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Aims and Scope

IFLA Journal is an international journal publishing peer reviewed articles on library and information services and the social, political and economic issues that impact access to information through libraries. The Journal publishes research, case studies and essays that reflect the broad spectrum of the profession internationally. To submit an article to IFLA Journal please visit: journals.sagepub.com/home/ifl

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Libraries and COVID-19: Opportunities for innovation

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When the COVID-19 pandemic started back in 2019, the library and information sectors had to adapt and went through several phases, the most typical being closure, reopening and adaptation to the ‘new normal’.

Closures

The initial measures to curb the spread of the virus resulted in far-reaching institutional closures. Multiple libraries across the globe closed, but this did not mean that they stopped serving their patrons – in reality, it meant that they had to redefine what services could be delivered online in addition to those that were already there. The library sector had experience from previous disasters, when people flocked in large numbers to libraries for shelter and support. Now, the challenge was to deal with the opposite – supporting patrons who were nowhere near the physical space of the library. At a time when libraries were expanding the variety of activities that help to define them as third places, suddenly the physical dimension of library use vanished.

At this stage, a huge impact on libraries was that they started redefining the services they provided. For those institutions already on the path of digital transformation, the pandemic brought an additional set of considerations. For many libraries not yet working on digital transformation strategies, the pandemic was what pushed them onto that path (Garcia-Febo, 2021). The results of this process remain to be seen and understood.

If we want to look into the evidence of what topics dominated professional thinking at this time, a helpful set of documents is the initial recommendations of the major library associations across the globe. Koscijew (2020) offers an informative initial analysis of these

plans and Figure 1 illustrates the timeline of their appearance.

Reopening

At the second stage, when the reopening of libraries had to be planned for and delivered, the library sector came up with specific institutional plans on how to organise its work under the new conditions. Evidence of the professional thinking at this stage is nicely captured in the set of reopening plans that was collected and synthesised by the IFLA (2020a, 2020b). Analysing a set of 77 library reopening plans shows certain overlaps in the areas addressed. Four key areas emerge: the rearrangement of the library spaces; changes in sanitisation; rethinking library services; and introducing safety measures. We call this the 4S model: space, services, safety, sanitisation.

The infographic in Figure 2 summarises the main findings and is indicative of the differences in how similar issues were addressed in different libraries. For example, in the Space category, we find a diversity of ideas on space limitations and the number of users allowed in library buildings after reopening. Sanitisation ideas and the number of days books should remain in quarantine also differ across the institutions. Within the Services category, a substantial number of libraries introduced a booking system for patrons’ visits – a practice that was followed for several months but was discontinued in many institutions in the next stage when they moved to the ‘new

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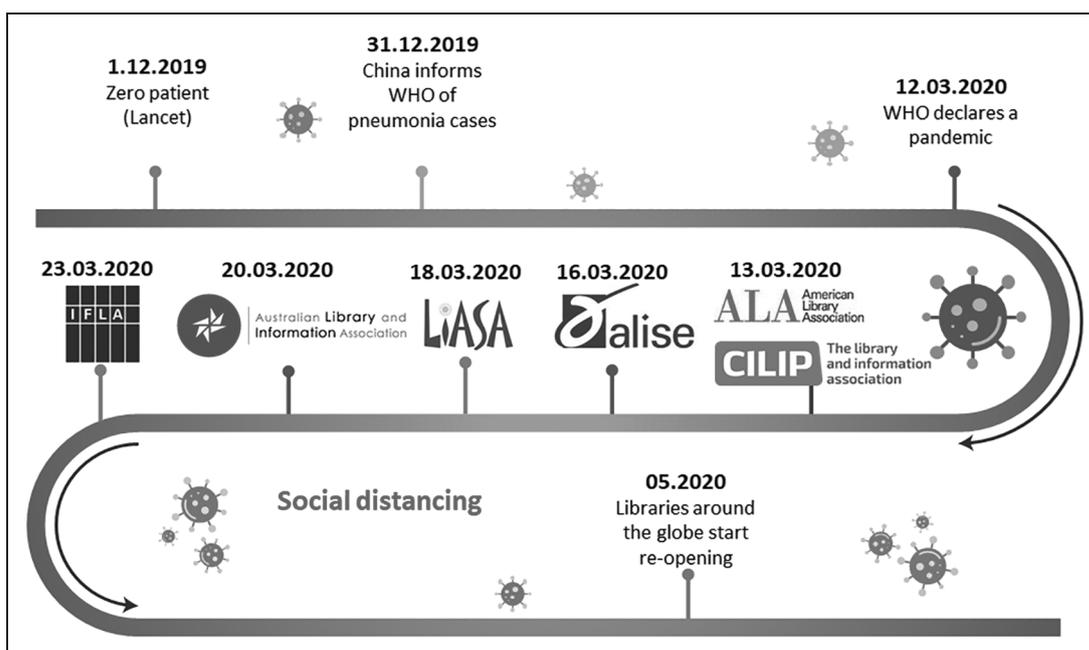


Figure 1. I. Timeline of initial COVID-19 statements issued by library associations. Source: CC-BY M Dobreva.

normal'. Under the category of Safety, in many cases libraries defined their requirements with regard to the use of personal protective equipment (PPE); currently, they are following the national guidelines for protection in closed spaces. However, at the time of designing their reopening plans, such guidance was not available in all countries.

The new normal

After the reopening phase, the library sector settled into 'the new normal'. What initially looked like a temporary adaptation has become a longer-term trend and, currently, the realisation is that COVID-19 is not a crisis but a new era: 'We tend to think of pandemics and epidemics as episodic', said Allan Brandt, a historian of science and medicine at Harvard University.

But we are living in the Covid-19 era, not the Covid-19 crisis. There will be a lot of changes that are substantial and persistent. We won't look back and say, 'That was a terrible time, but it's over.' We will be dealing with many of the ramifications of Covid-19 for decades, for decades. (quoted in Kolata, 2021)

At this stage, we are beginning to observe a shift from institutional planning towards seeking trends within the whole library sector. This is visible in the 'IFLA Trend Report 2021 update' (IFLA, 2022). This report was released on 6 January 2022, in the week we were wrapping up this special issue.

The remit of the IFLA Trend Reports is to 'bring together political, economic, social, cultural and technological trends to shape the future of our field and the communities we serve, as identified by emerging library leaders' (IFLA, 2022: 1). The first report in the series was released in 2013 and featured five trends. The growing complexity of library and information science has resulted in a gradual increase in the number of identified trends; in 2022, there are 20 areas that the contributing experts have identified as having a substantial impact on the professional work of librarians and information professionals.

The first trend, 'Tough Times Ahead', focuses on post-pandemic recovery and its impact on public spending and, subsequently, on libraries. The role of library advocacy is highlighted here and demonstrates a shift from work on a purely institutional level to more thinking about the coordinated response of library sectors. The second trend, 'Virtual Is Here to Stay', suggests that remote library services will continue to be the preferred mode of access, even if physical visits are possible. Figure 3 illustrates the main developments in the library sector during the three stages described above.

This special issue

We planned this special issue at the second stage of the pandemic when libraries started reopening. Rather than gathering more evidence of the changes

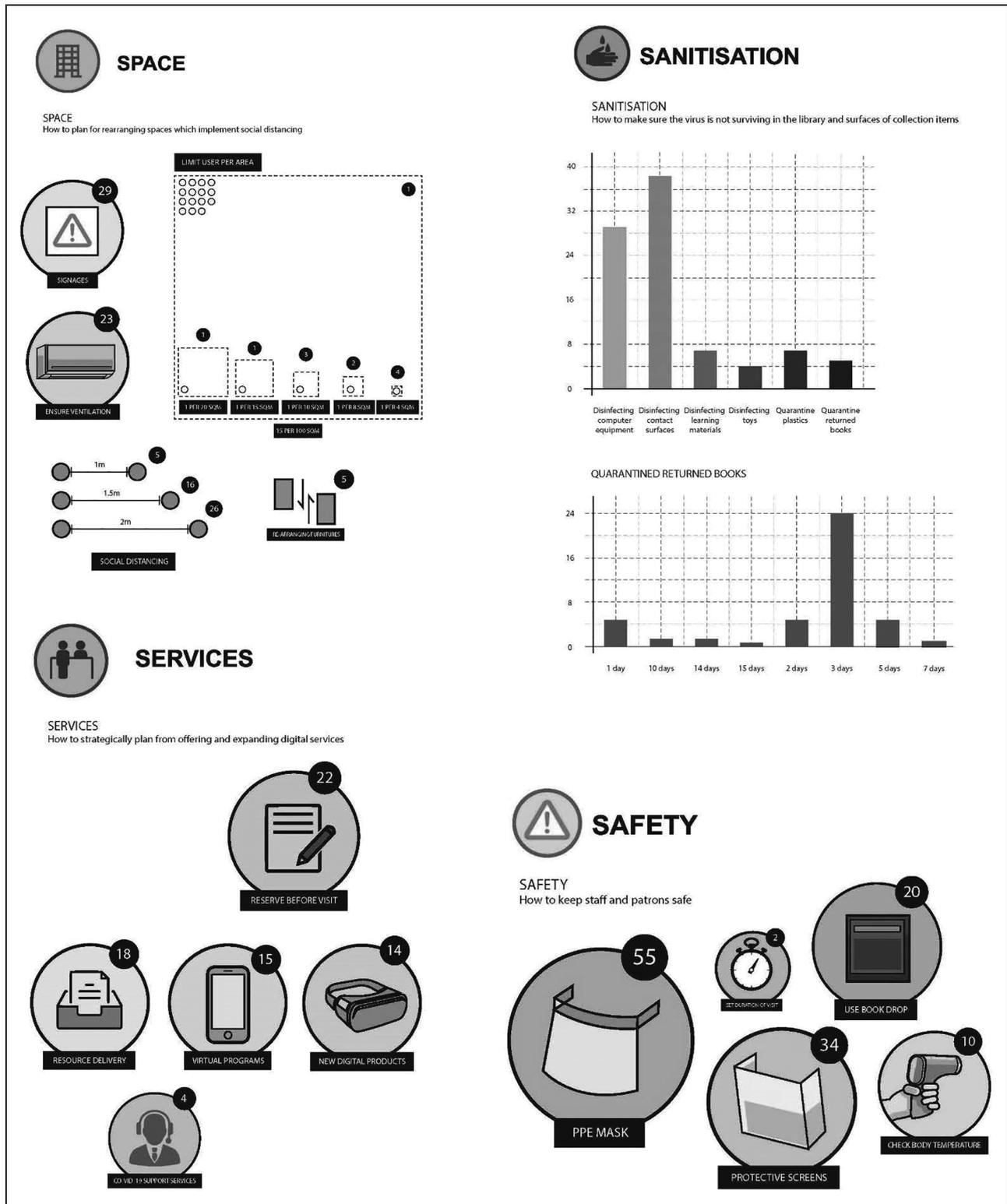


Figure 2. Summary of adjustments in libraries based on 77 post-COVID-19 library reopening plans. Source: CC-BY MA Abdulghani and M Dobrea.

introduced within the library sector, we wanted to explore how this challenging situation had brought about innovation in libraries. The issue took longer than anticipated to complete, and there were two main

reasons for this: first, the interest in the special issue was overwhelming, with close to 100 submissions from all over the world; second, the usual review process had to navigate delays from the editors and

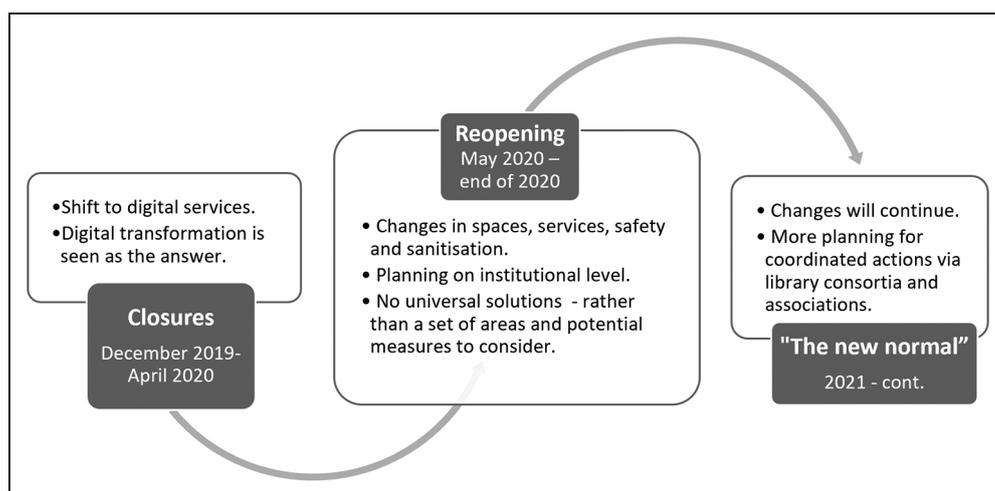


Figure 3. The three stages of the pandemic. Source: CC-BY M Dobrevá.

reviewers, who were fighting their personal battles with COVID-19.

The *IFLA Journal* decided to double the size of the issue. In the spirit of the journal, we did our best to capture different topics related to library practice but also to be inclusive and feature the voices of academics and professionals from different countries across the globe. In fact, this issue is truly global, with articles from all the continents and also articles exploring practices across different countries comparatively.

We expected that the submissions would address the 4S domains of change – space, services, safety, sanitisation. However, they did not really map onto these domains. We had multiple submissions related to different aspects of services, and a sizeable number explored the specific changes in certain institutions. We also had a great diversity of methodologies used by the authors to explore their research questions or analyse professional practice, ranging from ethnographic studies to social media data analysis. The most popular method in this special issue is the use of surveys – and it would be great to see more coordination between academics and practitioners answering similar research questions, and the accumulation of research data sets for reuse.

This special issue starts with several articles that explore topics of general professional interest. Carolyne Ménard provides an overview of the changes that were implemented in the library of the National Assembly of Quebec, Canada. We chose this as the opening article for the special issue as it gives a good idea of the diversity of challenges which had to be addressed on the institutional level.

Marc Koscieljew's article is a useful reminder that libraries, alongside archives and museums, have a duty to document. In the past, this duty was understood mainly as collecting and preserving materials that help us to understand the achievements and changes within human communities. With the technologies of today, there has been a shift to also documenting at the time events unfold, which adds a new set of skills for library professionals to apply in their work.

Andrew Carlos and Daisy Muralles explore the changes in the process of onboarding new staff during the pandemic; this is an example of an autoethnographic reflection. Heather Kapanka considers the shift in the roles of school library media specialists during the pandemic. Many libraries support education and learning, and this article explores some of the relationships between libraries and distance learning.

The next group of articles deals with different aspects of changes in library services. We start this section with an article which explores the National Library of Scotland's Data Foundry. COVID-19 was not the reason why these developments were initiated, but Sarah Ames and Lucy Havens' article discusses the patterns of increased demand during the pandemic. Their article provides helpful examples of the use of Jupyter Notebooks and explores their impact.

In a future issue of *IFLA Journal*, these cases will be further highlighted in a forthcoming article by Lourdes Feria Basurto, Humberto Martínez-Camacho and Alejandra Calderón-Swain, which explores the technological scenarios that have arisen in Latin American universities, and identifies shifts in the use of digital applications, services, user assistance and librarian training during the pandemic.

The article by Deborah Becker, Joanne Arendse, Veliswa Tshetsha, Zulaiga Davids and Vuyokazi Kiva-Johnson focuses on the development of the use of a popular library service – LibGuides – summarising the experience of librarians at the Cape Peninsula University of Technology, South Africa. Christina Riehman-Murphy, Anne Holloway and Mark Mattson present an excellent example of virtual engagement during the pandemic, which was developed in a partnership between Monash University Library, Melbourne, Australia and Penn State University Libraries, Pennsylvania, USA. The Great Rare Books Bake Off kept library engagement alive by using one of the activities that flourished during the pandemic – home baking. Any reader looking for an example of an unconventional engagement activity, and first-hand experience of planning, executing and assessing such a project, will benefit from this case study.

James Murphy, Carla Lewis, Christena McKillop and Marc Stoeckle present another useful example of the expansion of services, based on their experiences at the University of Calgary Library, Canada, and its digital resources. Amanda Boczar and Sydney Jordan explore how the educational activities of libraries are adapting to the pandemic, using as an example the Tampa Special Collections of the University of South Florida, USA. Furthermore, Guilherme Goulart Righetto, Tatiana Rossi and Julianne Fonseca Soares capture the experiences of the University Library at the Federal University of Santa Catarina, Brazil, and its working group in responding to COVID-19.

The next group of articles looks at the implications and measures taken in academic and public libraries in five different countries. Saturday U Omeluzor, Angela E Nwaomah, Ugochi Esther Molokwu and Atanda Saliu Sambo present the outcomes of a survey with 178 librarians from academic libraries in Nigeria. Simon Wakeling, Jane Garner, Philip Hider, Hamid Jamali, Jessie Lynn, Yazdan Mansourian and Holly Randell-Moon discuss the results of a large-scale survey of public library managers in Australia. Noah Lenstra and Christine D'Arpa focus on the programming of activities in small and rural public libraries in the USA. This group of articles also includes the contribution by Zhou Xin from China, which explores the use of the social media accounts of the National Library of China and more than 30 provincial public libraries during the pandemic. Dilara Begum, Md Roknuzzaman and Mahbub Shobhane explore the preparedness of librarians in Bangladesh for providing services during the

pandemic. Similarly to the article from Nigeria, they also used the survey method to gather data for their study.

The final group of articles in this special issue discusses issues related to user behaviour and disinformation. Sayeed Al-Zaman from Bangladesh considers the sources of misinformation in a data set that brings together social media data from 138 countries. One of the questions explored is what the actual role of social media is in distributing misinformation in comparison with other communication channels. This is an area that requires more methodological developments in order to properly extract and analyse representative data sets and, hopefully, the *IFLA Journal* will attract more papers that explore this type of big-data study in the future.

Brady Lund and Sanjay Kumar Maurya explore the information behaviour of older adults, making a case for comparison of the situations in the USA and India. Comparative studies are particularly challenging, with the complexity of analysing multiple factors. We hope that more scholars and professionals will seek opportunities to explore the development of research methodologies that can be shared in various environments. Our collection also includes an article by Esharenana Adomi and Gloria Oyovwe-Tinuoye, which, through the survey method, explores the information needs of library and information professionals in Nigeria. One of the aspects that it explores merits wider research: how library professionals, who are expected to be very efficient in helping different groups of patrons to find trustworthy and recent information, are navigating the complex information space during the pandemic.

All of the articles in this special issue capture examples of professional journeys in different contexts – not only the journey of researching around a specific topic, but also journeys that illustrate how the library profession evolved in the initial two years of the COVID-19 pandemic. We hope that this special issue will provide practical examples of activities for all academics exploring the changes in library practice. We also hope that the articles included here will support library professionals in the process of expanding their services, and will inspire more librarians to sustain and extend the engagement of their patron communities.

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Challenges and opportunities for parliamentary libraries during COVID-19: A case study of the National Assembly of Quebec Library

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Abstract

Parliamentary libraries play a crucial role in providing information support to decision-makers around the world. These institutions have faced an unprecedented situation with the COVID-19 pandemic. Many have had to modify their practices considerably to keep serving their users. This article explores how the National Assembly of Quebec Library has responded to this issue and redefined its services during the pandemic. The author presents the challenges and opportunities met while adapting virtual services, redefining document handling and improving team communication, and foresees future obstacles for the institution. This case study shares best practices and the lessons learned in the hope of informing and advising similar institutions facing challenges during this pandemic.

Keywords

Research services, parliaments, user populations, reference and information services, administration, management, collection development

Introduction

The COVID-19 pandemic has affected every aspect of society; no institution has emerged unscathed from this crisis. Libraries are no exception and have had to reinvent themselves to continue to fulfil their mission. While much has been said on the challenges faced by public and academic libraries, little information has been provided about special libraries, which often operate in atypical contexts. Among these, the experience of parliamentary libraries tends to remain unknown, even though these institutions play a fundamental role in providing reliable and quality information to decision-makers. Many experts have stressed how important it is that parliaments remain functional during the coronavirus crisis, as pillars of democratic governance and oversight (e.g. Mills, 2020). Parliamentary libraries have faced an unprecedented situation with the COVID-19 pandemic, and many have had to modify their practices considerably to keep serving their users. This article explores how the National Assembly of Quebec Library has responded to this issue and redefined its services

during the pandemic. The author presents the challenges and opportunities met while adapting virtual services, redefining document handling and improving team communication, and foresees future obstacles for the institution.

The National Assembly of Quebec Library: a cornerstone institution for decision-making

The National Assembly of Quebec Library contributes to the political and parliamentary life of the province of Quebec with a rich and diverse collection of over two million documents. It provides reliable and impartial information and analysis for its patrons. As Gallichan (2002) states, the library's main mandate is to assist legislators in the accomplishment of

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their work by catering to their information and research needs.

The parliamentary patrons are diverse and include: Members of the National Assembly and their staff; administrative employees of the National Assembly; the five public bodies designated by the National Assembly – namely, the Ethics Commissioner, the Lobbyists Commissioner, the Chief Electoral Officer, the Quebec Ombudsman and the Auditor General; the Lieutenant Governor and his staff; and the Press Gallery. Despite these patrons having precedence, assistance and research guidance are offered to all citizens on-site, by email or by phone.

Pelletier (2017) describes the library's four departments as complementary. The Reference Service offers information, assistance, training, selection and documentary research services in order to support the library's patrons in their work. The Research Department carries out research and analysis work for Members of the National Assembly, parliamentary committees and parliamentary delegations. It also contributes to knowledge production and dissemination regarding the history and evolution of parliamentarism and parliamentary institutions. The Acquisition, Processing and Indexing Department is responsible for acquiring and processing the documentary resources of the library, as well as rendering them accessible through the library's catalogue. It also produces the indexes of the National Assembly Debates. Finally, the Archives and Digitization Department manages the parliamentary, institutional and administrative records of the National Assembly. In addition, the staff share their expertise and consulting services on collection digitization and digital curating.

Ensuring continuity of service: broadening the library's digital offering

When COVID-19 was declared an international pandemic in March 2020, the National Assembly's speaker, Mr François Paradis, announced that the parliament would be closed to visitors. On 17 March, all parliamentary business was suspended until 13 May 2020. The library's physical premises were closed, and staff were sent home with directives regarding teleworking. Rapid changes had to be made to provide remote reference services for patrons.

Remote reference services

With the library's building closed, the public could no longer access on-site resources until further notice. Nonetheless, information and research requests were answered remotely using digital collections and

resources. Fortunately, as mentioned in the library's 2014–2015 annual report (Buteau et al., 2015), in 2014 the Archives and Digitization Department updated the digitization policy of the National Assembly, setting up a new institutional digitization programme and procedures. Since then, administrative documents, parliamentary documents and institutional publications have been prioritized in the digitization chain, which has led to a significant increase in the number of documents available in the library's digital collection. Optical character recognition is performed on the documents that are digitized. This work has proved to be very useful for remote reference services, as most of the parliamentary documents consulted are now available digitally. It has been shown (Falt and Pratim Das, 2020) that digital libraries can ensure continuity of learning and human development in crisis situations.

As Watt (2020) mentions it in an IFLA survey conducted on parliamentary libraries's experience during COVID-19, "as the pandemic demanded swift and radical policy choices there was a parallel requirement for informed parliamentary scrutiny and approval – the need, and potential demand, for quality information and research services increased, they could not simply be suspended." This challenge was experienced by the Quebec National Assembly Library as soon as the pandemic was declared an international crisis in March 2020.

During the first two weeks after the suspension of parliamentary business, the Reference Service was swamped with information requests from the National Assembly's administrative staff. Monitoring requests were particularly abundant, as many employees wanted to be kept informed on the evolution of the pandemic and its impact on parliamentary business. The National Assembly's top management created a steering committee to manoeuvre through the crisis, which asked the library to produce a monitoring newsletter with the aim of helping them to make informed decisions. The Reference Service's expertise was thus put to good use, but reference librarians had to manoeuvre through an increase of information requests they did not foresee.

Another challenge mentioned by Watt (2020) is that "effective service depends on close contacts with Members and their support staff – those interactions and routine acquisition of knowledge of clients and policy issues were impoverished overnight". In the case of the Quebec National Assembly Library, contacts with users and patrons were indeed extremely reduced at the start of the pandemic. However, the implementation of Microsoft Office 365 and its collaboration app Teams which was previously

scheduled to occur in Spring 2020 did counterbalance that new reality as best as possible, with additional help provided by the Library's traditional online tools such as emails to patrons, information letters, and use of the Assembly's portal for employees. As the Library adapted to the use of Microsoft Teams, it became possible to provide online assistance and training for tools and databases remotely available to patrons.

The library's crucial role in the National Assembly's monitoring committees

In April 2020, the National Assembly's steering committee concluded that it would not be capable of processing alone the voluminous amount of information regarding COVID-19. As Valika et al. (2020) demonstrate, the number of articles published on the virus was growing exponentially every month. Instantaneous access and the novelty of the virus provided a perfect situation for information overload. Considering this situation, the National Assembly's steering committee created four monitoring committees to filter and render intelligible the vast quantity of information available. The four monitoring cells were:

- Parliamentary Business – responsible for decision-making regarding parliamentary business (committees and plenary sittings);
- Strategic Risk Management – in charge of assessing the risks that could threaten the National Assembly and identifying how to prevent those risks from happening;
- Efficiency and Well-Being at Work – responsible for evaluating the impact of the crisis on human resources and the work environment;
- Process Optimization – in charge of identifying and implementing the necessary changes to go back to work after the crisis.

Both the Reference Service and the Research Department were involved in this new structure, as a reference librarian and a research analyst were part of each cell. The reference librarians provided information monitoring of the topics covered by the cells, while the research analysts produced analyses and reports based on the resources selected by the librarians. Information and reports were presented to the committees, which decided what had to be transferred to the steering committee for further action. Comparative research focusing on parliaments' management of the COVID-19 crisis was performed and proved very useful for the National Assembly's top management. This was an important opportunity for the library to reiterate its relevance and show how innovative it

was. Also, it prevented staff from different departments working in silos and duplicating work.

The monitoring committee on parliamentary business enabled the Library to contribute to the adaptation of parliamentary work during the pandemic. Reference librarians carried out research on elements specific to parliamentary reality such as:

- Plenary sittings with a limited presence of Members: how many MNAs can fit in the House while respecting social distancing, should the House's doors be kept opened to reduce contamination possibilities, adding circulation signals in the Chamber, etc.;
- Voting methods: how voting could be performed with a reduced number of MNAs, in a hybrid mode, or entirely virtually; considering different methods chosen by other parliaments such as proxy voting, pairing, or using an electronic platform;
- Reducing paper use: developing a platform to present and table documents electronically;
- Virtual plenary sittings: adapting question period and motions if plenary sittings were to occur in a virtual mode;
- Virtual committee stage of bills: how bills can be amended and studied article by article in virtual committee sittings;
- Adaptation of protocol: if meetings were to be held virtually, how to adapt the speaker's entrance in the Chamber, the presentation of the procedural mass, and the moment of reflection, which are requirements of Standing Orders;
- Parliaments sitting in unusual places: listing parliaments which have decided to sit in other buildings to allow social distancing with all Members present.

Comparative research was thus performed to find answers to these specific information needs. The experience of other parliaments, especially the Westminster parliament (which is known as "the mother of parliaments"), proved very helpful, both regarding adaptations implemented and challenges met. Comparative tables and briefing notes were produced by reference librarians to present these adaptations. A clear and concise bullet-point format was favored since the Assembly's high management needed to make informed decisions quickly. Once again, the Library made sure to adapt its work to its patrons' needs. Reference librarians also attended webinars organized by parliamentary research chairs or inter-parliamentary organizations where parliamentary

staff from around the world shared their experiences. A concise summary was then handed over to managers. It should be noted that all this research had to be carried out in a very short amount of time, emphasizing yet again the importance of quick reference work – often performed under pressure – as one of the main characteristics of parliamentary libraries.

The monitoring committee on strategic risk management also enabled reference librarians to perform important work for the Assembly's high management. This committee analyzed potential risks to the institution and passed them on to other monitoring committees for further action to prevent the risks from occurring. Reference librarians therefore drafted risk analysis information sheets on the following risks, among others:

- COVID-19 outbreak in the workplace;
- Shortage in the supply of sanitary equipment;
- Technological problems and network overload;
- Potential aggravation of staff's morale;
- Violent demonstrations outside of parliament;
- Ventilation issues affecting virus propagation.

Thanks to these information sheets, resources were deployed when necessary. Afterwards, the reference librarian attached to this monitoring committee did continue to monitor foreseeable future risks. The recent events which occurred at the United States' Capitol reiterated the importance of continuous monitoring in risk management.

For both these committees, the Library had the opportunity to develop new types of documents for its patrons' needs and to develop new forms of expertise. As stated by Watt (2020), parliamentary library and research services are often delivering highly customised products because of the unique information context surrounding them. Even though the pandemic made this delivery of customised information products more difficult, the National Assembly Library rose up to the challenge by creating new COVID-19 formatted documents.

Creating a COVID-19 New Acquisitions list

Since 2009, the Reference Service has published a New Acquisitions list each Wednesday to inform the library's patrons of new publications in its collections. This list includes between 15 and 20 references, which are indexed using a controlled vocabulary. The references are entered each week in an internal database. It serves two purposes: (1) to present a selection of interest of the new acquisitions to the library's patrons and (2) to keep track of references that are

relevant for answering future information and research requests.

The number of publications regarding COVID-19 led the Reference Service to transform its New Acquisitions list into a COVID-19 New Acquisitions list (Figure 1). Only references concerning COVID-19 were included. This decision was also motivated by the fact that the novelty of the virus led many patrons to want reliable information to be able to learn about this unprecedented situation. Since COVID-19 has had an impact on all spheres of knowledge, research institutions of all kinds (chairs, universities, think tanks, etc.) started to publish studies related to the pandemic. The COVID-19 New Acquisitions list was thus launched on 25 March 2020. It used the same format and the same controlled vocabulary as the regular list to ensure easy tracking. It was sent out every week until the end of the parliamentary session on 12 June 2020.

Although the COVID-19 list proved very useful and was appreciated by patrons, concerns eventually arose within the Reference Service regarding the lack of exposure for non-COVID-related documents published during the pandemic's first months. To remedy the situation, the Reference Service went back to its regular New Acquisitions list after 12 June. Since then, the New Acquisitions list has included documents on all topics, with a COVID-19 section that can hold up to 10 references per week.

Improving research tools and working methods

The library's physical premises reopened to staff and priority patrons on 13 May 2020, when parliamentary business was resumed. However, access to the building was restricted to a maximum of five people on-site and was forbidden to the public. With its physical premises less accessible, the library's departments had to review their research methods, improve their tools, and reinvent their working protocols and procedures.

The Reference Service, for example, enhanced its internal databases. The content of the Myrand databases (Figure 2), which allows to search in full text through the debates occurring in plenary and committee sittings, and through the annual Quebec Statutes, was improved. The PDF documents indexed in those databases lacked standardization. Some PDF files were created from the digitization of annual binders, and in some cases, one document ended in the middle of a page and the next started in the second half of the page. In these cases, the page containing the end of one document and the beginning of another was found in both scanned documents, which could add



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Figure 1. Excerpt from the COVID-19 New Acquisitions list.



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Figure 2. Interface of the Myrand database built by the Reference Service.

duplicates and noise to a search. To avoid this, it was necessary to modify the PDFs to crop the pages in question, which also implied redoing OCR on these documents. Under the supervision of a library technician, two office agents performed these tasks. This allowed the Library to improve its research tools available online – a priority with COVID-19 - while providing additional tasks to office agents who usually worked at the loan counter before teleworking. Also, continuous updates were made to the Myrand databases in order to provide users with the most recent debates.

The Reference Service staff also had to research additional online sources of information to remedy the inaccessibility of physical documents. Monitoring think tanks, research chairs, information centres, e-publishers and open-source databases proved even more important in this new context. The Reference Service staff performed their monitoring tasks using mostly WebSite-Watcher, subscriptions to newsletters and RSS feeds.

The Archives and Digitization Department, for its part, reviewed its loaning procedures in conjunction with patrons and employees. With the deployment of Microsoft Office 365 throughout the whole institution in March 2020, it worked to make sure that integrated records management was intertwined with the new software. Remote customer support was also implemented. In addition, integrated records management became indispensable for accessible, efficient and secure information management during the pandemic. The department worked to ensure perfect synchronization with the arrival of Office 365 at the National Assembly.

Meanwhile, the Research Department had to adjust its service offer very quickly because of various changes in parliamentary procedures. Since parliamentary committees decided to meet virtually in May 2020, the Research Department had to adapt to remote and paperless working sessions. In order to do so, it developed a PowerPoint presentation template and an editing protocol to help its research officers when preparing their interventions in committee sittings. Before the pandemic, the Research Department had considered for some time developing such a template since most committee sittings would benefit from a visual support. With virtual committee sittings, a PowerPoint template became essential since the Research Department could no longer distribute hard copies of its work to the committee members. It now needed to present its research results in a virtual format. The PowerPoint presentation template had several advantages:

- It gave structure to the presentation;
- It facilitated the follow-up of the members regarding the different sections of the research or its progression;

- It made possible to clarify certain remarks from research officers by using tables, graphs or illustrations;
- It ensured a more effective communication of the essential points of the research.

The department also contacted parliamentary research departments in Ottawa (Library of Parliament) and Toronto (Legislative Assembly of Ontario) to survey their managers on the services offered, work organization and resources at their disposal. Meetings are planned to take place shortly. Also, the research analyst associated with the Public Accounts Committee (*Commission de l'administration publique – CAP*) surveyed other Canadian parliaments to learn about the adaptations of public accounts committees across the country. This compilation was very useful since public accounts committees play an important role in ensuring parliaments can fulfill their oversight duties.

Promoting services and resources

The unforeseen character of the pandemic resulted in many changes in the library's service offer and stressed the importance of promoting its services and resources. As Dempsey (2020) states, it is extremely important for libraries to keep proving their value when their communities change. Patrons' needs were changing, and the library's services changed accordingly. In order to ensure that the parliamentary communities were informed of these changes, the Reference Service reached out to the research services of political parties and independent Members of the National Assembly. Moreover, information was regularly updated on the National Assembly's internal e-portal for administrative staff.

Several studies have shown the importance of social media in promoting library services (e.g. Friday et al., 2020). With a presence on Facebook, Twitter and Instagram, the library used these channels to inform patrons about the continuity of its services and the resources available to them. It promoted its exhibition on parliamentary writers and invited people to visit its virtual counterpart. Furthermore, the library's social media team created fun posts to defuse the tension of this stressful time and engage in a friendly way with its communities online. For example, social distancing was explained in a humorous manner in two Instagram posts. One showed the distance of 2 metres as equivalent to 30 debates books when seen by library staff, while the other showed the distance of 2 metres as equivalent to 6 linear boxes when seen by archives staff (see Figure 3).

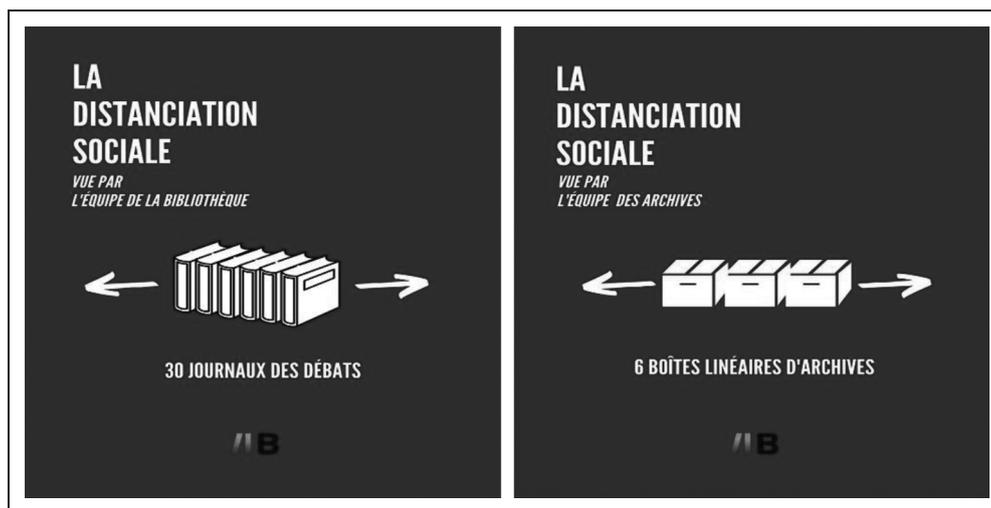


Figure 3. Instagram posts explaining social distancing in a fun way in a library and archives context.

Finally, the library's project of creating a blog to showcase its achievements has been brought forward by the pandemic. Recently launched, the library's blog (Figure 4) is part of the objective of better promoting its expertise. Furthermore, the pandemic has made it extremely relevant to have an additional virtual platform dedicated to the dissemination of research carried out at the library.

provide articles for patrons. Implemented before the pandemic, the Reference Service's platform for subscription to tables of contents allowed patrons to subscribe to contents from periodicals available at the library (Figure 5). Subscribers received an email alert when a new issue was available, along with the issue's table of contents. The popularity of this service increased during the crisis since it allowed users to



Figure 4. The library's blog heading.

Document handling and protective equipment

The highly contagious nature of the virus and its rapid spread caused the library to adopt sanitary measures related to materials handling, staff protection and collection management.

Sanitation control measures for collections

When the library's premises closed in March 2020, loans and interlibrary loans were suspended. All pre-existing loans were automatically renewed until 13 May. The ban on consulting and borrowing documents from the newspaper and periodicals collection lasted for nearly four months and was lifted only in September 2020. Digitization was privileged to

browse periodicals and select the articles they wished to receive by email.

When parliamentary business resumed on 13 May, the library partially reopened its on-site services. Loans were reinstated but interlibrary loans were delayed, depending on other libraries' rules. Despite having access to the library, patrons were forbidden from browsing the shelves as only staff were authorized to handle documents, with the aim of preventing possible contamination. Research was conducted to find out how the virus behaved on books and other materials. Government guidelines (Commission, 2020) recommended quarantining documents for at least 24 hours before handling them. A docking station for incoming and outgoing mail was set up.

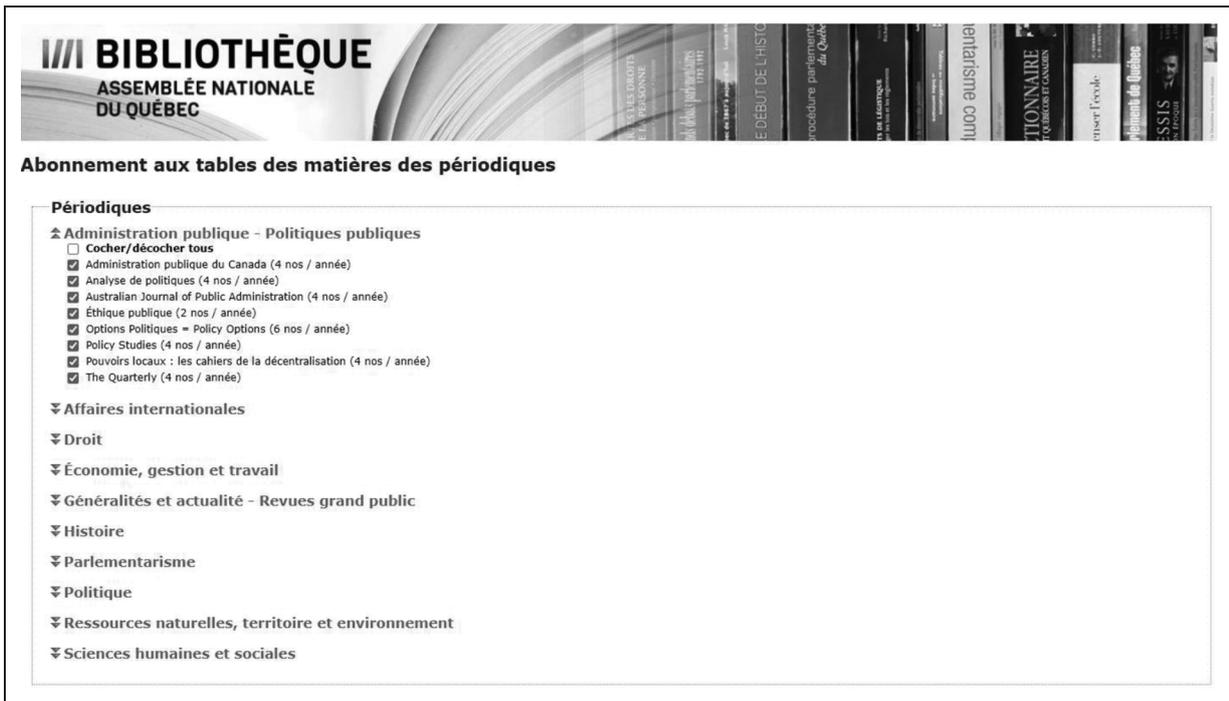


Figure 5. The Reference Service's platform for subscription to tables of contents.

Protecting staff while safeguarding access to information

An important challenge stressed by library professionals (Cox, 2020) in the wake of the pandemic is to balance equity of access with employee safety. Following the resumption of parliamentary business in May 2020, employees were scheduled to be on-site at the reference counter during sitting days. Plexiglass panels were installed at the reference counter and loan counter to prevent possible contamination (see Figure 6). Chairs were removed from the library's reading spaces

to respect social-distancing requirements, and the library's basement was closed to patrons to prevent the handling of periodicals and newspapers. Protective equipment such as masks and gloves was distributed to employees, and antibacterial gel stations were put up at different places in the library. Disinfectant wipes were provided at the reference and loan counters as both counters had to be cleaned at the end of the day. Circulation signs regarding public spaces (stairs, elevators, bathrooms, kitchens, etc.) were put up by the National Assembly's Communications Department.



Figure 6. Plexiglass screens at the loan counter (left) and reference counter (right).

Collection management and development

Delays were caused by the inability to acquire, process and weed documents while working remotely. In the Acquisition, Processing and Indexing Department, performing tasks on-site while respecting health measures proved to be a major challenge. The department had to review its electronic document-processing chain and daily work tools to be efficient. It also created collaborative monitoring tools – an efficient and sustainable practice that will be carried on after the pandemic. In addition, the pandemic forced the implementation of paperless procedures and the digitization of paper tools such as indexing slips, the guide to indexing procedures, and the index of tabled documents.

On the other hand, the Archives and Digitization Department experienced a surprising increase in efficiency through teleworking regarding the processing of its digitized archives. Reduced travel time for most employees made the department more productive and even led to the reactivation of projects that had been put on hold due to lack of time and resources. Hold-ups were nevertheless experienced in the restoration of heritage archives and objects. The processing of artefacts was also delayed due to restrictions on access to physical premises. Partial staff access to scanners and cameras resulted in the postponement of digitization and photographing activities.

Team communication and workload issues

Communication breakdown

The COVID-19 crisis brought many challenges regarding team communications. As stated by Watt (2020) in the IFLA's final report on '[t]he response of parliamentary library and research services', the library's managers were concerned about team cohesion and morale being threatened by the pandemic. Teleworking made communication between employees difficult, and isolation was seen as a potential threat to employees' mental health. However, the implementation of Microsoft Office 365 and its collaboration application, Microsoft Teams, helped keep communication channels open and flowing with information regarding the development of the pandemic. Surprisingly, the four departments of the library experienced greater collaboration between employees, between departments and even with other divisions of the National Assembly through more sustained virtual contact. Therefore, the risk of isolation for employees did not prove to be as important as anticipated.

Nevertheless, Microsoft Teams meant adaptations, mostly for the Reference Service and the Research

Department. It has been noted (Narcisi and Alspach, 2020) that Microsoft Teams is a very easy platform to use, with many operating modes being accessible. It is thus important to have procedures in place before launching this tool to ensure standardized use. The sudden nature of the pandemic did not render this possible at the National Assembly. Consequently, as soon as the application was launched, reference librarians and research officers received information requests directly through Microsoft Teams instead of through the library's email inbox. Therefore, staff had to adjust to a faster and more direct influx of information requests, especially at the start of the pandemic.

Collaborating with Canadian parliamentary libraries

As Levine-Clark and Emery (2020) stress it, collaboration between institutions is fundamental in the library field. The COVID-19 pandemic halted collaboration by isolating many institutions with the forced closure of buildings and the pausing of interlibrary loans, for example. However, collaboration between Canadian parliamentary libraries before COVID-19 was strong and the tools used before the pandemic proved very useful to maintain collaboration during the crisis. The Canadian parliamentary libraries are grouped in an organization called the Association of Parliamentary Libraries in Canada (APLIC), which includes provincial and territorial legislative libraries, and the federal parliamentary library. APLIC has been collaborating for years using, amongst other tools, various listservs. For reference staff, the email diffusion list allowed reference librarians to ask a question to their colleagues throughout the country, and to obtain fast answers to reference questions that focussed on a Canadian comparative approach. During the pandemic, this listserv has proven to be even more useful, especially in supporting the Assembly's monitoring committees' work on parliamentary business.

The APLIC also produces twice a year a newsletter in which each library describes its recent developments, accomplishments and challenges. Last July, parliamentary libraries presented their new COVID-19 reality and how they have adapted to the pandemic. Furthermore, on November 24, 2020, an online session entitled "The Changes and challenges to our libraries during the COVID-19 Pandemic," was organised by the Library of the Ontario Legislative Assembly. It featured speakers from the legislative libraries in British Columbia, Alberta and Ontario, and served as a test for a potential future virtual conference. Lastly, discussions are underway regarding the organisation of the 2022 APLIC annual conference, to be held in Quebec City.

Addressing the risk of overwork

The distribution of the workload proved to be an important challenge for the library at the start of the pandemic. During March and April, schools and day-care centres were closed. Many employees had thus to juggle work and family responsibilities. Consequently, a significant number of the library's staff could not work full days every week, which created an imbalance in the distribution of the workload. The situation was eventually resolved with the reopening of schools and day-care centres in May, but it presented the library staff with the risk of overwork and raised questions about how to distribute work fairly during a crisis.

Anticipating future challenges: what is in store for the library?

Offering continuity of service

Remote working became essential during the pandemic, but experts worry about its use in the post-pandemic period (e.g. Johnson and Suskewicz, 2020). Employees will have to come back to work at various times and speeds, and the use of teleworking will have to be re-evaluated and remodelled according to the reality after the pandemic. The library will have to evaluate how to combine teleworking with its on-site services. Its service offer will need to be constantly evaluated, reframed and reinvented depending on the government's decisions and the sanitary measures in place. Delays in projects and mandates are foreseen.

In order to ensure the continuity of the services offered, several works have stressed the importance of having a business continuity plan (e.g. BMS Canada Risk Services, 2020). Emergency procedures in the case of natural disasters are in place at the library, but no continuity plan has been drafted. The library's risk management has been focused on its collections, but it should have been on services as well. Natural disasters have been perceived as the main hazard for the institution, but the suspension of parliamentary business is equally as important. Ideally, a business continuity plan should be developed in accordance with the National Assembly's to make sure it meets patrons' needs.

Discussions are underway regarding the development of an integrated risk management policy at the Assembly. A risk management steering committee would oversee the implementation and follow-up of this policy. Integrated risk management is a systematic approach aiming at identifying risks, assessing them and implementing mitigation measures. Each

department at the National Assembly – including the Library – would be responsible for risk analysis and control within its premises. A centralized support unit would help managers in this task. The Library would have to answer a questionnaire to identify risks, participate in two working and information meetings and collaborate with other managers of the Assembly to assess the risks. It would then have to put in place risk mitigation measures. A risk register would also be created based on the risks identified by the departments.

Welcoming new employees

Another challenge regarding human resources during public health emergencies lies in the hiring of new employees. Employees who were hired just before the start of the pandemic in March 2020 had to learn most of their work in teleworking mode, which was obviously not ideal. The fall of 2020 also saw the first employees to be hired during the pandemic. Training and communication had to be adapted to respect social distancing and sanitary measures. The digitization of protocols and procedures was very helpful. In addition to this challenge, the library must find ways to make sure that its employees can continue their career development with online training, conferences and workshops.

Conclusion

Even though the COVID-19 pandemic has turned the library world upside down, it has shown the importance and relevance of parliamentary libraries in a crisis. This article has presented the experience of the National Assembly of Quebec Library as a case study for other institutions looking for ways to adapt their services and resources. In times of crisis, it remains important for libraries to share their best practices and lessons learned. As the crisis continues, libraries – and especially parliamentary libraries – must stay alert and continue to monitor the situation in order to foresee future changes and the risks they present. While the future remains unknown and there is still much to learn, information-sharing and open collaboration channels between libraries can provide institutions with innovative ways to fulfil their mandates.

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Remembering COVID-19; or, a duty to document the coronavirus pandemic

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Abstract

Remembering the coronavirus pandemic represents an obligation to the present and the future. Illuminating the intersections between remembrance, documentary heritage, memory institutions and COVID-19, this article argues that libraries, archives and museums have a unique and urgent duty to document the coronavirus pandemic as it unfolds to help ensure that its associated recorded heritage is collected, preserved and archived for the present and future purposes of consultation, reference and remembrance. Explicit ‘duty to document the coronavirus pandemic’ policy provisions should be adopted by libraries, archives and museums to, first, strengthen their current COVID-19 documentary initiatives and, second, support other possible documentary initiatives related to this or future global health crises. By documenting COVID-19, it can be collectively remembered and future possible health crises can be better anticipated.

Keywords

COVID-19, libraries, museums, archives, memory, coronavirus pandemic

Introduction: remembering COVID-19

Remembering the coronavirus pandemic represents an obligation to the present and the future. Remembering is an obligation to the present to continue informing and supporting efforts tackling the pandemic’s complex challenges. Remembering is an obligation to the future to preserve knowledge of the pandemic. Ultimately, remembering the pandemic will be crucial in ensuring that we can look to these contemporary (and eventually these past) experiences to move forward in any possible future global health crisis.

But how will the coronavirus pandemic (also referred to as the COVID-19 pandemic or more simply COVID-19) be remembered? How will it become a part of collective memory? Will it be remembered? Or will it eventually be forgotten? The Spanish flu of 1918–1920, for example, despite being ‘the most severe pandemic in recent history . . . [infecting] one-third of the world’s population’ (Centers for Disease Control and Prevention, 2018), never became a part of collective memory. The 1918 influenza pandemic ‘is not part of collective memory: not widely commemorated, not talked about in school, not the focus of

famous novels or iconic paintings’ (Erl, 2020b: 47), and thus does not inform our contemporary experiences of the coronavirus pandemic. When previous similar global health crises ‘did not play a great role in past collective memory, how will the world remember the present corona crisis in the future?’ (Erl, 2020b: 48). How, then, are events, crises and periods like the coronavirus pandemic remembered? Health crises pose peculiar challenges for remembering because

the role of human agency in them is less clearly discernible than, say, in wars, genocides, and terrorist attacks. It is therefore more difficult to draw normative lessons from pandemics: who is responsible for Covid-19? What is the ‘never again’? (Erl, 2020b: 49)

Put differently, how can or should remembering the coronavirus pandemic be ‘done’ and, by extension, how is it currently ‘being’ remembered?

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Documentation is, and indeed will be, fundamental to remembering the coronavirus pandemic. In fact, documentation is a bedrock component in constructing, materializing and mediating documentary heritage, including the heritage of this global health crisis. COVID-19's documentary heritage represents 'scientific, educational, aesthetic and cultural resource[s] that can be leveraged to address the various informational aspects of any [present and future] societal response to COVID-19' (Banda, 2020a: 18). Presently, COVID-19 is being documented in heterogeneous ways across sundry scenes and sectors. From government regulations to corporate policies, from biomedical and scientific studies to cultural materials, from social signage to social media content, the pandemic is being formally and informally documented by many institutions and individuals in variegated physical, print and digital formats. It is these documentary resources that will be 'handed down through generations as documentary heritage of significant and enduring value [for all] . . . and whose deterioration or loss would be a harmful impoverishment' (Banda, 2020b). COVID-19's documentary heritage, in other words, is the foundation on which COVID-19 will be both remembered and referenced.

The Chief of the Documentary Heritage Unit at UNESCO's Memory of the World (n.d.) division, Fackson Banda, for instance, calls for increased documentary interventions into the coronavirus pandemic. Observing that the pandemic presents unique challenges for the preservation and accessibility of documentary heritage held in cultural memory institutions worldwide, Banda (2020a: 18) argues that 'as a function of this pandemic, the future of documentary heritage – along with the cultural memory institutions that incubate it – needs to be rethought in terms of emergency preparedness as well as greater investment and public awareness'. Cultural memory institutions, particularly libraries, archives and museums (LAMs), have a central role to play in these interventions. Diverse LAMs worldwide are currently leading the way in securing COVID-19's heritage by collecting, preserving and archiving the myriad documentation being created in response to the pandemic.

Responding to and extending Banda's call, this article argues that LAMs' COVID-19-related documentary initiatives are vital for helping document this crisis as it unfolds and, consequently, must be further strengthened and supported if the world is to remember and (hopefully) learn from lessons presented by this global health crisis. By illuminating the intersections between remembrance, documentary heritage, LAMs and COVID-19, this article specifically argues that LAMs have a unique duty to document the

coronavirus pandemic in order to ensure that its heritage is collected, preserved and archived for present and future understanding, reference and memory. Explicit 'duty to document the coronavirus pandemic' policy provisions should be adopted by LAMs to, first, strengthen their current documentary initiatives and, second, support other possible documentary initiatives related to this or future global health crises.

Ultimately, this article serves as a dual call to action and support for LAMs in their ongoing efforts to document the coronavirus pandemic. This dual call is advanced by illuminating the intersections between documentary heritage, cultural memory institutions and 'duty to document' policies during this global health crisis. It is important to note, however, that this article does not intend to address, let alone resolve, the many complex challenges posed by the coronavirus pandemic. Nor does it aim to provide a detailed literature review or exhaustive list of the many commendable COVID-19-related documentary initiatives being undertaken by LAMs. Its humble aim is to centre, discuss and promote the role of LAMs in their diverse documentary initiatives involving the collecting, preserving and archiving of the pandemic's documentary heritage. Put differently, it aims to make this dual call and, in so doing, to make a case for a broad duty to document the coronavirus pandemic, specifically applied to cultural memory institutions as the guardians of culture and memory.

Admittedly, LAMs have different purposes, collections and services. Generally, libraries collect and provide access to published materials for educational and entertainment purposes; archives collect and preserve records for institutional accountability and memory purposes; and museums collect and exhibit special objects for cultural and historical purposes. Hence, the ways in which they document the coronavirus pandemic vary and, by extension, the kinds of COVID-19-related documentation differ. Libraries, for instance, are collecting and providing access to current published materials on the crisis; archives are collecting and preserving institutional records of governments and corporations responding to and managing the crisis; and museums are collecting and exhibiting cultural objects associated with the crisis. Notwithstanding their contextual contingencies, this article approaches LAMs as cultural memory institutions with parallel and, in significant ways, shared goals of assembling, safeguarding and protecting culture and memory not only for their specific situations, but also for society and posterity. The dual call is therefore made for all LAMs to hopefully inspire, provoke and raise awareness of their important roles

in and work for collecting, curating and preserving material related to the coronavirus pandemic.

Framed by COVID-19's documentary heritage, the following discussion is arranged in five interconnected sections. The first section offers a brief literature review spotlighting some illustrative examples of LAMs' documentary interventions in unfolding events, from contentious social movements and civil unrest to terrorist activities and health crises. The aim is to situate this article's subsequent discussion and argument within this important literature. The second section describes documentary heritage and its significance for collective memory, information and decision-making needs, and the coronavirus pandemic. This section serves as the basis for the following argument. The third section argues for LAMs' duty to document COVID-19, providing a list of possible policy provisions intended to implement and practise this duty. The fourth section outlines this article's implications for further studies on the intersections of LAMs and COVID-19 documentary initiatives and related efforts. The article concludes by presenting some implications of this duty to document COVID-19. By documenting COVID-19, we can collectively better remember it and, hopefully, learn from and anticipate future possible health crises.

To begin, it is important to review how, during times of crises and turbulence, LAMs make important interventions by documenting events as (and after) they unfold.

Documenting unfolding events

LAMs have a noteworthy history of intervening in events as they happened by documenting them in real time. Just as LAMs are documenting the continuing coronavirus pandemic, they have also documented, in various ways, other past events as they took place. Instead of collecting materials (long) after an event, today, 'digital content and documenting current events require information specialists to act quickly and be involved in the initial development of potential collections to ensure they are identified, described, and preserved for future retrieval' (Foster and Evans, 2016: 353). While this article does not intend to present a detailed literature review of these past documentary initiatives, it nevertheless contextualizes COVID-19's documentary heritage and LAMs' duty to document that heritage within this broader literature. The aim of this situating is to illuminate similar or parallel LAM-related initiatives to document during times of crisis and social unrest. The following vignettes serve as illustrative examples instead of a comprehensive list, acknowledging this important

literature and, by extension, framing this article's argument within these past documentary initiatives.

Within the context of social movements and civil unrest, for instance, LAMs can serve as 'forces for social change' (Rhodes, 2014: 5). Social movements are quick-forming, fluid and vast, incorporating diverse kinds of digital documentation including audiovisual clips and social media content. According to Rhodes (2014), LAMs 'have an opportunity to do the same to support, engage, and document what is happening around them, to take part in the changes within the lives of their users' (10) – for example, they can contribute to social movements by helping 'show the life of their communities by putting their responses on display to support their involvement in social movements, engage others, and document for the future' (5). Relatively recent LAM documentary projects have captured social movements and civil unrest as they occurred in real time, from collecting and storing all kinds of information – textual, audio and visual, for example – recorded at the time of an event to the continuous addition of new information as it actually happens.

The fast-moving, contentious Occupy Wall Street social movement was documented by various LAMs as it happened. Erde (2014) recounts the various innovative Occupy Wall Street-related documentary initiatives carried out by diverse LAMs at both grass-roots and institutional levels. Community archives projects, such as Occupy Wall Street and Occupy Philadelphia, 'collected the records of Occupy working groups as well as physical ephemera from the protests, conducted oral history interviews and sought solutions for the storage and preservation of archives' (78). Formal archival institutions, such as the Smithsonian National Museum of American History and the New York Historical Society, also collected Occupy Wall Street materials by sending representatives to encampments 'to collect fliers, pamphlets and other physical ephemera' (78). Noting that the 'scope of what could potentially be considered as documentation [in these efforts]... where there [was] no clear distinction between official records and outside commentary [was] huge' (78–79). Building on these experiences, Erde (2014) argues that LAMs should strive for greater community participation in the collection of relevant materials to expand opportunities for community participation and, by extension, increase the diversity of voices within these collections.

As another example of a major LAM-related documentary initiative from the Occupy Wall Street movement, Rhodes (2014) describes the 2012 #searchunderoccupy 'living archive' exhibit arranged

by the Sheila C Johnson Design Center in New York City, which ‘visually display[ed] the creative and critical responses of the New School’s student community to the Occupy Wall Street movement’ (5). The curatorial approach to the Occupy Wall Street movement was inclusive rather than exclusive since the volatile situation was quickly evolving, resulting in a dynamic ‘exhibit and virtual archive where the mediums ranged from video, photographs, audio, and performance projects, and also include[d] text-based works such as live feed tag clouds, posters, and blogs’ (8). These varying forms of documentation can serve as examples of what other LAMs can seek out and incorporate in their similar or parallel efforts at capturing social movements.

Crisis-related responses and collections developed by LAMs, moreover, are not unprecedented. In the USA, for instance, there are various LAM collections concentrating on the September 11 (9/11) terrorist attacks. Wallace and Stuchell (2011) examine the archive developed by the US government’s 9/11 Commission and various problematic issues surrounding its politically motivated composition and usage. Reviewing how the public record and public knowledge of 9/11 were shaped by the documentary processes surrounding the accretion of this archive, Wallace and Stuchell (2011) chart ‘records access and control controversies before, during, and years after the Commission submitted its final report’ (125). They argue that

the composition, accumulation, access to, and control of [this] archival record surrounding 9/11 was shaped as much by political concerns over blame and responsibility (and evading it) as it was by good faith efforts to get to the heart of the matter. (162)

Thus, instead of presenting an accurate or objective historical record, this archive has been developed and used to ‘submerge – as opposed to surface – basic facts’ (162), with troubling implications for future research and study.

Meanwhile, Brier and Brown (2011) describe the creation and development of another 9/11 collection – specifically, the September 11 Digital Archive. While focusing on issues raised by documentary efforts to both present and preserve 9/11-related information, Brier and Brown (2011) explain that the impetus for this collection arose from the concern ‘that without a coherent and deliberate plan to capture, archive, and preserve digital materials related to the September 11 attacks . . . such materials would be lost to future generations’ (102). By collecting digital information about the terrorist attack as and after it happened, the

archive aims to offer ‘future scholars . . . a sense of the *zeitgeist*: an intricately detailed panoramic view revealing the myriad ways Americans and others throughout the world experienced, understood, deciphered, distorted, and rationalized – *located meaning in* – an epochal traumatic event’ (108). This archive, in other words, intends to help remember the various experiences and interpretations of this event as it happened.

More recently, the ‘Documenting Ferguson’ project undertaken by Washington University in St Louis Libraries aimed to documentarily capture anti-police-violence and anti-racism protests in order to help ‘meet the information needs of the local and national public in the midst of a turbulent response to police violence in the St. Louis metropolitan area [in the state of Missouri]’ (Foster and Evans, 2016: 352). Implementing rapid collection and retrieval practices, this project captured the unfolding crisis in real time and preserved it for long-term availability. The project’s curators and coordinators leveraged digital technologies, which were better equipped to document, manage and preserve items relevant to the crisis. Foster and Evans (2016) note that, traditionally, many LAMs, particularly archives, documented and collected materials immediately after or even years following an event. The ‘Documenting Ferguson’ project, however, demonstrated that

this is no longer the case. Digital content and documenting current events both require information specialists to act quickly and be involved in the initial development of potential collections to ensure they are identified, described, and preserved for future retrieval. (353)

Thus, by ‘documenting this history, the goal [was] to ensure that as the movement wane[d], to have implemented sustainable practices to safeguard the individual stories and collective narratives preserving them for current and future researchers interested in Ferguson’ (360).

Current COVID-19 documentary initiatives undertaken by LAMs are still evolving as the pandemic itself continues to re-emerge in multiple waves of contagion across the globe. There is an emerging literature on these initiatives and other roles played by LAMs during the coronavirus pandemic (Acker and Chaiet, 2020; Alajmi and Albudaiwi, 2020; Burch, 2020; Dwivedi, 2020; Erll, 2020a, 2020b; Hobbins, 2020; Holland, 2021; Jones, 2020; Kosciejew, 2021; Lloyd and Hicks, 2021; Machovec, 2020; Martínez-Cardama and Pacios, 2020; Matthews, 2020; Neatrou et al., 2020; Oyelude, 2020; Rieger, 2020; Shankar et al., 2021; Tamaro, 2020; Wang and Lund, 2020;

Xie et al., 2020). There are useful lists and guides with COVID-19 information, initiatives and services compiled by various cultural memory institutions and professional associations. These resources include the IFLA's (2020) web page providing advice and materials on 'Covid-19 and the global library field'; the American Library Association's (2020) web page offering recommendations on 'Pandemic preparedness: Resources for libraries'; the Society of American Archivists (2021) web page presenting 'Resources for responses to COVID-19 health crisis'; and the Institute of Museum and Library Services (n.d.) web page showing 'COVID-19 resources for libraries and museums'.

Perhaps the most current and comprehensive list specifically concentrating on LAMs' COVID-19 documentary initiatives is the 'Resources for documentary heritage professionals' web page compiled by UNESCO (n.d.). This valuable resource provides key materials for LAMs navigating the coronavirus pandemic. It offers various ideas for selection criteria to help construct COVID-19 documentary heritage collections. It also provides information on starting or developing documentary initiatives, such as in-depth preservation practices and resources, pandemic-related financial relief, technology recommendations, and items on learning from past pandemics and crises. Moreover, it spotlights the blog 'In Living Memory: Making the Most of Documentary Heritage in COVID-19 Decision-Making', featuring reflections from international experts on how documentary heritage is, or can be, enlisted to assist scientists, policymakers and citizens deal with COVID-19.

A specific example of an ongoing initiative covered in this emerging literature is the 'Utah COVID-19 Digital Collection' being developed by the University of Utah's J Willard Marriott Library. Neatrou et al. (2020) explain that the main objectives of this project are to document and preserve COVID-19-related materials in a timely fashion while connecting people as the pandemic unfolds. Specifically, it aims to, first, 'document the immediate and long-term effects of the measures meant to keep people safe in Utah to curate primary source materials for future historians'; second, 'preserve how people have responded to [government directives], how people coped with social distancing, and the effects that this virus has had on communities'; and, third, 'to help people from the larger Utah and University communities connect with each other by sharing common experiences' (403–404). As 'the COVID-19 pandemic changed nearly every day, so did the needs and scope of this project' (411). Initially intended to collect photographs, it expanded to include text-based

documents, such as journal entries and written stories, and eventually oral history projects, all documenting how the pandemic was affecting Utah.

There are indeed numerous COVID-19 documentary initiatives being undertaken by LAMs worldwide. From the US Library of Congress's coronavirus-related collection, comprising photographs of street scenes, web content and maps, to the Smithsonian National Museum of American History's Rapid Response Collecting Task Force, charged with chronicling the pandemic, documentary initiatives focused on COVID-19 aim to 'offer a fully realized look at the outbreak that can help the public, researchers and policymakers better understand how the pandemic permeated [and still permeates] our lives' (Burch, 2020). Admittedly, however, the impacts of COVID-19 'may not be fully realized until years later' (Xie et al., 2020: 1419). But, importantly, it will be its documentary heritage that will eventually constitute the pandemic for future memory, and thereby mediate and make possible these realizations of the consequences and effects. What roles does documentary heritage play in this pandemic and what are, or should be, LAMs' duties vis-à-vis this heritage and crisis?

The documentary heritage of COVID-19

When asking what will be remembered about the coronavirus pandemic, the initial answer might appear to be 'everything' (Erl1, 2020a: 867). The sheer size, scope and heterogeneity of the documentary sources that are helping to record, construct and mediate this global health crisis is impressive. As the first global pandemic of the digital era, 'instant history-making abounds. Every second of pandemic time seems to be recorded on digital media, distributed, and shared via social networks' (Erl1, 2020a: 867). This instant history-making means instant document-making, especially in the digital realm, as individuals record their pandemic experiences in various documentary formats, and as institutions publish COVID-19 information and updates on a plethora of platforms and websites. There 'will be an abundance of [documentary] sources for future collective memory' that, in terms of LAMs, will include 'worldwide digital information about case numbers and the circulation of personal experiences via social media' (Erl1, 2020b: 49). This abundance of documentary sources comprises the documentary heritage of this troubled time.

Documentary heritage is made up of documents. According to UNESCO (2016), a document 'is an object comprising analogue or digital informational content and the carrier on which it resides. It is preservable and usually moveable' (3). A document is

necessary to materialize informational content, whether textual, code, audio, visual or pictorial, and ‘may have important aesthetic, cultural or technical qualities’ (3). A document, further, mediates practices, interpretations and experiences of informational content. Documentary heritage, then, ‘comprises those single documents – or groups of documents – of significant and enduring value to a community, a culture, a country or to humanity’ (3). Further, ‘documentary heritage reflects . . . [the] memory and identity’ of a people, society and period (3). Documentary heritage, in other words, is constituted by documents that are deemed of relevance to/for the collective memory and identity of a people and society. The loss or deterioration of documentary heritage would diminish, and even erase, these memories and identities, resulting in ‘a harmful impoverishment’ (3) for present and future remembrances.

The coronavirus pandemic’s documentary heritage comprises documentation about, associated with or related to COVID-19. This documentary heritage represents ‘a unique knowledge asset. Its utility value as such is becoming increasingly evident in how societies are making decisions in response to Covid-19 at the *behavioural*, *policy* and *technological* levels’ (Banda, 2020b). From government regulations and public signage to newspaper stories and social media posts, this multifarious documentation is materializing and mediating the experiences, perspectives and behaviours of people in variegated contexts across the globe. Loss or deterioration of this documentation would have harmful implications; for instance, it would undermine understandings of the disease and increase difficulties for navigating the pandemic in the present circumstances, as well as pauperize future information and decision-making needs for referencing, comparing and remembering the coronavirus pandemic.

Thus, the documentary heritage of the coronavirus pandemic represents an invaluable resource for present and future information and decision-making needs regarding COVID-19 and possible other health crises. According to Banda (2020b), documentary heritage as a COVID-19 resource has three major implications for decision-making: specifically, influencing behaviour, informing national policy responses and institutional initiatives, and providing opportunities for harnessing technological innovation. To begin, documentary heritage as a COVID-19 resource is influencing behaviour by ‘acting as a source of scientific, educational, aesthetic and cultural knowledge sharing among citizens, [cultural] memory institutions and governments’ (Banda, 2020b). This knowledge-sharing is influencing behaviour by helping people

reference and learn lessons ‘from both negative and positive actions taken in response to [COVID-19 and other] such pandemics across time and space’ (Banda, 2020b). Documentary heritage, for example, can be consulted to understand ‘how leaders have reacted to health emergencies in the past [to] inform the decisions of policymakers today’ or, as another example, scientists can ‘use records from past outbreaks to improve their methods and identify the best course of action to counter the spread of [COVID-19]’ (UNESCO, 2020).

Documentary heritage as a COVID-19 resource, moreover, is informing national policy and institutional responses to the pandemic. This documentation is providing the knowledge assets required for designing, implementing and guiding coronavirus-related regulations and projects, as well as equipping societies with current and past knowledge for addressing the coronavirus. It includes knowledge regarding ‘how societies nurtured their diversity and capacity to address a global health pandemic in a systematic and sustained manner’ (Banda, 2020b).

Further, the coronavirus pandemic is opening opportunities for harnessing new and innovative technologies to create new kinds of documentation. For example, this documentary reproduction is being done by ‘enhanced digitization of historical records . . . [enabling] more effective and widespread knowledge use and re-use, especially across libraries, archives and museums’ (Banda, 2020b). Present and ongoing LAM initiatives for collecting, preserving and archiving COVID-19’s documentary heritage are establishing the knowledge assets necessary to help meet present information needs pertaining to this pandemic and, simultaneously, anticipate future information needs for possible similar health crises.

Anticipating future information needs, in fact, is a vital long-term objective for COVID-19’s documentary heritage. The documentation of today, in other words, serves as the historical record for tomorrow; however, ‘the significance of a document may become clear only with the passage of time’ (UNESCO, 2016: 3). The importance of any particular COVID-19-related document might only become apparent at a later date, perhaps in a post-pandemic world. Since the gravity of any particular document might not become fully known or appreciated until a later date, it is arguably even more necessary that this documentation is collected, preserved and archived during the current situation. Collecting, preserving and archiving this documentation will help ensure its future availability and accessibility, and, by extension, facilitate determinations about its importance. With the passage of time, and eventually in the

post-pandemic world, this documentation will be necessary for numerous objectives, such as assessing, comparing and understanding responses to the virus.

Additionally, this documentation will also be necessary for remembering the coronavirus pandemic. In fact, collective memory about this crisis will be predominantly dependent on its documentary heritage. Approaching documentary heritage as ‘mnemonic premediation’ (Erll, 2017, 2020a, 2020b) reveals how documentation anticipates, prepares for and copes ‘with future events on the basis of remembered [recorded] experience’ (Erll, 2020a: 864). Since ‘all collective memory is mediated memory, all collective anticipation (or lack thereof) is therefore a matter of premediation’ (864). Collective memory, in other words, is documentarily mediated remembrance and, hence, collective anticipation is a matter of documentary premediation. In this sense, COVID-19’s documentary heritage is necessary ‘to mnemonically premeditate the corona pandemic’ (865). Without it, it would be excised from long-term collective memory, thereby suffering the fate of the Spanish flu as a forgotten pandemic.

One of the main reasons why the Spanish flu never became a part of collective memory is a lack of ‘mnemonic premediation’ through documentation. The Spanish flu was, in large part, ‘nowhere impressively [documentarily] mediated’ (Erll, 2020a: 864). It was not ‘sufficiently [documentarily] mediated and remediated in the past – no famous paintings, novels, films, rarely very exciting lore of oral family history – so that [it] could then turn into a premediating force in the present’ (864–865). Since ‘there are no major contemporaneous (or later) memoirs, paintings, novels, or films dedicated to the Spanish Flu’ (865), there is a lack of documentary sources recording people’s experiences and memories. By ‘adapting a concept by cultural historian Samuel Hynes (1990), [it can be argued that] the Spanish Flu was not “sufficiently imagined”. As it was not a “pandemic imagined”, it did not turn into a “pandemic remembered”’ (865). Put differently, as the Spanish flu was not a ‘pandemic documented’, it did not turn into a ‘pandemic remembered’. The Spanish flu was chiefly forgotten.

Both against the background of the ‘forgotten’ Spanish flu and within the context of COVID-19, it can be seen that ‘documentary heritage is an important resource to provide a historical perspective on how governments, their citizens and the international community have addressed pandemics in the past’ (UNESCO, 2020). The lack of substantial documentary heritage related to the Spanish flu further resulted in the concomitant lack of any substantial LAM collection concentrating on its history and remembrance.

But what the Spanish flu lacked in the first place – a deliberately created documentary heritage devoted to it – ‘is exactly what Corona is characterised by: it is the first worldwide digitally witnessed pandemic, a test case for the making of global memory in the new media ecology’ (Erll, 2020a: 867). During the Spanish flu’s unfolding between 1918 and 1920, and after its eventual end, LAMs did not collect, preserve or archive, in any significant manner, the minimal documentation about or associated with the pandemic.

In contrast to 1918, LAMs in 2020 emerged as foundational contributors in ensuring that COVID-19’s documentary heritage is collected, preserved and archived. In fact, many LAMs are already collecting, preserving and archiving ‘the decisions and actions being made [regarding COVID-19] which will help future generations to understand the extent of the pandemic and its impact on societies’ (UNESCO, 2020). Presently, LAMs, for instance,

are hard at work documenting the pandemic, including how lockdowns are affecting almost every individual, how governments are dealing with this health and economic crisis, how the media is reacting to it, as well as how new expressions of solidarity are emerging and contributing to an acceleration in the pace of digitization as a large proportion of the work force and young people in education have to resort to remote working and schooling. (UNESCO, 2020)

The growing documentation about, associated with or related to COVID-19 means that LAMs have an abundance of materials to build collections and offer services centred on the coronavirus pandemic.

Initiatives securing COVID-19’s myriad documentary heritage must (continue to) be spearheaded by diverse LAMs across the globe. After all, documentary heritage is their unique focal point and purview. As UNESCO argues: ‘documentary heritage in archives, libraries and museums constitutes a major part of the memory of the peoples of the world’ (Memory of the World, n.d.). They are already leading initiatives ‘in archiving and storing [physical and] digital information, especially social media information generated by the public, as an important part of our history – that may be of use in the prevention and management of future crises’ (Xie et al., 2020: 1422). These documentary initiatives will also help enable comparisons of current and previous health crises ‘with similar characteristics [that] can yield valuable insights on [their] origin, development, and consequences’ (1422). In this way, these initiatives are ‘documentarily premediating’ the coronavirus pandemic by making intelligible how it has been

approached, experienced and dealt with across different sociocultural contexts, thereby also making it a part of collective memory.

Although many LAMs are indeed ‘mobilizing to meet COVID-19’s challenges’ (Kosciejew, 2021: 321), their documentary initiatives would benefit from additional policy focus and support. Specifically, ‘duty to document the coronavirus pandemic’ policy provisions will help strengthen the work of LAMS in ensuring ‘that a complete record of the COVID-19 pandemic exists, so that we can prevent another outbreak of this nature or better manage the impact of such global events on society in the future’ (UNESCO, 2020). These COVID-19-related ‘duty to document’ provisions can help clarify and make explicit the fundamental roles played by LAMs in securing this pandemic’s documentary heritage.

A duty to document COVID-19

As the ‘permanent accessibility of documentary heritage is the fundamental justification for the existence of every memory institution’ (UNESCO, 2016: 8), LAMs have a concomitant duty, to both present and future generations, to document the coronavirus pandemic. Recently, the International Council on Archives recognized this documentary duty by issuing a statement specifically addressing the importance of the duty to document COVID-19. The statement declares that the need for ‘the duty to document this information does not cease in a crisis [like the coronavirus pandemic, but instead] it becomes more essential than ever’ (International Council on Archives, 2020). Ensuring that ‘duty to document’ policy provisions are followed during, and/or are specially adopted for, the coronavirus pandemic will help guarantee ‘the existence of proper documentation’ and, as a result, ‘enable not only business continuity, research and innovation, but also the evidence of how this crisis was managed for future generations’ (International Council on Archives, 2020). Without proper documentation guided by ‘duty to document’ policy support, ‘records and data will not be generated and captured in ways that will enable their preservation and access, now or in the future’ (International Council on Archives, 2020).

The International Council on Archives’ (2020) statement advances three ‘duty to document’ principles that must (continue to) be applied by archives during this global health crisis – namely, that COVID-19-related activities and ‘decisions must be documented, records and data should be secured and preserved in all sectors, and the security, preservation,

and access to digital content should be facilitated during the shutdown’. According to the International Council on Archives, these principles will help to ensure that COVID-19-related documentation is generated, stored and accessible both now and in the future, thereby enabling the ability to further study the crisis. Although targeting archives, these ‘duty to document’ principles can be extended to similar and parallel COVID-19 documentary initiatives being undertaken by libraries and museums. Whether archives, libraries or museums, all these cultural memory institutions ‘will eventually be the stewards for records related to the COVID-19 pandemic’ (International Council on Archives, 2020).

Although dealing with different kinds of documentation, all these COVID-19-related efforts undertaken by LAMs are contributing to and constituting this pandemic’s documentary heritage. Thus, as diverse LAMs across the globe are

collecting testimonies and curating related content, it would be valuable to take into consideration how these disparate efforts could be cumulatively useful and leveraged for scholars and the general public alike who will be exploring various aspects of this historic moment in the future. (Rieger, 2020)

Adopting explicit ‘duty to document the coronavirus pandemic’ policies, or embedding such provisions in present policies, would be an important step in ensuring that these disparate efforts are cumulatively useful and leveraged for various informational and decision-making needs regarding COVID-19.

Most ‘duty to document’ policies concentrate on the creation and management of governmental and public records. Some governments, for example, mandate ‘duty to document’ policy provisions, obligating their civil service ‘to create, manage, and preserve appropriate documents of their activities, decisions, and procedures’ (Kosciejew, 2016a: 3). Clear and explicit ‘duty to document’ policy provisions help civil service staff to ‘make credible and supportable decisions, fulfill legal obligations, maintain proper procedures, and preserve both their particular institutional memory and the broader historical record’ (3). The ultimate goal of the duty to document is protecting information ‘access rights by creating appropriate and necessary public records, facilitating more open and transparent governance, increasing accountability, fostering public confidence and trust, and contributing to institutional memory and historical legacy of government activities and decisions’ (Kosciejew, 2016b: 37). The duty to document comprises four main policy provisions or components which

(1) ‘oblige the creation of appropriate records with the aim of describing the “what” and “why” of public institutions’ activities and decisions’; (2) require that ‘these records are accurate, authentic, authoritative, and complete’; (3) must ‘be embedded within [existing records management] practices to help routinize the creation, organization, and management of these records’; and (4) must be ‘enforceable’ to prevent ‘instances of records being intentionally altered, falsified, mutilated, destroyed, or concealed’ (36). These components, while intended for civil service records management programmes, can be adapted and applied to LAMs’ COVID-19-related documentary initiatives. Since LAMs are the ‘holders of the memory of the world in all its manifestations, including pandemics [like COVID-19] and the world’s responses to them’ (UNESCO, 2020), these duties are particularly important to help bolster their missions. These duties can help strengthen and support LAMs’ identification of what COVID-19 documentary heritage is valuable and, in turn, what to collect, preserve, archive and make available.

The first three duties could be adapted to become embedded within existing, or form entirely new, policy provisions targeting COVID-19 documentary heritage. They should involve the following:

1. LAMs’ duty to document the coronavirus pandemic should unambiguously reaffirm their role in the identification and preservation of documentary heritage. It is LAMs ‘who identify and select documentary heritage for preservation, who care for collections, who provide access, who identify and manage risk and who advise governments on the resources needed for their work’ (UNESCO, 2016: 17). This reaffirmation should simultaneously oblige the collection, preservation and archiving of relevant COVID-19-related documents with the aim of describing the ‘what’ and ‘why’ of the disease and pandemic.
2. LAMs’ duty to document the coronavirus pandemic should clarify that the documents collected, preserved and archived must be about, associated with or related to COVID-19. This duty is not ‘a matter of just keeping in the collection the key documents: contextual material, including social media, is also important’ (UNESCO, 2016: 17). More specifically, LAMs, in this context, have a duty to document information, experiences and memories specific to COVID-19. It is important to entrench this duty since ‘primary source materials give insights into socio-economic, political and cultural aspects of [this pandemic and hence have] the potential to enable public awareness and participation in public health procedures, grounded in historical lessons learned’ (UNESCO, 2020 Turning the tide . . .). This duty will further help ensure that LAMs’ COVID-19 documentary initiatives focus on ‘fact-based, scientific [and legitimate socio-cultural] information and provide critical, comparative perspectives’ (UNESCO, 2020). Thus, the documents collected, preserved and archived must be the primary sources of COVID-19; moreover, they must be authentic, authoritative and accurate in the sense that they reflect, reference or in some relevant way are about COVID-19.
3. LAMs’ duty to document the coronavirus pandemic should be either established as extraordinary policies or embedded within current disaster-preparedness programmes as extraordinary additions or amendments. While ‘all [cultural] memory institutions have policies . . . they are not always set out to the same level of detail – if they are documented at all! Without a documented basis of policy and consequent procedures, there is a risk that decision making will be arbitrary, inconsistent and unaccountable’ (UNESCO, 2016: 7). Strong policies are based on sound and straightforward provisions that clearly communicate the goals to attain and the procedures to follow. By establishing such extraordinary policies or incorporating them into existing ones, LAMs will ensure that these provisions ‘become an effective and efficient routine’ (Kosciejew, 2016b: 37), as explicit, realized practice for collecting, preserving and archiving COVID-19-related documentation.

Further, securing and sustaining these duties requires LAMs ‘to have the resources and rights necessary to collect materials – both from official records and wider society, online and offline – in order to ensure as complete a documentation of the crisis as possible’ (UNESCO, 2020). Unfortunately, however, most LAMs confront challenges posed not only by this global health crisis but also by stagnant and declining budgets. Once established, these duties should be employed not only to advance their COVID-19 documentary initiatives, but also to emphasize their significance for their particular institutions, communities and contexts in order to garner further financial assistance from funders and sponsors. These duties should therefore be presented and

emphasized to the governments, corporations and private–public partnerships that currently fund or sponsor LAMs to ensure continued, and even increased, ‘investment in the preservation and accessibility of documentary heritage [related to the coronavirus pandemic] as a matter of disaster risk reduction and management’ (UNESCO, 2020). Admittedly, making this important case to funders could be challenging, but incorporating policy provisions surrounding the duty to document the coronavirus pandemic could serve as a starting or reference point for showing funders LAMs’ centrality in this crisis when seeking more or new funds for their missions.

LAMs’ ‘duty to document the coronavirus pandemic’ policies will help further clarify, strengthen and support their COVID-19 documentary initiatives. These duties will also help entrench the wider recognition of these cultural memory institutions as the custodians of the documentary heritage of this crisis specifically and even documentary heritage in general.

Implications for further studies of LAMs, COVID-19 and documentary heritage

This dual call to action and support for LAMs’ ongoing efforts to document the coronavirus pandemic has numerous implications for further studies on the intersections of LAMs, the coronavirus pandemic, documentary initiatives, and the argument for and policies related to a duty to document COVID-19. To begin, a foundation is established on which to build, extend and hopefully inspire additional advocacy and arguments for advancing and encouraging LAMs’ pursuits in documenting the coronavirus pandemic. This foundation can further function as a joint contemporary and historical overview of this duty and associated documentary initiatives within the context of the coronavirus pandemic.

The approach to or definition of documentary heritage could be expanded or specified in other studies examining LAMs’ COVID-19 documentary initiatives and other efforts. The approach to or definition of documentary heritage, for instance, could be narrowed to focus exclusively on libraries, archives or museums; refined to include only specific kinds of information or materials related to COVID-19; or localized to highlight the documentary heritage concerns and needs of one particular LAM institution or context. Altering the approach to or definition of documentary heritage can illuminate other perspectives on these intersections.

A point of departure is thus established for other research to explore and critically reflect on the

challenges that are inherent in establishing, preserving and using COVID-19 documentary heritage initiatives and their related collections and services. These challenges are complex. They include capturing the crisis as it still unfolds and rapidly changes; deciding what materials and information to curate and save; acquiring, assessing and accessioning appropriate and authentic information associated with the pandemic; dedicating human, financial and institutional resources to these projects; securing managerial, executive and/or public support, as well as funding, for pursuing these efforts; preserving, using and sharing pandemic-related materials and information; and, importantly, determining the responsibilities, outlining the policies and ensuring the best practices of different local, national, public, private, academic and special LAMs insofar as their particular duties to document COVID-19 are concerned.

The so-called ‘infodemic’ is another challenge confronting LAMs’ duty to document COVID-19. Specifically, fake news and misinformation about the disease and its associated vaccines, treatments, public health measures and political responses are confusing the discourse surrounding COVID-19, thereby presenting difficulties in documenting real information and reliable materials. Other studies could examine these difficulties, their implications and possible solutions. But confusing matters even more is the fact that the ‘infodemic’ is also a part of the pandemic. Fake news and misinformation about COVID-19 represent another component of this documentary heritage. The capturing and collecting of this dubious content could consequently be required by LAMs in their COVID-19 documentary initiatives. Additional studies could analyse how the ‘infodemic’ is contributing to the documentary heritage of COVID-19, and the ways in which LAMs can respond in both mitigating its corrosive effects and preserving aspects of it to show more fully the nuances of the crisis.

This article could also serve as a base for determining and analysing the potential selection criteria for constructing COVID-19 documentary heritage collections. Other studies could research cases of what specific selection criteria, practices, opportunities and problems are emerging or have already arisen since the beginning of the pandemic. Specific case studies or broad literature reviews of these issues could also be conducted. Additionally, the disparate COVID-19 documentary initiatives and other efforts undertaken by LAMs could be compared in various ways, from cumulative examinations to thematic comparisons, to illuminate their convergences or divergences as well as their different impacts on their individual or group contexts.

Indeed, this article, with its dual call to action and support, provides a plethora of possible pathways for more research and reflection on the intersections of LAMs, the coronavirus pandemic, documentary initiatives, and the argument for and policies related to a duty to document COVID-19. Its approach offers not only a base on which to build or expand other studies, but also provocation for additional and different work on this topic. It is hoped that this article and its heterogeneous implications can be useful for and leveraged by scholars, professionals, policymakers and the public in their current and future explorations of various aspects of this event.

Conclusion: documentarily premediating COVID-19

During the coronavirus pandemic, ‘many questions of direct relevance to the [library and] information science field can be asked’ (Xie et al., 2020: 1419). One motivating question for the field is: ‘what specific things can [be done] to help individuals and society as a whole survive global health crises like COVID-19, deal with the aftermath, and be better prepared for the next crisis?’ (1419). One specific, and vital, thing that must be done is document the coronavirus pandemic. This documentation, comprising the documentary heritage of this unfolding period, is necessary to help people navigate and understand COVID-19 in the present, deal with its ongoing and eventual impacts, and be better prepared for the next possible health crisis. In these ways, documenting COVID-19 can help ensure that the coronavirus pandemic is ‘mnemonically premediate[d]’ (Erlil, 2020a: 865) – that is, this documentation will help forewarn us about and forewarn us for possible future global health crises.

For contemporary needs, on the one hand, documenting the coronavirus pandemic directly informs and mediates present COVID-19-related governmental decision-making and measures that are affecting both individuals and societies. For future needs, on the other hand, documenting the coronavirus pandemic will directly shape future remembrance, reference and study of COVID-19. The causes, symptoms and effects of the disease need to be remembered for future health interventions, treatments and care. The scientific and biomedical characteristics of the disease, as well as the legislative and sociocultural responses to it, must be remembered for current and future research agendas. This documentary heritage of the coronavirus pandemic will facilitate assessments and make possible follow-ups on the many responses taken to address the crisis to ascertain what

succeeded, what failed and what are/were the long-term implications for society.

Illuminating the intersections between remembrance, documentary heritage and cultural memory institutions, this article has begun an argument for the central roles of LAMs in securing this documentary heritage. After all, ‘through their efforts to curate documentation on the prevailing responses to [and experiences of] COVID-19, it is they who will shape the representation of this pandemic for future generations’ (UNESCO, 2020). This article has therefore put forward a discussion featuring the overarching twin objectives of, first, emphasizing the significance of documentary heritage for remembering this global health crisis in the present while it unfolds into a historical event and, second, advancing LAMs’ adoption of ‘duty to document’ policy provisions to help further strengthen and support their COVID-19 documentary initiatives.

LAMs’ policy provisions surrounding their duty to document the coronavirus pandemic should involve three components. They should, first, reaffirm LAMs’ focus on documentary heritage and, in so doing, oblige the collection, preservation and archiving of COVID-19’s documentary heritage. Second, they should clarify what kinds of documentation should be sought and, in doing so, ensure that it is about, associated with or related to COVID-19. Finally, they should be embedded into contemporary routines during this crisis. Distinct ‘duty to document the coronavirus pandemic’ provisions will unambiguously outline the procedures needed to build, protect and make available COVID-19’s documentary heritage and, by extension, serve as a basis for confidence that these institutions are competently assembling and preserving such important collections. In both theory and practice, these duties can help further ensure that COVID-19 is properly and systematically ‘evidenced, not only to prevent and/or anticipate similar events but to understand the effect this event will have on current and future generations’ (International Council on Archives, 2020).

This article humbly aims to contribute to conversations about LAMs’ important interventions in responding to the coronavirus pandemic by specifically advancing the argument for adopting ‘duty to document’ policy provisions. Although a discussion, it is hoped that its points can be put into practice to clarify, strengthen, support and extend LAMs’ COVID-19 documentary initiatives. While LAMs are admittedly diverse institutions with different missions, collections and audiences, these duties can be adapted and adjusted to align with their divergent needs and contexts. Despite contextual contingencies,

these duties, however they are flexibly applied, will share the same fundamental goal of helping further guide LAMs in their COVID-19 documentary initiatives.

These duties, for instance, can provide the tailored policy direction required to help LAMs avoid confusion about or duplication of efforts in collecting, preserving and archiving COVID-19's documentary heritage. These duties, moreover, can be used as kinds of so-called 'policy guarantors' of focused, pertinent and quality practices pertaining to COVID-19 documentation, especially when seeking, collaborating with and/or (re)assuring partners in shared pandemic-related projects or service provision. They could even arguably be shown as demonstrable evidence of the centrality of LAMs' COVID-19 documentary initiatives when seeking support from funders and the public. Further, these duties can help inform or establish the basis for both present pandemic and eventual post-pandemic strategies and planning regarding the collection, preservation and archiving of relevant documentary heritage related to this and other health crises.

Ultimately, if we are to remember the coronavirus pandemic, documentation is needed, in addition to its collection, preservation and archiving by LAMs. Documenting COVID-19 now, while promoting and supporting LAMs in their duties to collect, preserve and archive this documentation, will help 'mnemonically premeditate' (Erll, 2020a: 865) this pandemic, thereby enabling us to better anticipate, understand and navigate possible future health crises. As Neatrou et al. (2020: 412) state: 'the greatest milestone for these documentary initiatives will be when people will be able to share their memories of the pandemic instead of their current lived experiences [of it]'. We have a duty to ourselves and future generations not to forget COVID-19 but instead to remember by documenting it.

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Author biography

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Onboarding in the age of COVID-19

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Abstract

Due to the transition to a remote/virtual working environment, the process of onboarding new hires has to make a shift to the remote/virtual as well. In this article, a review of past and present practices at a mid-sized academic library is conducted, as well as an autoethnographic reflection of a new hire's experience with onboarding. Best practices and suggestions are presented to help inform other libraries that are also going through a remote/virtual onboarding experience.

Keywords

Onboarding, orientation, new hires

Introduction

Starting a new job can be a daunting experience—no matter the number of circumstances that might be affecting an individual concurrently. From learning how the organization functions to determining who to trust or who to turn to for answers, there can be so much to learn that is unspoken or unwritten before a new hire can feel comfortable in their new environment. Some organizations have ways in which they introduce their new hires to the organization and its functions. In library hiring practices, we see the learning experience sometimes referred to as “new hire training,” “orientation,” “rapid onboarding,” or “onboarding”—all terms for the organizational socialization of a new member to the hiring group, which can include specific sets of tasks and goals. In this article, we argue that it is the careful selection of tasks and goals during the onboarding process that helps orient the new hire to their new position in the organization. With its requirements for social distancing, remote learning and work, and closed facilities, and in the authors' experience, this age of COVID-19 has made it even more difficult to learn about the relationships that exist within an organization. In short, the remote onboarding process that was developed incorporated aspects of in-person onboarding but, due to COVID-19, was quickly converted to a remote/virtual set-up. Most importantly, opportunities for

socialization—both formal and informal—were included in the onboarding process.

Literature review

The literature review focused on searches in two distinct databases: Library, Information Science and Technology Abstracts (LISTA) and Business Source Premier. Table 1 presents the search results from these two databases, using two different sets of keywords.

Note the use of the term “onboarding” for this review, as opposed to “orientation” or “socialization,” for example. As will be discussed further in this review, onboarding has been defined as a broader term that encompasses orientation and socialization. Based on the activities designed for the new hire, “onboarding” was chosen as the more appropriate term for comparison, despite its relative newness in the literature.

Considering the results in Table 1, the texts that discussed onboarding in LISTA were outnumbered by those in Business Source Premier by a large margin. Looking more closely at the results, we saw that a

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Table 1. Number of search results from LISTA and Business Source Premier.

Keywords	Business Source Premier	
	LISTA	Premier
Onboarding	24	1087
virtual OR remote OR distance AND onboarding	3	43

much smaller number of the results were relevant to our search. For LISTA, only 11 results were relevant in our search for onboarding and none were relevant in our more complex search. For Business Source Premier, only 15 were relevant in our complex search, most of which were non-scholarly (a thorough review of the “onboarding” search results was not conducted). From a quantitative point of view, onboarding is not a process that is discussed much within the library literature but is a heavily discussed topic within the business literature. Something to consider as well is that when the databases were searched for virtual/remote/distance onboarding, there was a sharp decline in the number of results. Looking at the results more closely, the results from the library literature did not directly address the onboarding process, or merely addressed it in passing. In the business literature, despite 43 results being returned, only 15 were relevant to the actual search, with most of these being non-scholarly.

Of the articles found in LISTA, most presented the development of tools and resources that would help with the onboarding process—such as websites and guides that help the new hire become acquainted with the organization (Hall-Ellis, 2014; Lisbon and Welsh, 2017; Macnaughton and Medinsky, 2015; Winterman and Bucy, 2019). This type of onboarding tends to lead to a checklist-style series of activities that aim to get the new hire oriented with the processes and procedures of the organization. As previously mentioned, many articles described a checklist approach to onboarding, often using some online component to track these activities. One benefit of using this approach is the possibility of self-study for the new hire. This allows the new hire to learn and engage with the material in their own time and at their own pace. A drawback is that this does not allow for the development of connections between the new hire and the rest of the organization.

The difference between orientation and onboarding

Orientation is the process whereby the new hire learns about the tasks and responsibilities that they are expected to perform. Typically, this includes video-

based training, reading, and instructor-led training. Examples of orientation in the literature are Jaisinghani and Patel’s (2013) article on training medical information specialists, with a heavy focus on the job description, and Macnaughton and Medinsky’s (2015) article describing the use of a learning management system to create training materials. On the other hand, onboarding includes not only all aspects for orientation, but also the important component of socialization in the organization (Winterman and Bucy, 2019). This socialization component is important because it allows the new hire to feel connected to the organization and develop relationships effectively. One thing to note is that many articles found through LISTA indicate that they are about onboarding but are actually only about orientation—the ever-important socialization process is not mentioned in many of these articles. For the purposes of this review, onboarding and orientation will be treated as similar processes, but the distinction between them is important to remember.

In light of the importance of socialization when it comes to onboarding, activities that are designed to connect the new hire and their new colleagues are introduced in the literature. Examples include Keisling and Laning (2016), who note that new hires saw value in being able to connect with others in the organization (e.g. through check-ins or formal meetings); Snyder and Crane (2016), who highlight a modified mentorship program that connected new hires with other staff outside of their departments; and McClurg and Jones (2018), who encourage looking beyond basic tasks and processes in onboarding and developing an environment of trust between the new hire and the organization.

Practical and theoretical benefits of onboarding

Graybill et al. (2013: 211), in a review of the onboarding practices of libraries that were members of the Association of College and Research Libraries, highlight that the institutions covered “job assignments, introduction to coworkers, and the evaluation process,” but did not necessarily cover the sociocultural aspects of the library. Corbin (2020) focuses on a practical task that is accomplished by the onboarding process: the documentation of policies, procedures, and workflows. This documentation process is, ultimately, important when libraries with historically low turnover rates end up hiring new employees, and originally relied on institutional memory rather than written-down instructions. Corbin also discusses the concept of self-care during the onboarding process, the goal of which is to encourage new hires to

consider their physical and mental health during the process of learning about their new workplace. Very few of these types of articles really discuss the socialization aspect of onboarding. Franklin (2019) touches on this idea by suggesting that regular meetings with new hires could act as an opportunity for them to network and develop community with each other. However, the biggest issue with Franklin's suggestion is that this requires a cohort model, where there are multiple hires at a time. Nyakale (2016) notes that the onboarding process, particularly interaction with new colleagues, helped to reduce the fear that new hires had of their jobs.

One of the gaps in the literature that includes discussion centered on remote/virtual onboarding is the lack of articles that center the lived experience of the new hire. This article attempts to fill that gap. Much of the literature focuses on either the creator of the onboarding process, with some input from the new hires through surveys or interviews, or a retrospective analysis of the onboarding process either by the creator or a third party. One notable exception comes from the business literature. Rollag et al. (2005) discuss the work they did on studying onboarding and highlight the ethnographic work that was involved in studying the diaries of newly hired employees at tech organizations. This gap in the literature exposes the lack of a true understanding of the onboarding experience from the perspective of the new hire, especially within libraries.

Methods

This article presents an exploration of the importance of the remote onboarding process of a new faculty librarian through an analysis of their personal experience onboarding at an academic institution during COVID-19. The methods used to explore this experience are autoethnographic, an approach that is used to research a cultural experience by systematically analyzing personal experience (Ellis et al., 2011). An autoethnographic approach is valuable in this case because it potentially diversifies and expands current understanding of the onboarding process as experienced by an individual in a new organization—that is, an academic library. As described by Waymer and Logan:

autoethnographies and autobiographies allow for detailed, personal, context-laden accounts that demonstrate how a . . . communicator not only makes sense of her work but also how personal value from the profession can be derived in the retelling of a personal organizational story. (Waymer and Logan, 2016: 1468)

In this case, the “personal organizational story” is about onboarding at an academic library during COVID-19.

Waymer and Logan (2016) also offer a thorough description of autoethnography as a research method, largely citing the work of Carolyn Ellis and Arthur P. Bochner, and showcasing the power of autoethnographic research to describe lived experiences in a credible way. In this article, the lived experience is analyzed in an autoethnographic approach by using two methods. The first utilizes a first-person reflection from the new hire, highlighting the context, outlining experiences and moments which allude to potential lessons learned about this process, and discussing the tools or methods that could potentially be used to transform the future onboarding practices of new hires in a library organization. The second method is an attempt to quantify the total number of *experiences* as derived from the autoethnographic evidence. Overall, the autoethnographic method uses the onboarding's memory and description of the social context to situate their experience of the onboarding process during COVID-19.

In summary, the autoethnographic evidence refers to the review and interpretation of Daisy Muralles' personal documents, created during the onboarding process and reflective of their onboarding experience. In the section below titled “The onboarding experience: present and future,” Daisy Muralles describes their perspective of the new-hire experience to add contextual information by personal reflection. The reflection included in this work incorporates information from notes gathered during various one-on-one meetings with colleagues, journal reflections, calendar events, and other written or recorded documentation that the onboarding created during the onboarding process.

In the following section titled “Identifying data in the onboarding experience,” the data derived from the autoethnographic evidence is categorized and describes the total number of interactions between the new hire and members of the library organization within a given time frame, as well as the total number of workshops and other training sessions the new hire attended during the onboarding process. One of the key themes interpreted by Daisy Muralles from this data is the value of taking a *relational approach* in onboarding new hires, as has been already recommended in some onboarding literature (Rollag et al., 2005). The autoethnographic evidence also highlights the value of deep relationship-building and identifying short-term goals, and a need for feedback related to the new hire's onboarding progress.

The onboarding process: past and present

Historically, onboarding in the library under study has been an afterthought: the organization considered important tasks and training for the new hire, but a plan or agenda was never developed that could be replicated with each new hire. This was because new hires typically trickled in one at a time, which did not necessitate a big push to codify many of the things that were done. However, this made it more difficult with each new hire, as organizational memory was relied on to develop the onboarding plan each time, and sometimes tasks were forgotten or training might be skipped.

The typical onboarding process is outlined below. One thing to note is that there is no formal timeline for this onboarding process. Historically, however, everything has taken place within one term (either one quarter or one semester):

1. The new hire starts in the summer (July or August) and is assigned a mentor from among the library faculty.
2. Office supplies and an office space are provided for the new hire, along with an ergonomic assessment by the campus.
3. The new hire is reminded of the required/mandatory training by the campus or by the chancellor's office—typically, in a spreadsheet, handout, or email, or even just by word of mouth.
4. Orientation in the library is provided via (a) library-specific tools such as LibApps and collection development tools such as Gobi and (b) introduction to other library staff and faculty, including taking the new hire out for lunch.
5. The new hire attends a new faculty orientation meeting to connect with other new faculty from other departments.

With the latest hire, the library had to consider how to replicate the onboarding process remotely/virtually. Much of the onboarding process outlined above would take place in person or serendipitously—either through formal meetings with the faculty chair or mentor, in passing in hallways and offices, or in large group meetings. With the difficulty of replicating serendipity in an online setting, the decisions and activities had to become more intentional.

A historical example would be the informal structure of checking in with the new hire—typically, by them just running across their mentor or other librarians and being asked how everything was going. In this age of COVID-19, a consistent check-in schedule between the new hire and their onboarding mentor

was cooperatively developed that allowed the new hire to feel connected to the other library faculty. This checking-in was not meant to be a formal meeting—one where progress in onboarding was measured. Rather, it acted as an opportunity for the new hire and the orientation mentor to have an open forum for frank conversations about onboarding and the needs of the new hire for support.

Similar to other studies found in the literature (Hall-Ellis, 2014; Lisbon and Welsh, 2017; Macnaughton and Medinsky, 2015; Winterman and Bucy, 2019), an online repository was created with links to resources, training, and other materials for the new hire to review in their own time. The collaboratively developed online nature of this repository ensured that up-to-date information was always available and at hand for the new hire. Knowing that this information was online and that it was easy to access reduced the stress on the new hire and the orientation mentor to keep track of all the resources, training, and materials.

One of the more unexpected aspects of onboarding is socializing (Franklin, 2019; Nyakale, 2016)—not only getting to know your new colleagues, but also being socialized into the culture of the organization, knowing who really does what and who to ask to get things done. In person, this occurred through lunches away from campus with the new hire, allowing them to feel comfortable with their new environment. In an online setting, it feels strange having this type of activity occur—eating lunch with colleagues through a video call is not quite the same. However, consideration should be given to replicate some aspects of the socialization process of onboarding. One way this was done for the most recent hire was to order a lunch delivery, which replicated the financial side of taking someone out to lunch, but did not quite get there when it came to conversation.

The onboarding experience: present and future

According to Daisy Muralles, the new hire's reflections are described in the first person, as the experience of onboarding can be a very personal and self-reflective experience:

Since 2013, I've worked professionally in libraries, which has given me the opportunity to explore different approaches to onboarding students and staff into a new group in an academic library. However, today, as I continue to transition into my new role in my new library at my institution, as a newly minted librarian, I am realizing that I have specific needs for the onboarding process. The experience of the "onboarder" is often an unwritten/

unrecorded aspect of the onboarding experience. I hope that by sharing the rollercoaster of emotions and thoughts I had up until writing this article, others might gain some insight into what they might be able to negotiate or ask for in their onboarding process, should they be new hires at a new library.

To begin with, I expected some anxiety and other emotional labor in the process of my acculturation in my new institution but, given our current COVID-19 health crisis, the Black Lives Matter protests taking place after the murder of Breonna Taylor and George Floyd by officers of the law, and the rise of emboldened white supremacists, the so-called “alt-right,” in the USA, my role as the Equity and Open Access Librarian took on a new meaning for me, which I continue to wrestle with as I continue my onboarding to this day. And I ask myself on a daily basis: What is the role of the Equity and Open Access Librarian today, tomorrow, and the next day and the next day?

I think it is a common understanding that for any new position there is going to be self-doubt, fears, and expectations held by the new hire. The fear of not being enough, not accomplishing enough, or fears of not meeting the expectations of peers or the community can be very isolating. I had/have all of these fears and starting my new job during this coronavirus pandemic, during Black Lives Matter protests, during a point in our society where we need to stand for what is right ever more fiercely, adds a whole other set of additional fears of working in a public institution where its mission is to provide equitable access to information and information resources to students going through the same rollercoaster we are all on—students who, despite all the chaos, continue to pursue their right to an education and persevere. So, I feel a great responsibility and the deep need for community, support, personal connections, and time for reflection.

Thankfully (and forever grateful), relationship-building and open dialogue have been a core component in my onboarding process. Starting my onboarding completely remotely after years of working in a very contact-specific discipline, in special collections/archives, has been difficult. At first, I was thinking the difficulty emerged from not having a sense of place, being unfamiliar with the organization in general. But I am now realizing that the difficulties were there because I did not have access to the unspoken physical cues I would normally pick up from my colleagues. There is so much learning that I do from observing others working together, how my colleagues communicate and interact with each other. I was also missing those small reminders that I am part of a team working on a shared vision when we pass each other in hallways or run into each other on our way to a meeting. These are small moments I took for granted when I was working on-site, which can contribute to establishing a sense of community and support. And there are definitely ways that these moments can be recreated online but, as a new

employee, I don't think I had the confidence to engage “so boldly” in new methods of communication, especially during a time when folks were trying to adjust their work and their ways of working.

It might be my archives background or the fact that there was a collective move in the archives world to document what had been happening to us at the start of COVID-19, but very early on in my onboarding, I knew that I wanted to document how I was feeling while starting my new job during the age of COVID-19. This practice was encouraged by my faculty chair and my onboarding mentor. However, it wasn't until I started preparing for a meeting with a prospective library and information studies student that I realized that my documentation had only been documentation, and what I really needed to do was reflect on my experience.

To help me in the reflection process, I used the storytelling structure as described in *Research Is Ceremony: Indigenous Research Methods*, by Shawn Wilson (2008). I decided that I would also write a letter—a letter to the student. This allowed me to take time to outline my relationship with that student, the experiences I'd had leading up to my new position, and the process of me recognizing I was still onboarding three months after my start date. It allowed me to frame any advice I had for this student in a way that allowed the student to interpret my experience as a new faculty librarian at an academic library from their own understanding of who I was. It felt like a deep reflective practice, and the act of writing this letter also helped me prepare my thoughts and feelings about my experience before I spoke with the student. This reflection also gave me some insight into how I could describe these feelings to my onboarding mentor.

Up to this point, my mentor and I had clocked in several hours of one-on-one conversations, think sessions, and reflection, which allowed me to express the feelings I was having about my onboarding in a very open and honest way. I found myself saying that I felt like I was feeling seen and unseen in the work I was pursuing or wanting to do. I was able to express that I was still going through the in between and becoming comfortable very slowly. I was able to express that I was feeling that I was not accomplishing enough or being enough in my role at the library. This correlated with a need for feedback on my progress as a new librarian.

These are going to be ongoing conversations that my mentor and I will likely continue to have. I think these types of conversations are important to have as needed in the onboarding process, particularly for new roles. During this time of COVID-19, I've realized that we need to be patient, flexible, and compassionate, and allow ourselves time to adapt with the changing expectations that one might have for themselves and those they interpret others have of them. What I realize has mattered most to me in this onboarding process is the

need to develop relationships with my colleagues that center clear expectations of communication, of the type of support.

Below, I outline “data” (i.e. categorizing and counting moments and experiences) I tried to extract from the first few weeks of my onboarding experience. I tried to review this data as a way to reflect on my progress in building connections with my colleagues. What I have learned from this data is that the onboarding process is about building relationships—ones in which I have an equal say. I am trying to embrace that process rather than aim for a “final product” of a successful onboardee, one who is a confident, well-acclulturated librarian who is the expert in equity and open access at my institution. Instead, my aim is to be a librarian who is learning how to continue developing relationships to be able to successfully fulfill my roles and responsibilities around equity and open access.

Identifying data in the onboarding experience

Over a span of 31 days, in the first month of the new hire’s employment (1–31 July), the new hire was able to engage in 14 distinct one-on-one meetings with library staff, as documented by the new hire’s personal calendar. According to the library’s most recent organizational chart, there is a total of 36 library staff, which includes library faculty and directors but excludes library student assistants. Most of these interactions were self-initiated and required the new hire to reach out individually to their new colleagues. It must be noted that this was the preferred option of the new hire. It was initially offered that these meetings would be arranged by a senior faculty member, but the new hire opted out of this for the flexibility of scheduling. In the cases where the meetings were not initiated by the new hire, department heads and directors had been encouraged to reach out to the new hire to introduce themselves.

The total number of interactions between a new hire and members of the library organization within a given time frame might help define a type of threshold that can be correlated with a new hire’s successful onboarding. The total number of meetings, as a sole indicator, cannot be the only measure to determine the success or the completion of a new hire’s onboarding process. But this number can indicate if steps have been taken to meet a threshold for successful onboarding. In the end, the perceived goal for many of these meetings is to establish a connection and exchange information that might help the new hire build a broader understanding of their role in the organization’s functions. However, more importantly, these meetings give the new hire the opportunity to form individual relationships and

partnerships, or simply to understand the network of potential support.

Another measure that was identified during the onboarding process was that of the number of training sessions or learning opportunities the new hire participates in. An explicit definition of what is considered a “training session” should be described in order for it to be used as a quantitative measure, and this measure can then be used to set up a threshold that should be met to determine the progress of a new hire’s onboarding process. There are different types of training that are required by individual employee contracts and campus policies. However, there are also training sessions that might help the new hire to be inspired, gain confidence in themselves, or broaden their knowledge on a particular subject or skill, which are often attributes that are not found in required onboarding training sessions. These are aspects that can come from collaborative training sessions or networking events, community events and campus activities. These social group meetings can often be an indicator of campus culture.

Over the span of 31 days in the first month of the new hire’s employment (1–31 July), the new hire was able to participate in 51 hours of learning outside of operational technical training or other committee work, as documented by the new hire’s personal calendar. Operational technical training and other committee-work training are necessary in one’s job function. However, additional opportunities for learning and engagement outside of the library’s technical or human resources training are critical for a new faculty librarian to build community relationships. This is particularly true during this time of COVID-19 where those relationships are more difficult or not possible to build in person. This training provides the new faculty librarian with a different understanding of another key component of their work—their relationship to their research and learning—while also providing the opportunity to situate their role in a purpose within the campus and the broader community. The broader community includes the broader information professional community and the communities the new hire wants to directly serve locally.

Discussion

The themes that emerged from the autoethnographic data include the need for relationship-building, identifying short-term goals, and for feedback related to the new hire’s onboarding progress. Additional insight into the importance of relationship-building may be gained from a further review of the autoethnographic data. The total number of interactions between the new hire and members of the library organization within a given

time frame might help define a type of threshold that can be correlated with a new hire's successful onboarding. In addition, the total number of workshops and other training sessions might help establish a different threshold that needs to be met for the successful onboarding of a new hire. Making progress in meeting other colleagues in the library or on campus, in understanding ideas, relationships and purpose from the community, requires dedicating time—intentional time—to learning about others and these new communities. It might appear to be easier to put a new hire to work on day-to-day operations but, if meaningful time is provided for them to learn about the community, a deeper connection can be made between the new hire and their work. This deep investment in relationship-building and establishing trust among individuals is a critical element in the successful onboarding of a new hire in a library organization.

One of the unexpected difficulties of the remote onboarding experience is the lack of unspoken physical cues. Given the remote nature of the new hire's onboarding experience, the lack of physicality was expected, but it was the lack of unseen, unspoken physical cues that was felt the most. None of the articles found during the literature review address this, perhaps due to the nature of their data collection or the difficulty of parsing this information from surveys or interviews.

The collaborative nature of this onboarding experience was an intentional decision by the onboarding mentor—something that is not seen or discussed in the literature. By relying on ongoing conversations between the onboarding mentor and the onboarding mentee, issues or concerns related to the onboarding experience can be addressed quickly. This creates a positive experience for all involved, with the onboarding mentee feeling seen and heard and the onboarding mentor learning more about the onboarding mentee.

The best practices to consider for onboarding remotely include the following: (1) engage in scheduled reflective practice; (2) when possible, seek regular feedback on progress from mentors, colleagues, and key people on your projects; (3) schedule regular meetings with colleagues, ideally with a loose agenda, which will allow for opportunities to brainstorm, process, collaborate, and check in with each other; and (4) acknowledge that we are, for lack of a better term, in unprecedented times and that there will be challenges to building and maintaining strong relationships with colleagues and others.

Conclusion

The goals of the onboarding process—building relationships and skills training—ultimately lead to the

development of trust: trust on the part of the new hire in the organization, trust on the part of the organization in the new hire, and trust between the new hire and other staff and faculty. The ideas discussed in this article are not new concepts. They are instead established concepts that have been reconfigured to help individuals who are entrusted with ensuring the successful socialization or onboarding of new hires in their organization. By focusing on creating opportunities centered on building relationships, the hope is that the new hire will be engaged, succeed in their work, and become the best version of themselves that they can be.

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Author biographies

Andrew R. Carlos was the Web Services Librarian at Cal State East Bay. His research interests are leadership development, popular culture, and information literacy.

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School library media specialists: An evolving profession in a pandemic

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Abstract

In March 2020, Michigan's school library media specialists, along with the entire educational community, found themselves facing unprecedented challenges brought by the disruption of the COVID-19 pandemic. As learning shifted online, the roles of school library media specialists shifted as well. Three southeast Michigan school library media specialists were interviewed to obtain their perspectives regarding the adaptation to distance learning, as well as how they predicted educational practices will evolve going forward. The educational practices of learning commons, guided inquiry, co-teaching, and information literacy were found to be particularly valuable during the shift to distance learning. The increased dependence on these practices during the pandemic will likely result in increased implementation of these practices when face-to-face learning resumes.

Keywords

Pandemic, COVID-19, Coronavirus, school media centers, school media libraries, information providers, distance education, library and information science, education, North America

Introduction: school librarians before the pandemic

In recent decades, the role of the school library media specialist has evolved in response to technological developments and their implementation in educational practices. School library media specialists foster the development of students' reference skills from their earliest school days. First, the role of school library media specialists will be described; this is followed by a description of the impact of the COVID-19 pandemic.

In Michigan, “[e]ducators who hold the Library Media (ND) endorsement are certified teachers who have attained a Master’s Degree in Library Science or Library and Information Science (MLS or MLIS)” (Michigan Department of Education, 2018). Library media specialists serve as specialized teachers who collaborate with classroom teachers to deliver digital and information literacy instruction, as well as reinforcing classroom literacy instruction. They act as information specialists, curating materials for students and staff, managing the library collection, and researching best instructional practices to share with the school staff. They are program administrators,

developing and implementing the school library program while acting as advocates for literacy and information instruction within the school community (Michigan Department of Education, 2018).

Investigation method

This article began as a final paper for the INF 6210 Access to Information class at the School of Information Sciences, Wayne State University, Detroit, Michigan. A standardized open-ended interview of three Michigan school library media specialists was conducted via the Zoom teleconferencing application in the fall of 2020. The interview questions were shared with the interviewees in advance of the interview. These questions can be found in Appendix 1. Each interviewee received and approved a transcript of their interview. They each gave their consent to be quoted in this article. The completed paper was also shared with each interviewee prior to publication, and

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they were asked to review and approve their quotes, which they did via email exchanges.

The three interviewees were all female school media specialists in southeast Michigan public school districts. Each interviewee is the only school library media specialist at her individual school. They teach students of different ages. Each was asked the same general questions about their reference responsibilities before the COVID-19 pandemic, their experiences since the COVID disruption, and how they adapted their teaching practices to provide support to students, teachers, and parents during the pandemic. Each interview lasted approximately 30 minutes.

Participants

Elementary school library media specialist (kindergarten–5th grade)

Jennifer (Jenny) Bachman has been the library media specialist at Hampton Elementary School for 16 years. Hampton Elementary has 492 kindergarten through 5th-grade students and 25 teachers, and is in Rochester Hills, Michigan (Great Schools, n.d.). Great Schools is an online resource that lists demographic information for public and private schools in the USA. Rochester Hills is a suburban community north of Detroit, with an estimated population of 74,516 (United States Census Bureau, 2019b).

The Hampton Elementary Media Center has approximately 12,000 books in its collection. Jenny Bachman has a Master of Library Information Science from Wayne State University (Jenny Bachman, personal communication, 29 September 2020).

Middle school library media specialist (6th grade–8th grade)

Gwenn Marchesano is the school library media specialist at Pioneer Middle School in Plymouth, Michigan. She is also a past president of the Michigan Association for Media in Education and an adjunct faculty member of the School of Information Sciences at Wayne State University. She holds a Master of Library and Information Science with a School Library Emphasis and has worked as a school library media specialist for 15 years (Gwenn Marchesano, personal communication, 1 October 2020).

Pioneer Middle School has 869 students and 39 teachers, and is in Plymouth, Michigan (Great Schools, n.d.). The Pioneer Middle School Media Center has approximately 7500 print books and 1000 digital books in its collection (Gwenn Marchesano, personal communication, 11 October 2020).

Plymouth is a suburban community located to the west of Detroit, with a population of 9154 (United States Census Bureau, 2019a).

High school library media specialist (9th grade–12th grade)

Brenda Carlson is the school library media specialist at Rochester Adams High School in Rochester Hills, Michigan. She has been the school library media specialist for 10 years. Ms Carlson has a Master of Library Science from Wayne State University and her National Certification.

Rochester Adams High School has 1570 students and 100 teachers, and, like Hampton Elementary, is located in Rochester Hills, Michigan (GreatSchools, n.d.). The Rochester Adams Media Center has approximately 11,000 books (Brenda Carlson, personal communication, 28 September 2020). Brenda Carlson is the only school media specialist on staff (Brenda Carlson, personal communication, 28 September 2020).

An elementary school library media specialist's perspective

Jenny Bachman meets with each class once a week. She guides students with book selection; reads aloud to each class; teaches digital and information literacy lessons; and teaches students to use the online databases provided by the Michigan Library—specifically, the Michigan Electronic Library Catalog (MeLCat). “MeLCat is an online catalog service that allows patrons of participating libraries to borrow materials—books, movies, music, and more—from all over Michigan and have them delivered to their home library” (Michigan eLibrary, n.d.). She makes use of PebbleGo, an online curriculum-based research tool for kindergarten through 3rd-grade students (PebbleGo, n.d.); World Book Kids (World Book, 2021); Explora, an online interactive STEM (science, technology, engineering, mathematics) resource for elementary students (Explora, n.d.); and Britannica School (Encyclopaedia Britannica, 2021). Most reference resources are now online, with the exception of almanacs. She encourages her teachers to use online databases with students, rather than defaulting to Google searches. She teaches students to write citations for their research assignments (Jenny Bachman, personal communication, 29 September 2020).

A middle school library media specialist's perspective

Gwenn Marchesano also supports students with book selection for independent reading. She supports

classroom teachers by helping students find reference materials for research projects. She reports that about 10% of her students' research relies on print materials. The Plymouth-Canton School District issues Chromebooks at no charge to every student to use for schoolwork. Gwenn, like Jenny Bachman, uses the electronic databases and resources in the Michigan eLibrary, including Britannica School. She uses "Gale in context: Opposing viewpoints," which presents different viewpoints on current social issues (Gale, n.d.). She makes use of BrainPOP. BrainPOP provides animated research resources for topics across subjects for kindergarten through 8th grade. It includes current topics like the Coronavirus (BrainPOP, 2020). Lastly, she curates Destiny (Follett, 2021) collections of print and online resources for classroom teachers as they prepare for research assignments (Gwenn Marchesano, personal communication, 1 October 2020).

A high school library media specialist's perspective

The majority of Brenda Carlson's time is spent working with language arts classes. She also works extensively with seniors on their projects. She supports social studies classes as well. She makes use of e-books when working with the language arts classes and also uses the MeLCat resources like her colleagues at the lower grades. She curates collections for teachers to support research assignments and provides research and citation instruction while the classroom teachers cover the course content (Brenda Carlson, personal communication, 28 September 2020).

Post-COVID: teaching through disruption

In mid-March 2020, everything changed in Michigan's public schools. The COVID-19 pandemic forced school shutdowns. School districts scrambled to transition to distance learning. "The rapid advance of the virus disrupted and essentially disabled often well-structured face-to-face learning environments that were quite familiar to both learner and educator and relied on established learning modalities" (Schultz and DeMers, 2020: p. 3). Parents found themselves partnering with the school to ensure that their children's education remained uninterrupted. The entire system needed to be rapidly reimagined.

School library media specialists were already teaching students to access online resources to complete assignments. In 2019, researchers at the University of Alberta studied the school library media specialist's leadership roles. They wrote:

All of the participants identified their teacher-librarianship training as being integral to having the

opportunity to take on formal leadership roles. Each of the participants in this study graduated from the same graduate level teacher-librarianship education program and many credit this experience as the beginning of their leadership journey. (Branch-Mueller and Rodger, 2019)

School library media specialists are uniquely positioned to lead school staff, students, and families through the transition to distance learning. The COVID-19 disruption brought not only challenges, but also opportunities for overdue change and growth for all of Michigan's educational stakeholders.

Literature review

In the *American Libraries Magazine*, Kathy Carroll, the 2020–2021 president of the American Association of School Librarians, reported: "Some school systems have been online for a while, and they've purchased databases and had conversations about how to use online resources" (Keeker, 2020). School library media specialists' expertise at finding online sources and providing technology support for faculty made them invaluable in 2020. Carroll continued: "For other students and educators, it's been a new world. We heard stories throughout the spring about how librarians assisted other educators to get online" (Keeker, 2020).

School library media specialists are preparing for the eventual transition to in-person learning. Finding new ways to reach students, including joining online classes and using carts to bring books to classrooms, school library media specialists continue to be active participants in education. *Knowledge Quest*, the journal of the American Association of School Librarians, conducted a back-to-school survey. It was reported that:

School librarians have always found a way to reach learners at the point of need. School librarians whose school library will be closed or used for classroom space plan to meet learner needs by taking bookcarts to classrooms for in-class check-outs (50%) and continuing to teach remotely (55%) or co-teaching with classroom teachers (38%). (American Association of School Librarians, 2020)

As the pandemic shut down schools, librarians faced the challenge of providing independent reading material to students. In addition to working collaboratively with classroom teachers, school library media specialists began to reach out to parents. Rachel Grover, a librarian at Fairfax County Public Schools in Virginia, comments: "Consider reminding parents and staff that digital reading is reading, too! Whether or not there is access to your physical space, e-books, audiobooks,

and other digital media can be excellent ways to keep students reading” (Gilbert and Grover, 2020: p. 22).

Across the USA, school library media specialists continued to find ways to encourage independent reading with their students. The *Bemidji Pioneer* reported on a Minnesota school, saying:

The roles look different across the district—at Bemidji Middle School, Pflieger [Bemidji Middle School Library Media Specialist] is helping students to access e-books with the new resources available to students due to COVID-19. . . . Elementary library media specialists are connecting with younger children to encourage daily reading and asking them questions about their current books. (Olson, 2020)

School library budgets did not take pandemics into consideration when they were planned. School districts found themselves facing mounting unexpected expenses. Sheila Intner, Professor Emerita at Mount Holyoke College, argued:

We are providing the materials and information our people need to succeed in getting through the pandemic without losing themselves to ignorance and fear. They need our help and you have to make it possible for us to help them. That is the most important plea each library administrator must make and continue to argue until they get what they need. (Intner, 2020: p. 9)

An article in the *Texas Library Journal* looks to the future and the practices school library media specialists will continue to embrace, saying:

we can still take advantage of some really great programs to flip the classroom and allow students to learn at their own pace, finish their assignments online, while getting instruction time with teachers and more assistance from staff all over the school. (Santos, 2020: p. 68)

Educators found new online tools to engage their students in distance learning settings. While educators felt the stress of transition throughout 2020, it was clearly also a time of innovation and growth.

As school districts sought to re-engage students in new learning environments, the need for professional development and support for teachers was clear. Laura Summers (2020: p. 33), Assistant Clinical Professor at the University of Colorado, expressed concern regarding teaching staff: “Professional learning that is relationship-based, empowering, and grounded in social and emotional learning (SEL) will prepare educators to build equity and self-efficacy for re-engaging learners in the coming school year, whether teaching online or in person.” School library media specialists provided professional development as teachers

transitioned to their new roles as online instructors, as well as social and emotional support as they created online gathering spaces for teachers to share and debrief (Summers, 2020). The COVID-19 disruption in 2020 highlighted the leadership roles of school library media specialists in the school community as they facilitated educational collaboration between teachers, administrators, parents, and students.

An elementary school library media specialist’s perspective

In the spring of 2020, information technology support became a larger part of Jenny Bachman’s job as she worked to provide support for overwhelmed teachers, students, and families. She needed to teach the students how to use Sora, an online reading application that gives access to e-books. She also provided consultation for teachers regarding how copyright laws apply to books being shared online. She has been encouraging her students to make use of the online resources available through the Rochester Public Library.

In the fall of 2020, Rochester Community Schools offered the choice between “remote learning” and a “virtual academy.” Remote learning students began the school year with online instruction. They would transition back to face-to-face instruction when the district deemed that it was safe. The virtual academy students had online instruction for the first semester. In December 2020, families evaluated whether they wanted to continue with online instruction through to the year’s end. This is a model that has been followed by many school districts in the metropolitan Detroit area.

As of fall 2020, Jenny Bachman had 10 “remote” sections and 15 “virtual” sections. She has been meeting with each section for 30 minutes. Pre-COVID, she was able to meet with each class for an hour each week. There is pressure to cover the same amount of material in less time. She is thankful that she taught her students to use Google Classroom and how to send emails before the COVID-19 disruption. The school still precludes the circulation of print books due to heightened health concerns. However, the Rochester Public Library has a bookmobile that has been circulating in the community (Jenny Bachman, personal communication, 29 September 2020).

A middle school library media specialist’s perspective

Gwenn Marchesano described the transition to online learning as “very abrupt.” Their last day of face-to-face instruction was 13 March 2020. Her primary goal was to “get books into the kids’ hands.”

She shared videos with her students to help them navigate the library website. Since Plymouth-Canton already provided Chromebooks, her students had devices, but not everyone had Internet access. Plymouth-Canton requires families to pay an insurance premium for the Chromebooks, unless students qualify for free or reduced school meals (Gwenn Marchesano, personal communication, 22 March 2021). Her district worked to provide hotspots for students in need. They found that many students did not have library cards, so Plymouth-Canton Community Schools worked with the public library to get them library cards, allowing them access to the public library's online resources. Gwenn Marchesano provided training for students so that they were able to access e-books and audiobooks using Sora from OverDrive. In the fall of 2020, contactless curbside pickup of books was made available to the Pioneer Middle School students. The middle school library media specialists also provided digital citizenship tips for students every week as they adjusted to virtual learning (Gwenn Marchesano, personal communication, 22 March 2021).

Gwenn Marchesano reported that classroom teachers began to plan lessons collaboratively. She has been able to provide not only lesson-planning support, but also social-emotional support. She hosted online gatherings to provide connection and support for the staff (Gwenn Marchesano, personal communication, 1 October 2020).

A high school library media specialist's perspective

Brenda Carlson used the word “nightmare” to describe the transition to online learning in the spring of 2020. She reported that her role shifted to include much more information technology support for staff and less interaction with students. Instruction had more structure in the fall of 2020 than it did in the spring of 2020. Her students were making good use of the public library resources during distance learning. Her language arts teachers were beginning to bring her into their online classrooms for co-teaching opportunities with research projects. She was pleased that her district was beginning preparations to phase back face-to-face learning (Brenda Carlson, personal communication, 28 September 2020).

The practices that serve us well

Many districts in Michigan again found themselves in a liminal space in the fall of 2020. Some districts were beginning to transition back to face-to-face instruction. While the pandemic is not yet over,

enough time has passed that school library media specialists have had an opportunity to reflect on what worked well during the disruptions of 2020. Below are some of the practices that proved their value in 2020 and will continue to serve them well as they press into the future.

Learning commons

As school districts seek to update aging library facilities, discussion inevitably turns to learning commons. While this is generally perceived as a new trend, its roots extend back to antiquity. The Greek library at Pergamum, designed by Attalus (241–197 BCE), had reading rooms, spaces dedicated to public discourse, storage rooms, and a room dedicated to lectures (Buchanan, 2012).

The learning commons model is transforming school libraries. Sykes (2016: p. xii) describes the learning commons model, stating: “Learning Commons pedagogy incorporates both physical and virtual realms where students and teachers are welcomed, focused on learning, and able to connect and communicate locally and globally.” Learning commons pedagogy, rather than being simply the result of a physical remodel of library facilities, shifts the mindset of the entire school. Its implications are far-reaching. Classroom teachers and school library media specialists become partners in the instruction process, planning lessons together and co-teaching lessons. The library becomes the physical and virtual learning center of the school.

A high school library media specialist's perspective. A few years ago, Rochester Adams High School remodeled its library. It sought to create a learning commons environment. There are booths that encourage students to use the space for group study. During lunch, the library fills with students. There are smart boards and classroom spaces available, as well as multiple computer labs. The school culture has shifted to a more collaborative environment. Since transitioning online, teachers have been using virtual breakout rooms in their online instruction to continue to foster student collaboration (Brenda Carlson, personal communication, 28 September 2020).

Guided inquiry

An Australian-based study found that

teacher librarians are strong advocates of inquiry learning based on inquiry process models. The use of the inquiry process models and the emphasis on questioning ideas indicates that teacher librarians have evolved their

practice from an information literacy or information-seeking focus to a more holistic focus. (Lupton, 2015: p. 19)

Guided inquiry models encourage students to determine their topic of study. Students become engaged researchers, honing their critical thinking and presentation skills.

In “Making the shift: From traditional research assignments to guiding inquiry learning,” Maniotes and Kuhlthau (2014: p. 9) offer an alternative to the “traditional k–12 research assignment.” Their model of inquiry-based learning has been widely implemented in K–12 schools. They differentiate between exploration and collection of information, arguing that a student must first explore a topic before being able to form a question to investigate. They submit that the formal question comes mid-investigation, rather than at the outset (Maniotes and Kuhlthau, 2014). An initial period of topical exploration prioritizes the value of research and develops skills that transform students into lifelong learners.

In their article “‘Just let me go at it’: Exploring students’ use and perceptions of guided inquiry,” Garrison et al. state:

GID [guided inquiry design] is different from other inquiry learning models in its emphasis on delaying the creation of a topic focus (i.e., an inquiry question) until the student is engaged by the topic and has some idea of its scope. (Garrison et al., 2018)

Inquiry-based models of instruction allow students more time for researching, which in turn gives them a deeper understanding of the topic. Students are allowed more control of their own learning and creation process and, as a result, take greater ownership of their work. Students also hone their presentation skills as they share their work with their classmates.

The Library of Michigan has adopted the School Libraries in the 21st Century benchmarks. The “Inquiry-Based Research” benchmark reads as follows:

The school librarian:

- Provides instruction in research strategies and evaluating the accuracy, perspective, credibility and relevance of information, media, data or other resources.
- Provides instruction in using authoritative sources and in appropriate citation of sources.
- Instructs using an inquiry-based process.

Table 1. The Big 6 process model.

Step Title	Step Description
Step 1. Task definition	Students define the problem and the information they will need to solve it.
Step 2. Information-seeking	Students plan the information-seeking strategies they will use and select sources.
Step 3. Location and access	Students locate sources and search for information.
Step 4. Use of information	Students engage with sources and extract relevant information.
Step 5. Synthesis	Students organize information into presentations or reports.
Step 6. Evaluation	Students evaluate their final product and reflect on their process.

Source: Eisenberg and Berkowitz (2018).

- Instructs in accessing, comprehending, and synthesizing primary source, data, scholarly and/or peer reviewed sources.
- Instructs learners to create and share new knowledge in multiple formats. (Library of Michigan, 2020: 19)

The benchmarks recommend an inquiry-based approach. School library media specialists in Michigan are implementing inquiry-based approaches in their libraries and sharing inquiry research practices with classroom teachers.

School library media specialists’ perspectives. Jenny Bachman, an elementary school library media specialist, follows the Big6 model for inquiry instruction. She allows students to choose their own topics and asks lots of questions. She spends time with students, helping them to narrow their topic to a focus question (Jenny Bachman, personal communication, 29 September 2020). An overview of the Big6 process model is provided in Table 1.

Gwenn Marchesano reported that the degree to which she uses a guided inquiry approach depends on the classroom teacher. About 30% of the classroom teachers follow a guided inquiry model when assigning research projects. Many classroom teachers still prefer to assign specific topics to students and follow a traditional teaching style (Gwenn Marchesano, personal communication, 1 October 2020).

Brenda Carlson takes a guided inquiry approach when working with her language arts students. She described a research project on the USA during the 1920s (a time of transition between World War I and

the Great Depression, which began in 1929, and of economic growth, when many cultural norms were challenged). Her students are exploring topics relating to the 1920s, developing a focus question, investigating, and reporting back to the class (Brenda Carlson, personal communication, 28 September 2020).

Co-teaching

School library media specialists have long supported classroom teachers through collaborative planning and co-teaching. In March 2020, school library media specialists found themselves working with new collaborative partners: parents. As parents struggled to support their children's transition to distance learning, school library media specialists were a vital link to the school.

Co-teaching leverages the school library media specialist's information expertise with the classroom teacher's content expertise. The relationship between school library media specialists and classroom teachers is critical to successful co-teaching: "Teachers' feedback shows that the interpersonal aspects of co-teaching relationships are very important in establishing and maintaining successful co-teaching partnerships" (Donovan, 2018: p. 127). Students benefit from watching the interactions between the library media specialist and their classroom teacher, seeing collaboration modeled in their classroom: "When we co-teach in the school library or in her classroom, the students benefit because we keep up a dialogue, adding layers of meaning and suggestions to our explanations and giving students multiple ideas to foster their critical thinking" (Kilker, 2012: p. 43). Collaboration is critical in the online environment for both students and teachers: "In Zoom, features like Breakout Rooms enable students to collaboratively create meaning and presence" (Henriksen and Creely, 2020: p. 204).

School library media specialists' perspectives. In the fall of 2020, Jenny Bachman was teaching 10 remote sections and 15 virtual academy sections each week. Unfortunately, with 25 sections each week, there was not much time left for co-teaching. She coordinated with classroom teachers and supported their research assignments, helping students find reference materials and teaching them to write citations (Jenny Bachman, personal communication, 29 September 2020). For co-teaching to be possible, library media specialists need some flexibility in their schedules.

The middle school and high school library media specialists both co-teach with classroom teachers. They have flexible schedules that allow them to work

in collaboration with classroom teachers. Brenda Carlson is currently planning with language arts classroom teachers to begin their students' inquiry-based research assignments on the 1920s in the USA. She uses graphic organizers to help students with their inquiry process and is planning to use these digitally whether the students are in a face-to-face environment or still online (Brenda Carlson, personal communication, 28 September 2020).

Information literacy

During the COVID-19 disruption, evaluating source reliability has become an issue of national concern. On social media, citizens share videos from very questionable medical sources. "About two-in-three U.S. adults (64%) say fabricated news stories cause a great deal of confusion about the basic facts of current issues and events" (Barthel et al., 2016).

With the proliferation of unreliable sources on the Internet, the need to explicitly teach students information literacy skills has become clearly apparent. "Fake news is often used to describe false or extremely biased stories and the term has become a part of the cultural zeitgeist. School librarians have been able to use it to reinforce the need for information literacy instruction" (Spisak, 2020: p. 152).

"[W]e have the potential to see a social change whereby students will begin to excel in information literacy and technology both academically and personally as the common core standards push teachers to create activities that foster critical thinking" (Taylor, 2015: p. 118). It has become apparent that, as student instruction has moved online, they have to be able to identify whether an online source is reliable. Teachers have also been challenged to find reliable sources to share with their students and colleagues.

A middle school library media specialist's perspective. Gwenn Marchesano shared that she has focused on students using information effectively and ethically. Her goal is that students will independently identify reliable sources. She teaches students to identify bias. "That's a big one right now," she shared (Gwenn Marchesano, personal communication, 1 October 2020).

Conclusion: moving forward

In the face of the COVID-19 disruption, the practices described above have proven their value. A learning commons philosophy readily transitions to the online environment. Teachers and school library media specialists have realized the importance of working collaboratively, both co-teaching and giving students opportunities to collaborate. Guided inquiry skills

have allowed students to make use of familiar online resources, such as the MeLCat system of the Library of Michigan. Information literacy skills have helped students to intelligently interpret data, seek the provenance of sources, and determine the validity of information found in the online world.

The COVID-19 pandemic has revealed what school library media specialists already knew. The school library is the heart of the school, whether virtual or physical. The potential for collaboration, as promoted in the learning commons model, has become a lifeline for teachers who have struggled to regain their footing in this new world of distance learning. A desire to help their fellow teachers is often what drives teachers to become school library media specialists. In a study done on the development of leadership qualities among school library media specialists, one of the participants shared the following quote:

My focus was teacher-librarianship, educational technology, and inquiry learning. In that role, what we did was a lot of workshops for teachers, finding resources and making them available on our intranet. We did a lot helping teachers if they had questions, co-teaching, co-mentoring, working together as a group to say here is the new curriculum what are some ways to make it easier to implement it? (Branch-Mueller and De Groot, 2016: p. 4)

As the school library media specialist, Gwenn Marchesano was uniquely positioned as a person in the school who everyone already knew, so it was natural for her to bring teachers together online to support each other (Gwenn Marchesano, personal communication, 1 October 2020). The COVID-19 disruption has given school library media specialists an opportunity to shine in the greater community, beyond the school's physical walls. As classroom teachers and parents have looked to school library media specialists for advice and support during the COVID-19 disruption, familiar practices have proved their worth, easing the transition to distance learning. These practices will continue to support success in the future.

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Author biography

Heather Kapanka began her career teaching biology and physical science in Ferndale, Michigan. Classroom teaching convinced her of the value of inquiry-based instruction. She continued her work in education as an educational consultant for Macmillan/Mcgraw-Hill Publishers, where she provided product support and professional development training for kindergarten through eighth grade teachers. She is currently completing her Master of Library and Information Science Degree at Wayne State University in Detroit, Michigan.

Appendix I

Interview questions

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1. How do you normally provide reference skill instruction to students?
 2. Before COVID, what percentage of your students' research relied on print materials?
 3. Describe how you provide reference support to teachers.
 4. Do you ever co-teach with teachers when they assign research projects?
 5. Describe your experience of the transition to online learning in the spring of 2020.
 6. What are you thankful that you taught your students pre-COVID that made their transition easier?
 7. How did COVID affect access to information for your students?
 8. How did your role change during online instruction?
 9. Were there changes between spring 2020 and fall 2020 regarding online learning?
 10. Were you able to engage with your students during COVID? What percentage of students? What did that look like?
 11. Did you provide technical reference support for teachers during COVID?
 12. Did you provide consultation regarding copyright issues for teachers during online learning?
 13. How will your experiences during COVID change the way you teach when we return to in-person learning, particularly regarding information literacy?
 14. Did you collaborate with public libraries during the COVID disruption? Can you describe that?
 15. To what degree does your school follow a learning commons philosophy?
 16. To what degree do you follow an inquiry-based approach to research assignments?
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Exploring National Library of Scotland datasets with Jupyter Notebooks

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Abstract

The National Library of Scotland's Digital Scholarship Service has been releasing collections as data on its data-delivery platform, the Data Foundry, since September 2019. Following the COVID-19 lockdown, this service experienced significantly higher traffic, as library users increasingly made use of online resources. To ensure that as many users as possible were able to explore the datasets on the Data Foundry, the Library invested in a Digital Research Intern post, with a remit to provide introductory analysis of the Data Foundry collections using Jupyter Notebooks. This article provides a case study of this project, explaining the Library's work to date around its new Digital Scholarship Service and releasing datasets on the Data Foundry; the reasoning behind the decision to begin to provide Jupyter Notebooks; the Notebooks themselves and what types of analysis they contain, as well as the challenges faced in creating them; and the publication and impact of the Notebooks.

Keywords

Jupyter Notebooks, collections as data, digital scholarship, access to collections, COVID-19

With over 31 million items in its collection, the National Library of Scotland is one of the major research libraries in Europe. Founded in 1925, and based on collections formed from the Faculty of Advocates Library in Edinburgh, which itself was established in 1682, the Library is currently working to a 10-year 'One Third Digital' strategic aim, which commits to making a third of its collections available in digital formats by 2025 (National Library of Scotland, 2015). This has resulted in a surge in activity around digital acquisitions and digitisation, and, to date, 22% of the collections are digital. An in-house mass digitisation programme, which has a significant focus on out-of-copyright material, contributes substantially to this number, with 128,810 items digitised in 2017–2018 and 201,679 in 2018–2019. This material in particular has provided fuel for the Library's new Digital Scholarship Service, which was launched in September 2019. The Digital Scholarship Service has a focus on making collections available in

machine-readable form – as data – for computational use on its Data Foundry website (National Library of Scotland, 2019b).

On 23 March 2020, the UK government introduced COVID-19 lockdown measures, including closing libraries and asking the public to work from home (UK Government, 2020). With COVID-19 causing disruption to many library services – including the Library's Digitisation Team (whose efforts temporarily turned towards a working-from-home Wikisource project, which won the Library the Wikimedia Partnership of the Year 2020 Award (Wikimedia, 2020)) – the Digital Scholarship Service was able to continue releasing digitised material and other Library datasets. Having published a total of 38 datasets on the

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Data Foundry in 2019–2020, the next step was to enable users to explore these datasets easily and quickly, even if they had limited or no coding skills. With an increased need for digitised material during lockdown, and with the Data Foundry seeing increased use, the timing was right to create a series of Jupyter Notebooks providing introductory analyses of collections on the Data Foundry for remote users. This article provides a case study of the Library’s Jupyter Notebooks project. It considers the relevance of and need for Jupyter Notebooks exploring cultural heritage data collections; the process of analysing collections data in Jupyter Notebooks and the challenges of this; and the outputs of the project.

From digitisation to Data Foundry

The ‘One Third Digital’ activity at the National Library of Scotland situates the Library well in relation to the more recent computational turn in cultural heritage: digitising collections at scale ensures a rapid release of digital material. Defining ‘digital scholarship’ as ‘the use of computational methods, with National Library of Scotland collections, to enable new forms of research’ (Ames, 2020), the Library established a new Digital Scholarship Service in September 2019, with five objectives:

- Encourage, enable & support use of computational research methods with the collections.
- Ensure that the collections are used to their full potential.
- Establish a library culture which understands digital scholarship.
- Practise and promote transparency in our data creation processes.
- Anticipate the future of research. (Ames, 2020).

These objectives are carried out through three key areas of work: making collections available as data; external engagement activities to encourage use of the datasets and collaboration with the Library, and to support scholarship; and internal engagement activities around training, skills and culture change.

As part of this first programme of work – making collections available as data – the Library began publishing datasets on its Data Foundry website in September 2019. The initial focus for this work has been on providing digitised material as datasets, to align with and exploit the existing digitisation programme, with future plans to publish metadata, maps-as-data, audiovisual material, web archive data and organisational data. After some adjustments to the digitisation and ingest processes, to ensure consistent file formats

were produced to enable digitised material to be packed up as ‘datasets’ and to embed provenance information about how and why items have been digitised in the metadata, the Library committed to releasing a dataset each month from September 2019 to the end of 2020.

The design and launch of the Data Foundry have been strongly influenced by the recent Collections as Data movement, and particularly the Always Already Computational project (Padilla, Allen, et al., 2019) and its Mellon-funded successor, Collections as Data: Part to Whole (Padilla, Kettler et al., 2019), as well as the broader OpenGlam (2020) movement. These projects have advocated for the value of presenting cultural heritage collections in open and reusable formats as machine-readable data, and the role that this plays in encouraging new uses of the collections. Aligning with these values, and with three core principles of openness, transparency and practicality, the Data Foundry is designed to be easy to access and use, providing ‘no-nonsense’ data with clear rights information, straightforward downloads, dataset trials and plain text-only options (National Library of Scotland, 2019a). The Data Foundry is also home to the Library’s Open Data Publication Plan, which details the formats the Library’s datasets use, the rights statements and licenses they are made available under, and the standards they adhere to (three-star open data); it also lists the datasets published in this way (National Library of Scotland, 2019c).

Notebooks as a COVID-19 response

With the Digital Scholarship Service launched six months before the UK lockdown began, workflows and planned outputs were established and able to continue remotely, despite COVID-19. Furthermore, with a 29% increase in unique page views in March 2020 compared to February 2020, it became clear that digital resources such as the Data Foundry were becoming increasingly important during the pandemic. Yet while the Library’s datasets are rich pickings for those who have computer-programming skills, those without the ability to code are left unable to make the most of these collections. Jupyter Notebooks, bringing these collections to those who are unable to code, were already a part of the vision for the Data Foundry, and with the increasing need for digital collections for newly remote audiences, this goal to enable all users and skill sets to access cultural heritage datasets in an easy and convenient way gained more traction.

Jupyter Notebook is a web application which allows users to write and interact with live code; it is often used in a learning and teaching environment. However, the value of Jupyter Notebooks for library

services and collections data has also been demonstrated in recent years by the GLAM Workbench established by Tim Sherratt (2020), and through work by Gustavo Candela et al. (2020) at the University of Alicante. These ‘workbenches’ make library data more accessible by using Jupyter Notebooks to analyse and explore the collections – meaning that the contents of large cultural heritage datasets can be easily explored by anyone, including those without coding skills. Inspired by this work, the Library invested in a Digital Research Intern position – the first remote-working post recruited by the Library – with a remit to create Jupyter Notebooks exploring five Data Foundry collections through text analysis.

As Rule et al. (2018) explain, ‘Jupyter Notebooks . . . were designed to support reproducible research by enabling scientists to craft easily shared computational narratives that mix code, results, and text’. Furthermore, Havens (2020) notes that Jupyter Notebooks align with the FAIR data principles of findability, accessibility, interoperability and reuse. By highlighting aspects of the Library’s datasets through Jupyter Notebooks, the Library therefore not only conforms to research values such as reproducibility, but also brings its collections to new audiences – a key component of the 2020–2025 Library strategy, ‘Reaching People’ (National Library of Scotland, 2020g). Furthermore, with the COVID-19-induced acceleration of the ‘digital shift’ in libraries and the closure of many in-person services (Greenhall, 2020), users were now increasingly moving to online services and resources; adding new ways to explore and analyse the collections online, for use by multiple audiences and skill sets, would strengthen the offerings of the Library’s burgeoning Digital Scholarship Service.

Collections data as Notebooks

The Jupyter Notebooks were created to give all library users an opportunity to explore the Library’s collections as data, even if they have never programmed or conducted data analysis. To represent the range of the collections data the Library has made available for analysis, the datasets chosen for analysis in Jupyter Notebooks are diverse in size, topic and format. The datasets are:

1. A Medical History of British India: digitised and manually corrected text of 468 papers from 1850–1950 covering topics related to public health, disease mapping, vaccination, veterinary practice, the military and colonial relationships (National Library of Scotland, 2020a).

2. Britain and UK Handbooks: digitised text from 50 official publications with tables of statistics and other quantitative information about Great Britain and the United Kingdom from a civil service perspective, published between 1954 and 2005 (National Library of Scotland, 2020b).
3. Edinburgh Ladies’ Debating Society: digitised text from 16 volumes of two journals published from 1865 through 1880 by the Society, which was founded by women of the upper-middle and high classes of Edinburgh who played roles in education, suffrage, philanthropy and anti-slavery efforts (National Library of Scotland, 2020c).
4. Lewis Grassie Gibbon First Editions: digitised text from 15 fiction and non-fiction books written by renowned Scottish author Lewis Grassie Gibbon, named James Leslie Mitchell at birth, between 1928 and 1934 (National Library of Scotland, 2020d).
5. National Bibliography of Scotland (version 1): digital metadata, provided as the library standard Machine-Readable Cataloguing (MARC) in Extensible Markup Language (XML) format, for the 368,961 books included in the National Bibliography of Scotland at the time of writing, which contains materials from the National Library of Scotland’s main catalogue that were written in Scots or Scottish Gaelic, or were published in Scotland (National Library of Scotland, 2020e).

At the beginning of the Notebooks, we included contextual information about the collections. This information summarises the contents and significance of the collection, which was written in partnership with the collections’ curators, to guide the development of research questions or larger projects that could benefit from analysis of the collections’ data. The contextual information also includes the data source (a web page on the Library’s Data Foundry) so that library users can quickly find more information about the collection represented in the dataset. Additionally, the Notebook’s contextual information states the data format, which shapes how the dataset can be programmatically explored, and the data creation process, which indicates how accurately a dataset reflects its associated physical collection items.

In all sections of the Jupyter Notebooks, explanatory text accompanies code, explaining what the code does and, where not self-evident, the results of the code. To explore the text datasets (1 to 4), we used the Natural Language Toolkit (NLTK) – a library of

code for conducting text analysis with the programming language Python (Bird and Loper, 2004). For datasets 2 and 3, we also used Altair – a data visualisation library that facilitates the creation of charts with the programming language Python (VanderPlas et al., 2018). NLTK provides methods and functions for standardisation, information extraction, classification and machine learning. To explore the MARCXML metadata (dataset 5), we used Element-Tree – an application programming interface (API) provided with Python (Python Software Foundation, 2020) – and Pandas – a library of code with methods and functions for data science work in Python (McKinney, 2011).

Each Notebook was structured around the same high-level sections: ‘Preparation’, ‘Data Cleaning and Standardisation’, ‘Summary Statistics’ and, for all but the fifth dataset, ‘Exploratory Analysis’. In ‘Preparation’, we load the dataset into the Notebook, estimate the size of the dataset (i.e. total words and total sentences), and group the dataset into subsets. For datasets of digitised text (datasets 1 to 4), we grouped the dataset by the individual works it contained – for example, we assigned each file in the fourth dataset to its associated book title. For the dataset of metadata, which the Library provides as a single file, we created a subset of the metadata based on eight MARC fields to extract author names, titles, language(s) of publication, publication dates, publication places and topics. In ‘Data Cleaning and Standardisation’, the dataset is normalised in preparation for different types of data analysis, which includes identifying the words and sentences in the running text, reducing words to their root form, lower-casing words, and labelling parts of speech in the sentences. In ‘Summary Statistics’, we calculate the frequency of words, or total times words occur in a dataset, and visualise the results for a selection of the most frequently occurring words. We also analyse vocabulary, calculating the diversity of word choice for subsets of a dataset and comparing them using the lexical diversity metric – the ratio of the total number of unique words to the total number of words.

The ‘Exploratory Analysis’ section varies more than the previous sections across the Notebooks. In the Notebook exploring the first dataset, the ‘Exploratory Analysis’ section contains questions developed in discussion with the dataset’s curator to suggest potential research directions to library patrons. The Notebook exploring the second dataset analyses the occurrence of select words by decade of publication. Exploratory analysis of the third dataset focuses on identifying women named in the collection using a natural language processing method called named

entity recognition. In the exploratory analysis of the fourth dataset, the Notebook calculates and visualises changes in the lexical diversity of each book and each publication year included in the dataset. The fifth dataset’s Notebook does not contain an ‘Exploratory Analysis’ section because we chose to dedicate more space to explanations of the data formats MARC, XML and MARCXML in the ‘Preparation’ section.

In addition to the data format, differences in the Notebooks arose due to the size of the datasets. Datasets 1 and 2 have plain-text datasets of a significantly larger size than datasets 3 and 4. To ensure that users could run the code in the Notebooks in a reasonable amount of time (ideally, each block of code in a Jupyter Notebook cell would take seconds to output an answer), the analysis applied to the larger collections differed from the analysis applied to the smaller collections. For example, although tagging each word in a sentence with its corresponding part of speech is a standard task that can prepare a user for more complex text analysis tasks, part-of-speech tagging took several minutes to run on the datasets for datasets 1 and 2. We decided to exclude part-of-speech tagging from these collections’ Notebooks, as well as the more complex text analysis tasks that depended on part-of-speech tagging. Part-of-speech tagging is included in one of the Notebooks, however, because it is a fundamental text analysis task: dataset 3’s Notebook includes part-of-speech tagging, as well as a complex text analysis task dependent upon it, named entity recognition.

The size of the collections datasets and their Notebooks also introduced challenges for their online publication. On testing the Jupyter Notebooks in an interactive online environment provided by the Binder (2020) service, we discovered that the standard Binder did not provide adequate memory space to run the Notebooks completely. The Library’s interactive Notebooks were moved instead to a different Binder service called GESIS Notebooks, which provides larger memory space (GESIS, 2018). The Notebooks for datasets 1 and 2 were also revised to reduce their memory requirements, removing code that was similar to other Notebooks. The Notebook for dataset 5 cannot be run entirely in a GESIS Notebook, however; its interactivity on that platform is limited to its second and third sections only (excluding the ‘Preparation’ section). Users may interact with the entire Notebook for dataset 5 by running the Notebook locally on their computer, downloading the Jupyter Notebook software and the Notebook file from GitHub. The next section details the options we provide to users for accessing all five Notebooks.

Publication and impact

The final step of the project was to publish the Notebooks on the Data Foundry website in a clear and consistent way, aligning with the Data Foundry's three principles of openness, transparency and practicality. Given the range of users who could be accessing the Notebooks, the aim was to ensure that they were clearly explained and framed. As a result, each Notebook page on the Data Foundry website summarises what the Notebook will enable the user to explore, and also suggests that users consult the introduction to Jupyter Notebooks on Sherratt's (2020) GLAM Workbench. Importantly, each page also contains 'A Note on the Data', which explains the problematic nature of working with historical data – such as issues with the accuracy of optical character recognition, and antiquated language and attitudes which may be present in the data. Each Notebook is then made available through three different routes to ensure a variety of choice for different skill sets or uses. These are:

1. A static HyperText Markup Language (HTML) view of the Notebook;
2. An interactive Notebook, using the GESIS Notebooks Binder service (Binder, 2020; GESIS, 2018);
3. A download from GitHub (National Library of Scotland, 2020f).

A Digital Object Identifier (DOI) is added to each page as a persistent identifier for the data analysis work and to ensure that any references to the Notebooks always resolve.

The Notebooks were published on the Data Foundry and publicised on social media on 24 September 2020, with extremely positive feedback. On Twitter, the tweet by the National Library of Scotland account announcing the launch of the Jupyter Notebooks received over 100 retweets, including retweets not only in English, but also in Russian, Portuguese, French and German. This 'launch' tweet had a reach of over 60,000 Twitter users and over 2,000 engagements (clicks on the link within the tweet to the Notebooks or to the profile page of the Twitter account, for example), as well as positive feedback from the international community (National Library of Scotland, 2020h). Meanwhile, Google Analytics shows that 40% of the traffic to the Data Foundry on the launch date visited the Jupyter Notebooks page – significantly higher than the page with the next highest share of the traffic, at 9%. Furthermore, between 24 September and 22 October 2020, the Jupyter Notebooks page remained the highest visited page on the Data

Foundry. Over the same time period, the Data Foundry also saw a 99.6% increase in overall page views compared to the previous one-month period. The most popular Notebook on the website is 'Exploring A Medical History of British India', with the remaining Notebooks sharing evenly in the increased traffic to the website (National Library of Scotland, 2020b).

There are, however, some limitations to these measurements. The particular popularity of 'Exploring A Medical History of British India' could be the result of its position on the web page – the top left – which studies have shown draws most of readers' attention on screens (Nielsen, 2010). Furthermore, Google Analytics only shows us which pages are accessed, and not which Notebooks are viewed, downloaded or used. Currently, the Library does not have access to these kinds of usage statistics, but we will continue to seek further ways to gather this information – as well as demonstrating impact through other means, such as anecdotal use of the Notebooks on university courses and promoting the Notebooks during engagement activities.

Beyond the Data Foundry, we can track engagement activity with the Notebooks through the software development platform GitHub, where we created an online repository for the Jupyter Notebooks (National Library of Scotland, 2020f). A GitHub repository displays information about who has added to software, downloaded software, or requested changes to software in the repository. To date, we have seen two requested changes – 'merge requests' – to the repository, indicating that two people found ways to improve the repository's Jupyter Notebooks when interacting with them, made the changes, and requested that their changes be integrated into the repository.

Internally, the Jupyter Notebooks were launched in a Digital Scholarship Staff Seminar on 23 September 2020, which was attended by those working in curatorial, metadata, digital preservation, digitisation and developer roles. The presentation introduced Jupyter Notebooks as a tool for exploring the Library's collections and provided highlights from each Notebook to demonstrate the output of the Digital Research Intern position. The feedback after the presentation emphasised the impact that the Notebooks are having on the Library's culture, helping to facilitate a shift towards an environment that integrates code and data as a complement to physical and digitised collection items. Furthermore, the lasting impact of the internship (developing a series of tools to enable the Library's diverse audiences to explore collections in more detail) and the value to the broader library community (as an example of how libraries can support

users of collections as data) demonstrates the relevance of such roles.

Looking ahead: from collections as data to library users as data analysts

The Jupyter Notebooks project has been a success for the National Library of Scotland – both breaking new ground for the Library as an online remote-working project amidst a challenging global context and opening up new ways of exploring Data Foundry collections as increasing numbers of library users seek to make use of online resources. Given the positive feedback and the strong indications of engagement from Google Analytics and GitHub, the value of producing Notebooks providing exploratory analysis of cultural heritage datasets appears clear. Following this positive start, the Google Analytics for the Data Foundry website and its Jupyter Notebooks pages, as well as the GitHub repository, will continue to be monitored to assess where interest lies. High usage of the Notebooks will, we hope, help to make the case to use further resources in this area, and to begin to create a Notebook ‘as standard’ for each dataset the Library publishes.

Furthermore, this project has demonstrated that there are opportunities for libraries and software developers to work together at the intersection of library data services and online tools, and develop resources which are designed specifically for library data. There are a number of use cases around libraries and library users working with collections data which would benefit from further software and tool development to enable exploration of large datasets using library standards. For example, expanding the memory capacity of interactive platforms such as MyBinder (Binder, 2020) and GESIS Notebooks (GESIS, 2018) would remove limitations on the data that can be loaded into and produced within online Jupyter Notebooks. Here, we hope, there are opportunities for future collaborative development work.

Following the intensive activity around the release of collections as data during 2019 and 2020, the Library’s Digital Scholarship Service now needs to ensure that its users are able to access and explore these collections – and particularly as new users turn to online materials. With cultural heritage organisations finding new use cases for software such as Jupyter Notebook, the Digital Scholarship Service seeks to put itself at the forefront of creating opportunities for users to carry out large-scale exploration of cultural heritage collections as data.

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Lucy Havens is a PhD student at the Institute for Language, Cognition and Computation in the School of Informatics at the University of Edinburgh. Lucy's current research explores how to identify, classify, and communicate types of bias in text. Working with text from an archival catalogue, her research lies at the intersection of Natural Language Processing, Data Visualization, and Cultural Heritage. As a designer, developer, data scientist, and technology consultant, Lucy has worked across numerous sectors, including heritage, finance, energy, and retail.



The development of LibGuides at Cape Peninsula University of Technology Libraries and the impact of the COVID-19 lockdown on their usage

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Abstract

LibGuides have been used by librarians at Cape Peninsula University of Technology since 2012 as a means of providing subject-based information to students, with quick links to selected resources and information supplementing information literacy training. Lecturers use the resources for preparing lectures and identifying learning materials, while researchers and postgraduate students use research support guides when writing their papers. As the worldwide pandemic caused a major lockdown, academic institutions in South Africa were closed and students sent home. However, students still needed to complete their studies, and librarians at Cape Peninsula University of Technology had to continue providing support to these students. One of the online services available was LibGuides. This article provides insight into the historical developments of LibGuides at Cape Peninsula University of Technology, the use of LibGuides during lockdown, and the experiences of a selected group of students and librarians.

Keywords

COVID-19, lockdown, LibGuides, academic libraries, South Africa, LibAnswers

Introduction

On 23 March 2020, President Ramaphosa declared that South Africa would be locked down for 21 days from 27 March. All economic and academic activity would be stopped and only emergency services would be allowed on the streets. All universities were closed and students were sent home. Over the past 8 months, lockdown restrictions were gradually eased and, by

October 2020, Level 1 restrictions were in place. Lockdown Level 4 saw the return to campus of final-year medical and clinical laboratory students,

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Level 3 allowed 33% of (mainly final-year) students to return to campus, Level 2 permitted 66% of students, and Level 1 allowed all students to return to campus, provided that institutions were able to implement the necessary safety measures.

During this period, universities and university libraries were faced with the challenge of enabling students to complete the academic year. It was realised that the only possible way to do so would be by providing online content, training and support. Cape Peninsula University of Technology (CPUT) embarked on a multimodal approach, combining text, audio, image and speech (Marchetti and Cullen, 2016) with its teaching and learning in order to reach all students. Communication is part of the multimodal approach, which, with technology and online connectivity, provides resources that challenge traditional forms of communication.

The pandemic forced institutions to re-evaluate their methods of communication, teaching and learning. To fulfil the multimodal approach of CPUT and reach all undergraduate students, the following modes were proposed: a learning management system, print material, worksheets, manuals, workbooks, memory sticks, video files and lecture material. Social media platforms like WhatsApp and Facebook were used as online learning platforms (Cape Peninsula University of Technology, 2020: 12). On the postgraduate level, supervisors were encouraged to use all forms of communication channels and 'digital platforms' to stay in contact with their students and provide guidance on their research activities (Cape Peninsula University of Technology, 2020: 18). A further and larger challenge was the fact that many students and staff did not have easy access to either data or laptops from home, resulting in projects to ensure that students on government bursaries would be provided with laptops and universities would ensure that staff and students were provided with data. To continue with remote teaching and learning support, CPUT assisted with devices and data, and negotiated zero-rated websites with service providers (Cape Peninsula University of Technology, 2020: 26). At CPUT, it was decided that online teaching would commence from 1 July 2020. Even with lockdown Level 1 in place, CPUT teaching and learning activities have continued online for the majority of students.

CPUT Libraries responded by providing virtual support to meet the teaching and learning needs of faculties. The libraries supported this approach by strengthening their online presence on all social media and, specifically, their websites, focusing on LibGuides and LibChat as online services for students. In addition, Blackboard (the institutional

learning management system, with embedded links to library online services) is utilised for information literacy training purposes. LibGuides, having already been used by faculty librarians at CPUT to provide information and links to suitable materials, were an immediate solution to providing support to CPUT students during lockdown.

The aim of this study was to trace the development of LibGuides at CPUT and to establish if CPUT Libraries succeeded in creating LibGuides that supported the information needs of students and were used by students during the COVID-19 lockdown period.

Literature review

LibGuides in the university context

Academic libraries worldwide have embraced and adopted LibGuides technology. This easy-to-use content management system is used by librarians globally to curate knowledge and organise and share subject-specific information resources with user communities in support of learning, teaching and research (Springshare, 2020). Globally, there are 782,590 guides that have been produced by 205,183 librarians across 5605 institutions in 97 countries (Springshare, 2020).

The universal use and impact of LibGuides technology has been explored extensively by many studies in different countries, such as the UK, the USA, Australia, Canada and South Africa. These studies establish the use and value of LibGuides as instructional tools in teaching information literacy skills (Chiwere, 2014; Kolah and Fosmire, 2010; Mokia and Rolen, 2012; Mooney, 2012; Skelly et al., 2013; Strutin, 2008; Yelinck et al., 2010). Several studies look at the support value of LibGuides for distance learning programmes and curricula (Dobbs et al., 2013; Gonzalez and Westbrook, 2010; Neves and Dooley, 2011; Smulewitz et al., 2013). Studies by Fry (2014: 2), Griffin and Lewis (2011: 5), Little et al. (2010: 440), and Neves and Dooley (2011: 94) explore the use and value of LibGuides as promotional and marketing tools for library information resources. Other studies look at how LibGuides have been used in managing e-resource subscriptions like aggregated databases, e-books and e-journal collections (Bausman et al., 2014; Dobbs et al., 2013; England and Fu, 2011; Smulewitz et al., 2013), and indicate that they are a useful tool for collection development and analysis (Bangani et al., 2019).

South African university libraries have embraced LibGuides and made a significant contribution with a total of 2332 LibGuides by 22 university libraries. CPUT Libraries has contributed 153 listed LibGuides

(Springshare, 2020). Bangani and Tshetsha (2013) show that the LibGuides project started in 2012 with a small committee that received a brief from the CPUT Libraries management for librarians to:

- Explore various ways of responding to the research agenda of the institution;
- Explore the LibGuides of other institutions and decide on how CPUT Libraries could use LibGuides to enhance its services;
- Learn how to design LibGuides for use by the CPUT community;
- Decide on a standard template to be used by CPUT Libraries to develop its LibGuides;
- Develop ‘model LibGuides’; and
- Report back to librarian faculty clusters and coordinate the development of LibGuides by other librarians.

Theory and Technology Acceptance Model

Theory and the application of a theoretical framework forms the backbone of all types of empirical research (Lederman and Lederman, 2015: 597). It supplements the objectives of the research and contextualises it (Ngulube, 2018: 1). The Technology Acceptance Model (TAM), developed by Davis (1986), is broadly used in various technology-usage studies as a theory to examine and explain user behaviour in the adoption of new end-user computing technologies (Alfaresi and Hone, 2015; Davis et al., 1989; Jeong, 2011; Joo and Choi, 2015; Khan and Qutab, 2016; Nov and Ye, 2008; Park et al., 2009; Venkatesh and Davis, 1996; Xu and Du, 2018; Yoon, 2016). Davis et al. (1989: 982) posit that ‘to predict, explain and increase users’ acceptance and use of technology’, it is important to establish the reasons that inform an individual’s decision to use or not use technology. A key objective of TAM is therefore to provide the theoretical bedrock to trace the impact of external factors on a user of technology’s beliefs, attitudes and intentions (Davis et al., 1989: 985). In addition, the model infers that ‘perceived ease of use’ and ‘perceived usefulness’ are the two key belief constructs that influence an individual’s behavioural intention to use a specific technology or not (Alfaresi and Hone, 2015: 25). ‘Perceived usefulness’ is the belief of a person that the use of the technology will add value to their work performance, while ‘perceived ease of use’ suggests that the use of the technology is easy and ‘free of effort’ (Davis et al., 1989, quoted in Park et al., 2009: 197).

Therefore, based on the purpose of this study – namely, to trace the development of LibGuides at

CPUT, as well as establish the use of LibGuides during the COVID-19 lockdown period – TAM was considered an appropriate theoretical framework. A key objective was to explore the perceptions of a selected group of CPUT students and librarians pertaining to the usefulness and ease of use of the LibGuides designed by the CPUT librarians. An earlier empirical study conducted by Zuozuo et al. (2015) also employed TAM in the determination of continued LibGuides usage behaviours among Zhejiang University students.

A qualitative case study approach was followed, exploring fourth-year education students’ perceptions and use of the Education LibGuide. To obtain an understanding of the factors that influenced the students’ perceptions and use of the Education LibGuide, the impact of nine specific external variables on the students’ key beliefs, perceived usefulness and perceived ease of use was explored with students in focus groups. These external variables were grouped into three categories: individual differences (computer experience, domain knowledge and self-efficacy), system characteristics (screen design, terminology and relevancy) and facilitating conditions (library assistance, awareness and accessibility). The authors also observed that external variables could provide a deeper understanding of what influenced the students’ opinions of the perceived ease of use and perceived usefulness of this learning-support library-subject information tool. The application of the TAM constructs of perceived usefulness and perceived ease of use as critical determinants provided useful insights into the students’ behavioural intention to use LibGuides.

Research setting

Background

CPUT is a university of technology which offers diplomas and Bachelor’s, Master’s and doctoral degrees to over 33,000 students. It has six faculties spread across eight campuses within the Western Cape area. Wellington Campus (the location of the focus group for this study) is located approximately 80 km from Bellville Campus and 100 km from District Six Campus. Wellington Campus is unique in that it caters specifically for Afrikaans-speaking education students. As with all CPUT Libraries communication, the Education LibGuide is in English.

Usage of LibGuides

LibGuides are created to provide current information relevant to specific subjects or faculties. Most guides

Table 1. Most used LibGuides.

LibGuide	Total number of views as of 20 August 2020
CPUT Research Support Guides	6461
Education	6172
For Researchers	3128
Research Support Guide	2815
Faculty of Business and Management Sciences	939
Mendeley @ CPUT	935
Agriculture	782

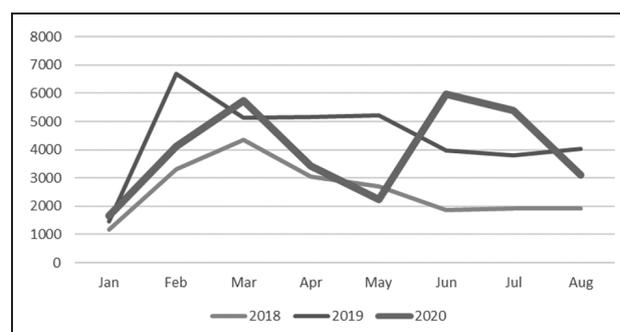
service specific faculties, while some cover general library activities or research-related activities. While there is a total of 71 published guides, the Education LibGuide is one of the most used (see Table 1).

Figure 1 indicates that, except for a peak in February 2019, there is a similar pattern between LibGuide usage in 2018 and 2019, with a large increase in usage occurring in 2019. Initially in 2020, the pattern copies that of 2018, but after March the pattern changes drastically, showing a drop in usage during April and May and a sharp increase in June (when, in previous years, the usage dropped). This is due mainly to the lockdown of South Africa (affecting all sectors and closing all universities) from 27 March 2020 and the change in term dates for that year.

Table 2 provides an overview of the different term dates for 2019 and 2020 owing to the lockdown.

Given the rich history of the development of LibGuides, their use at CPUT, and their adoption as a critical mode of service delivery during the COVID-19 national lockdown, which affected the higher education sector, it was important to investigate their use through engaging staff and students. Therefore, the main purpose of this internal case study review was to investigate the usage of LibGuides during 2020. This was done through (1) online focus groups held with a selected group of fourth-year students in the Faculty of Education located at the Wellington Campus and (2) an online survey questionnaire conducted with the library staff who maintain and use LibGuides.

Guided by the theoretical perspectives of TAM, which explains user behaviour in the adoption of technology, this study adds to the continuously developing area of research on user acceptance of information systems and technology. LibGuides, which are created by librarians to support teaching, learning and research, are considered by CPUT Libraries to be a key online student learning support tool, and were especially so during the COVID-19 lockdown period.

**Figure 1.** LibGuide usage from January to August 2018, 2019 and 2020.**Table 2.** Term dates for 2019 and 2020.

	2019		2020	
	Start	End	Start	End
Term 1	28 Jan	30 Mar	3 Feb	20 Mar
Term 2	2 Apr	21 June	15 July	7 Aug
Term 3	15 July	30 Aug	17 Aug	19 Oct
Term 4	9 Sept	6 Dec	19 Oct	24 Dec

The findings of this study may provide useful insights for the CPUT Libraries management on how to adapt or improve LibGuides to more effectively support and accommodate the information needs of library users.

Research

This research was guided by a qualitative case study research design. In a qualitative study, researchers are interested in 'how people interpret their experiences; how they construct their world and meaning they attribute to their experiences' (Merriam and Tisdell, 2016: 24). An additional facet of this study was the case study, which sought to understand the 'unit of analysis' (Merriam and Tisdell, 2016: 24). The 'unit of analysis' under investigation in this particular study was the fourth-year undergraduate education students at the Wellington Campus and the librarians who created the LibGuides.

The case study was framed by interpretive philosophical world views and theoretical constructs adapted from the TAM theoretical framework developed by Davis in 1986. In this qualitative case study, the perceptions and use of the Education LibGuide by selected fourth-year undergraduate education students based at the Wellington Campus were explored through synchronous online focus groups. The collected focus-group transcribed data was thematically analysed and interpreted.

Methodology

Research ethics

Social science research is mostly concerned with the collection of data from people (Punch, 2006: 69). Therefore, to protect the integrity of the researcher and the research process, and to ensure that the research findings are valid and trustworthy, ethical issues relating to the protection of the rights of the study participants, including informed consent, confidentiality of information and protection against any form of harm, are a requirement in empirical research (Hesse-Biber, 2017: 67).

The researcher obtained informed consent from the purposively selected study participants before the data collection phase of this study commenced. A consent form furnished the participants with information about the study, their role in the study, the way in which they would contribute to the study objectives, and the potential benefits and risks involved in participating in the study (Hesse-Biber, 2017: 73). Participation in this study was voluntary, and the participants had the option to withdraw from the study at any stage of the research process. The consent form specified the principles of confidentiality and anonymity, with which the researcher complied in the handling of the data.

A research ethics clearance certificate to conduct research, valid until 31 December 2024, was issued by the Education Faculty Ethics Committee at CPUT on 28 April 2020. In addition, permission to undertake the study was obtained from the Dean of the Faculty of Education and Assistant Dean of Education at the Wellington Campus.

According to Harding (2019: 156), the aim of case study research is to obtain a thorough understanding of a subject by examining the case in detail. The aim of this survey was to explore final-year undergraduate education students' use and perceptions of the Education LibGuide at the CPUT Wellington Campus.

Case study

Guided by the research objective and framed by an adapted version of TAM, this interpretive qualitative case study focused specifically on 'the drivers or factors that influence[d]' the students' acceptance and use of the Education LibGuide.

Final-year undergraduate students in the education programme at the CPUT Wellington Campus, who had been trained in the use of the Education LibGuide in the compulsory information literacy skills module in their first year and had been exposed to and expected to use the Education LibGuide, were selected as the study population. Thirty students were

purposely selected from this group. The selection of these students was based on shared or similar criteria. According to Greeff (2011: 365), the homogeneity of a group can contribute to study participants being more at ease to engage openly in discussions in a group context. The homogeneity of the selected group of CPUT education students included being in the same year of study, faculty, department and campus, and knowing each other, thereby creating the expectation that these students would engage more actively and openly in focus group discussions, and leading to the collection of rich, in-depth qualitative data that would provide insight into the students' utilisation of the Education LibGuide (Hesse-Biber, 2017: 150).

For this case study, focus groups were used as the primary data collection method to obtain data on the students' perceptions and use of the Education LibGuide. Prior to the focus groups, an online pre-data survey questionnaire with mostly closed-ended questions was distributed to the selected study participants. The purpose of this survey questionnaire was to obtain baseline data that would serve as a basis to inform the subsequent virtual focus group questions. The questions developed for both the survey questionnaire and focus groups were guided by the theoretical constructs selected and developed from TAM.

Section A of the baseline questionnaire focused on demographic profile information such as the students' age and gender. Sections B and C included questions on the students' awareness of, access to, use of and perceptions of the Education LibGuide. Twenty-eight (93%) of the 30 purposely selected students completed the online questionnaire. Thirteen (46%) of the questionnaire respondents participated in the follow-up virtual focus group interviews.

The focus group interview schedule consisted of 24 questions. The following themes pertinent to the research topic were covered: perceptions of usefulness, perceptions of ease of use, behavioural intention to use, usage, facilitating conditions, individual differences, system characteristics and recommendations.

Three synchronous online focus groups were conducted with a small group of four or five participants for a maximum of 90 minutes. The online focus groups offered numerous advantages, including collecting data from participants from different remote locations concurrently, the reduced planning involved in organising a virtual focus group compared to organising a face-to-face focus group, and being economical (Barbour, 2018: 52). Microsoft Teams, 'the communication and collaboration hub of the Microsoft Office 365 products' (Petters, 2020), was used as the online meeting platform for the focus groups. The Teams focus group discussions were video-recorded

and closed captions were activated. This was done to generate transcripts of the focus group discussions for data analysis. Permission to do the video-recording was obtained from all the participants before the online meetings. After the focus group meetings, a transcript of the recorded discussion was downloaded for the data analysis phase of the study.

Thematic analysis was used to reduce, analyse and interpret the transcribed focus group data. A priori themes were identified from the key TAM theoretical constructs – perceived usefulness and perceived ease of use – as well as the nine specific external variables grouped into three categories: namely, individual differences, system/interface characteristics and facilitating conditions. The data with related meanings was then coded, categorised and grouped into themes. The focus group participants were recorded as Respondent 1 to 13 to maintain their anonymity.

Survey

A survey was circulated to the librarians who were responsible for creating and maintaining LibGuides.

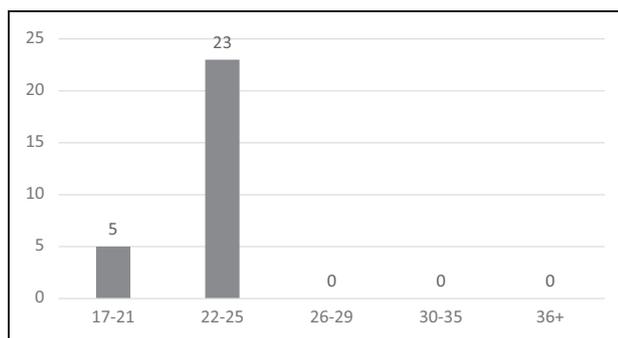


Figure 2. Age of the respondents.

The purpose of the survey was to get their perceptions of students' usage of LibGuides. The survey, which did not use TAM, was circulated during the week of 4–11 September 2020. The results obtained were analysed using Microsoft Excel.

Results

The research findings obtained through the baseline questionnaire and online focus groups aimed to provide insight into final-year Wellington education students' usage and perceptions of the Education LibGuide.

Section A of the questionnaire focused on obtaining biographical information about the respondents. The findings reveal that 82% of the respondents were between the ages of 22 and 25 (see Figure 2). This cohort of students was born after 1995, and they are referred to as Generation Z (Lewis, 2016: 16). These students grew up with the Internet, smartphones and applications, and are absorbed in online video and audio streaming (Association of College and Research Libraries, 2019). Hence, they expect new technology-integrated resources and services that support teaching, learning and research.

This expectation is further strengthened by the questionnaire and focus group responses relating to the students' preference to access the Education LibGuide off-campus and through devices such as personal laptops and smartphones (89%). Figure 3 shows the preferences selected by the students. The students could select more than one device. None of the respondents indicated that they used tablets to access the Education LibGuide.

With regard to access to the Education LibGuide off-campus and remotely (mostly through mobile

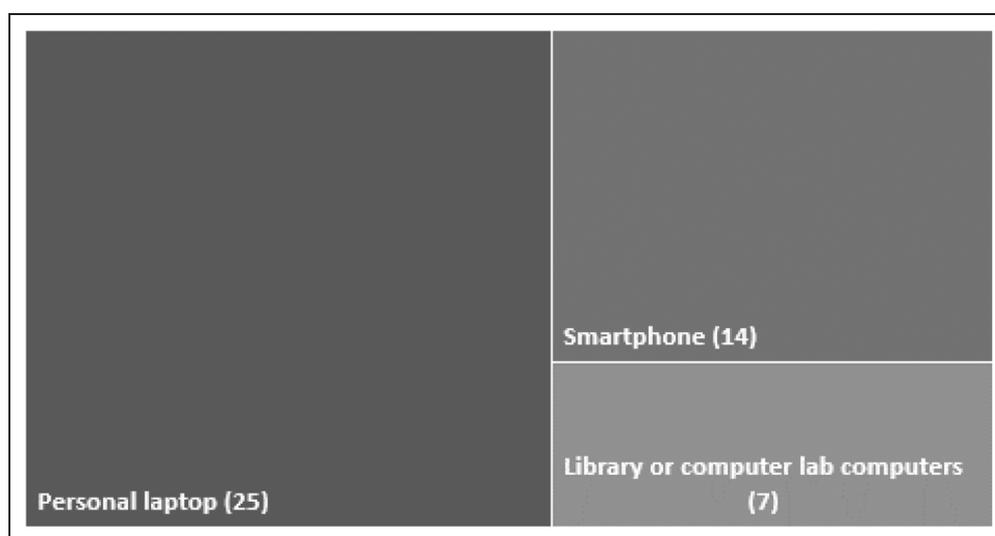


Figure 3. Use of devices.

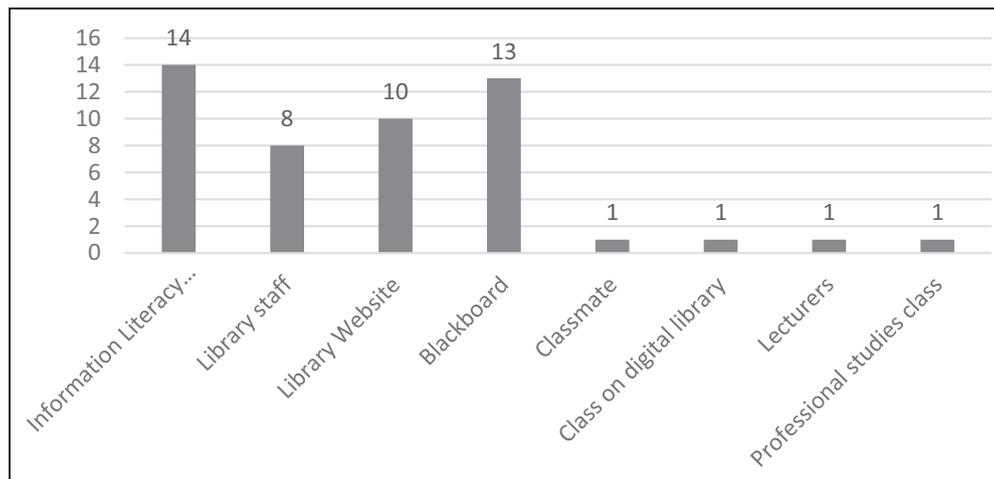


Figure 4. How did you become aware of the digital library services?

phones) during lockdown, the focus group participants commented on the challenges they experienced with data costs and connectivity:

I mostly use my mobile phone now to access the Education LibGuide. Since we are at home in this COVID-19 situation, it does take up a lot of data to do these searches and without having Wi-Fi at home. (Participant 7)

We do not have Wi-Fi and I did not have data. (Participant 13)

I do experience a few challenges because I mostly use my mobile phone now. (Participant 9)

Positively, the university addressed this problem by providing registered students with data bundles.

Section B examined the students' awareness and use of the Education LibGuide. Figure 4 provides insight into the selections made by the respondents as to how they became aware of the digital library services. The students could select more than one of the options. Library information literacy training (14) and Blackboard (13), the learning management system, created the most awareness.

The responses reflect that 92.9% of the respondents were aware of the Education LibGuide; 50% identified their first-year information literacy skills class and 46.4% the learning management system, Blackboard, as the platforms through which they became aware of the Education LibGuide; 61% were in agreement that the library created enough awareness about the Education LibGuide; 57% indicated that they used the Education LibGuide for their academic assignments, while 53% gave preference to using the Internet; and 43% used the Education LibGuide in collaboration with the Internet, not on its own, to find information. This supports the survey done amongst the librarians who created the LibGuides, who

indicated that they felt that the most effective marketing tool for LibGuides was information literacy. However, the perception with regard to Blackboard being an effective marketing tool differed considerably, with the librarians rating it as sixth best while the students rated it as second best. Figure 5 provides an overview of the perceptions of the librarians of the most effective platforms for creating awareness of LibGuides.

A comment made by a final-year education student during a focus group discussion highlighted information literacy training as the key tool in education students' awareness of the Education LibGuide: 'I firstly used the Internet to find information for my assignments. I also use the library's online catalogue, databases and the Education LibGuide that the librarian trained us on to find reliable information sources' (Participant 1). However, it was noted by other participants that more student awareness, visibility and promotion of the Education LibGuide was needed to ensure optimal usage: 'I just wish they were a bit more visible. I only knew about it because of a class I had in my first year' (Participant 3). This is an area of improvement for developers.

Another comment also suggested problems with locating the Education LibGuide on the library's web page:

The visibility and accessibility of the guide was a challenge. For example, I accidentally went onto a different page on the library site itself and I could not find the Education LibGuide again, so I had to open a whole new tab and start from the beginning. It is a challenge, especially if someone has not received the training to find and use the guide. (Participant 10)

Section C, pertaining to the respondents' perceptions of the usefulness and ease of use of the Education LibGuide, revealed that 75% of the respondents

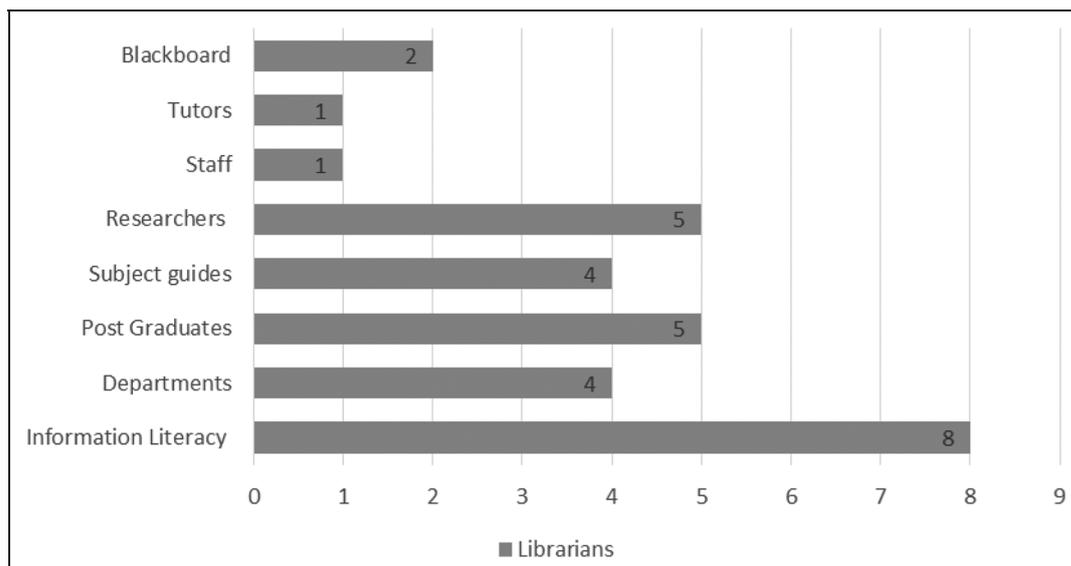


Figure 5. The marketing of LibGuides.

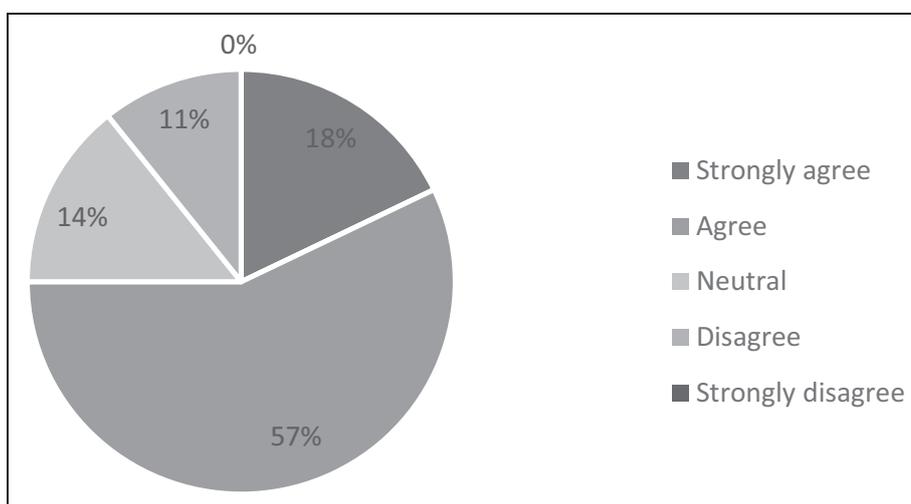


Figure 6. Students' responses to the statement 'The Education LibGuide is a useful information search tool'.

regarded the Education LibGuide as a useful subject information search portal and 60% found it easy to use (see Figure 6).

The majority of the focus group participants agreed that the availability of relevant academic information resources in the education subject field through the Education LibGuide was useful in supporting their studies:

I love the CPUT libraries and LibGuides.

Resources provided by LibGuides is reliable. (Participant 7)

It is truly magnificent and does make a big difference in supporting not only my studies but also the quality of my assignments. (Participant 10)

We had to make a digital storybook this year, so it was wonderful, and being able to go on the Education LibGuide and find storybooks is amazing.

It's very convenient and you don't have to jump around and search all over the Web.

Everything is there for you to search and then find.

The Education LibGuide provides access to free resources whereas if you go through Google, you have to pay for some of those. (Participant 4, 2, 7)

These comments suggest that education students expect to find trustworthy and reliable information resources in the Education LibGuide, and also access to the full text of resources, which they are not able to have on the Internet.

The screen layout and interface search functionalities were also highlighted by the focus group participants as key influential factors impacting on their use of, and perceptions of the usefulness and ease of use of, the Education LibGuide:

The Education LibGuide is visually appealing due to the way the information is organised on the home page and the individual LibGuide pages. (Participant 6)

The layout is useful and contributes to the ease of use because of the individual tabs on the website... the home page looks very categorised and easy to go into each tab and find information. (Participant 8)

I think it is useful – in particular, the page tabs, listing books and databases, ethics and references. I also like the Google Scholar search box, and that also aids, and all the education databases that information sources available on the website (Participant 2). So, I appreciate all of those things because it makes finding information rather easy (Participant 2).

Moreover, the library Search box on the Education LibGuide home page, which students can use to search for information resources within CPUT Libraries' collections, was viewed as useful and convenient. The visibility of, and option to post and ask a question of a librarian through, the Ask Us online-chat question box was also considered a useful and convenient system design feature. However, the Ask Us pop-up screen on the individual Education LibGuide web pages was perceived by the participants as distracting, as the pop-up screen covers other important information on the page and is problematic when accessing through mobile devices.

The amount of text in the Education LibGuide was also noted:

Personally, I don't like reading a lot, especially when I want to find something very quickly. If I click on a tab, then there is a lot of explaining going on and descriptions, and I think that maybe if you can shorten some of the information to key points or keywords, it makes it easier read and find the information. (Participant 7)

Some of the key recommendations and suggestions made by the respondents to improve and/or adapt the current Education LibGuide included:

creating an app to access the Education LibGuide. We use our phone most of the time and having an application that we can use to access is much easier and efficient.

To reduce the amount of text used on the Education LibGuide, the use of hyperlinks and [a] hover-over function to provide detail and descriptions was recommended.

Continuous promotion and marketing of the Education LibGuide after our first year.

Consider a dual medium filter that reflects the user's home language – for example, Afrikaans and Xhosa (Participant 2).

Discussion

Information literacy plays a key role in the marketing, accessing and visibility of LibGuides for students. While the education librarian at Wellington Campus used the Education LibGuide to ascertain the perception and usage of this tool as a digital library service, the training librarians used information literacy training to introduce students to LibGuides. Awareness of the Education LibGuide (50%) was largely due to its usage during information literacy training and promotion in the students' first year. This point was also validated by the librarians (88%), who marketed the LibGuides during their first-year information literacy training classes.

Students might be aware of LibGuides, as highlighted by the education students, but major challenges are the visibility, data consumption and navigation of the LibGuides. This impedes the use of LibGuides when students and staff are off-campus, and especially when they are using mobile phones to connect to the service. Staff pointed to connectivity issues (45%) being a major problem hampering their work, and 11% indicated that updating LibGuides was time-consuming. It was indicated by the education students that a mobile application would improve access to LibGuides.

From the study, the education students indicated that they would access the Education LibGuide for assignment purposes (57%), whereas, from the librarians' perspective, 44% felt that students would access LibGuides for assignments and reading material. The education students revealed that they were exposed to LibGuides in their first-year information literacy class, as well as the learning management system. This was also highlighted by the librarians, who indicated that students felt comfortable using both access points (66%) to explore LibGuides.

From the literature review, it was established that limited research has been done in which TAM was employed as a framework to explore the use of LibGuides in academic libraries. However, according to Joo and Choi (2015: 284), TAM has proven to be an effective theoretical framework to explore the use of technological information systems, focusing on the usefulness and ease of use of such systems. A number of digital library studies have employed TAM (e.g. Alfaresi and Hone, 2015; Joo and Choi, 2015; Khan and Qutab, 2016; Omotayo and Haliru, 2020; Park et al., 2009; Sayekti et al., 2020; Thong et al., 2002; Xu and Du, 2018). Prior research also suggests that both perceived usefulness and perceived ease of use are significant determinants of technology usage (e.g. Hwee and Yew, 2018; Jeong, 2011; Joo and Choi,

2015; Thong et al., 2002; Venkatesh and Davis, 2000; Xu and Du, 2018). Using the key TAM belief constructs – namely, perceived usefulness and perceived ease of use – a theoretical contribution lies in the fact that this study empirically explored the impact of nine external variables on these key constructs pertaining to fourth-year undergraduate education students' use of an Education LibGuide.

Limitations of the case study

The general usability of the study findings may be questioned, as the emphasis is specifically on the perceptions, experiences and use of the Education LibGuide by final-year undergraduate education students at the CPUT Wellington Campus. However, these findings may lead to further research to determine the use of other CPUT faculty LibGuides by students in other disciplines.

From the literature review, it was established that limited research has been done in which TAM was employed as a framework to explore the use of LibGuides in academic libraries. TAM-related studies within the library field have focused more on users' perspectives and not as much on those of professionals such as librarians (Weerasinghe and Hindagolla, 2017: 19). More research needs to be conducted on librarians as adopters of technology.

Conclusion

LibGuides have been developed by CPUT librarians as an online library learning support tool to accommodate the needs of undergraduate and postgraduate students, as well as staff and researchers, across all faculties. While faculty guides concentrate on promoting faculty-specific resources and providing information to assist students in information literacy, the content of the research LibGuides is more specific and assists with the use of various research platforms and tools provided by the library.

LibGuides, which have been in use for a number of years, provided a trusted resource to assist students and staff during lockdown, as indicated in the literature, the case study of the students and the librarians' survey. These resources were available online with multiple entry points.

Connectivity remains an issue with all online resources, including LibGuides. What was highlighted, however, was that many students and staff were using mobile phones for access and that access via these devices needs to be improved, either by the introduction of applications or improved site design.

The availability of data was another problem experienced by the students. Not having data means that

students cannot access any online learning material. Even though CPUT has assisted students with access to devices and data, and negotiated zero-rated websites with service providers, the university must ensure that there are no barriers to students accessing online learning material.

Although there was a decline in usage in 2020, it was still considerably higher than in 2018. This shows that the efforts made by librarians to promote the use of LibGuides during information literacy training, and to postgraduates and researchers, created the necessary awareness of the guides. These awareness and training initiatives guaranteed that both students and researchers continued to use the LibGuides remotely during the lockdown period.

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Veliswa Tshetsha was the Research and Scholarly Communication Librarian at Cape Peninsula University of Technology and is now Senior Coordinator: Open Scholarship at University of Pretoria. LibGuides was one of her areas of research.



Cooking up engagement during a pandemic: The international Great Rare Books Bake Off between the Penn State and Monash University Libraries

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Abstract

In July 2020, during the COVID-19 pandemic, the Monash University Library in Melbourne, Australia, and the Penn State University Libraries in Pennsylvania, USA, leveraged their previously established international sister-library partnership to host a virtual engagement event focused on promoting the partnership and selected special collections at both institutions. The Monash–Penn State Great Rare Books Bake Off, a friendly competition collaboratively developed by the two academic libraries, engaged both institutions' communities with their collections and resources by inviting participants to bake featured recipes from their collections and post evidence of their experiences on social media platforms. In addition to promoting awareness of the institutions' international partnership and their respective collections, a primary goal of the collaborative project was to offer their local communities an enjoyable and creative outlet during a difficult time. This illustrative case study describes how the two institutions planned, executed, and assessed the project.

Keywords

Academic libraries, archives, special collections, social media, outreach, engagement, global partnerships, sister libraries, information needs, information behaviors, services, user populations

Introduction

As COVID-19 moved across the globe, many citizens found themselves without access to in-person educational, occupational, recreational, and cultural activities, and abruptly confined to their homes. Seeking to keep themselves busy, cope with stress, or just stave off boredom, many people found themselves suddenly dabbling in homesteading hobbies, picking up a dusty instrument, trying at-home exercises, or pulling out their sewing machines to make masks (Cotnam, 2020; Enrich et al., 2020; Gan, 2020; Hope and Lange, 2020). In particular, baking rose in popularity across

continents as people turned to comfort foods and experimented with recipes new and old (Abdul, 2020; Collins, 2020; VanDerWerff, 2020), getting more creative as the pandemic wore on (Lorenz, 2020; Orlow, 2020). Many shared the fruits (sometimes unsuccessful) of these labors on social media

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using various hashtags like #stressbaking, #quarantibaking, #covidchallenge, and #covidcooking (Clifford, 2020; Levin, 2020; Ray, 2020).

With their favorite physical locations now closed, people were also seeking to maintain relationships with favorite and familiar places from the safety of their homes. Finding themselves likewise isolated from their user communities, educational and cultural institutions were also experimenting with novel engagement ideas. Some university communities, like Boston University, tapped into the surge in baking as a means to maintain connections among students, faculty, and staff (Sassoon, 2020). Archives, public libraries, and museums quickly pivoted to promote their collections with virtual gallery tours, live concert series, and online story times (Institute of Museum and Library Services, 2020; State Library Victoria, 2020). A number of museums increased their use of social media to both engage their communities and expand their reach to a much broader public with their digital collections (Agostino et al., 2020; Samaroudi et al., 2020). And some piggybacked on the popularity of social media challenges by tasking users with posting pieces recreated from their collections with only household items (Barahas, 2020). In many of these challenges, participants did more than just engage with “likes.” They hunted through digital collections to find paintings to recreate. They shared recipes from their personal collections. They pulled out their favorite books as suggestions for story times. The popularity of virtual engagement opportunities during COVID-19 demonstrates that when institutions invite users to share their experiences, lives, and perspectives, people will often respond with enthusiasm.

In March 2020, Christina Riehman-Murphy, a co-author of this article, was scheduled to travel to Monash University with one of two inaugural Penn State Libraries International Partnerships Travel Grants to explore potential collaboration in the areas of the internationalization of library pedagogy and curriculum, information literacy, and diversity and inclusion. When months of planning were abruptly put on hold, she sought ways to continue engagement with Monash University Library under the serious constraints of the pandemic; local restrictions for both institutions included stay-at-home orders, and thus interaction for both parties had to happen entirely virtually. But necessity breeds creativity, and when she discovered that Monash was hosting a student bake off, which serendipitously aligned with baking projects that Penn State University Libraries was involved in, it seemed like an opportunity to collaborate virtually within the international partnership framework. Inspired by

models like *The Great British Bake Off* (*The Great British Baking Show* in the USA) and the Folger Shakespeare Library and University of California Los Angeles’ social media Pi(e) Day cooking competition (Happe, 2020), she saw potential for a timely and engaging social media event.

After an enthusiastic response from the faculty and librarians at Penn State, Riehman-Murphy reached out to the organizers of the bake off at Monash to see if they would be interested in coordinating an inter-institutional bake off with recipes from both libraries’ special collections. Monash was also interested in the initiative, and the Monash–Penn State Great Rare Books Bake Off was born. The following sections will explore the larger context of community engagement through a review of relevant literature, describe the project’s background, detail the project’s planning process, and consider the project’s results and lessons learned.

Literature review

Engagement

While the pandemic has emphasized the need for virtual engagement efforts, this topic and practice have been a consistent area of interest in library and information science research situated in the field of library engagement and outreach, in particular in the world of special collections. Engagement is critical if collections and resources are to be seen and used by patrons; further, patron engagement is seen as central to library development efforts. Traditionally, the axis of engagement in galleries, libraries, archives, museums, and records (GLAMR) communities has revolved around donations, programs, exhibitions, and displays. Government, grant, or donor funding for these institutions is often predicated on providing opportunities for research. But funding may also be accompanied by contributions to collections and increased access to them via a diverse set of engagement opportunities. Library use of social and digital media has redrawn the footprint of institutions, thereby creating increased opportunities for wider engagement and expanded outreach.

When examined within the broader scope of GLAMR, special collections and archives in academic institutions may face difficulties in articulating their engagement to their larger library organization, as it often differs from traditional university library engagement, which focuses on providing library access to researchers and students that fits within existing frameworks of research and pedagogy. Leong (2013) explains that academic libraries are expected to help the university meet its goals of impact,

engagement, knowledge transfer, and innovation. Special collections and archives, however, also contribute to engagement through partnering with researchers and providing a conduit for external public communication of research. Moreover, they are an integral part of visitors' experiences, providing unique access to rare artifacts for students and researchers alike. In order to facilitate the effectiveness of these programs, special collections units must also maintain engagement with the general public and civic communities that make up the traditional heart of the GLAMR industry (Fulgham, 2019; Greenwood, 2019; Harris and Weller, 2012; Jensen, 2013).

With extensive shutdowns and quarantines, the impacts of COVID-19 on the in-person functions of libraries across the world have highlighted the importance of virtual programs and services, amplifying the focus on such models within library communities. In fact, many library-focused bodies, such as the International Federation of Library Associations and Institutions (IFLA), American Library Association, Australian Library and Information Association, Conference of Directors of National Libraries, National Authorities on Public Libraries in Europe, and Association of College and Research Libraries, have sponsored virtual programming efforts, and numerous library and information science publications have published special issues on the status of existing and emerging virtual library programs and services (IFLA, 2020). However, the question for both Monash University and Penn State University was how best to do this in a completely digital environment, especially as the chosen approach of a Great Rare Books Bake Off was originally based on competitions that were in-person events.

Virtual engagement as a form of community has been around since the invention of Web 2.0, but interest intensified when Facebook became public and with the growth of other social media platforms such as Twitter, Tumblr, and Instagram. The 2013 publication of Drotner and Schroder's *Museum Communication and Social Media: The Connected Museum* forms the foundation for research done on the topic in the GLAMR areas, setting the parameters for the academic discussion of precisely how to engage communities in digital spaces. Archival studies explore these opportunities as part of the means to construct the archive and collection in digital spaces (Cram, 2016; Prieto Blanco, 2015). One component of the digitization of archives is promotion of them on social media—for example, Ashuri (2011) explores archival consumption of Israeli soldier testimonies through sites such as YouTube and Facebook, and how this interactivity with an audience means that the archives

do not calcify and become static, but rather are sites of living memory and change. These discussions around the digitization of collections, social media engagement, and how they shape collecting are shared with special collections and archives within academic libraries.

Distinguished from outreach and programming, at its core, engagement demands a relationship between the institution and the user that is reciprocal (Diaz, 2019; Drotner and Schroder, 2013; Eshbach, 2020; Schlak, 2018). The engagement should impact curation, collection development, and education, and change the nature of interaction and collaboration. The very act of focusing on engagement is an act of openness to being changed, and this is no different in a virtual environment where users can interact with other engaged users through social media and less direct library touchpoints (Peacemaker and Heinze, 2015). Librarians who want to achieve engagement “should not expect to influence users’ work without being prepared to allow users a voice in the delivery of library services” (Peacemaker and Heinze, 2015:270). As such, good practice in virtual engagement is not simply about “being something” but instead “becoming for someone” (Garner et al., 2016; Weil, 2012; Xu and Saxton, 2019). At its heart, engagement should be user-centric interaction, which goes out into communities in order to promote participation and create an extended commitment that will work towards building relationships among institutions and their users. Social media, no matter what the format, provides its own communities and shared language, whether that be text-based (Twitter), visual (Instagram), or some combination of both (TikTok). The successful case studies involving virtual engagement demonstrate an understanding of existing special interest pools, whether it is through Instagram tags, Facebook groups, or the flow of memes across all of the networks (Baggesen, 2014; Budge and Burness, 2017; Chu and Du, 2012; Hunter, 2018; Salahudin, 2019; Villaespesa and Wowkowych, 2020). These case studies suggest that virtual engagement across the different platforms should not only be tailored to each experience, but also be about creating new relationships, capturing a feeling, and sharing dialogue. For example, Villaespesa and Wowkowych (2020), in discussing ephemera and Instagram, talk about the use of hashtags in order to create a shared feeling and an aesthetically pleasing moment that can be fed into an existing community of social photography. For libraries, archives, and special collections, virtual communication and engagement must be complementary to the physical spaces as well in order to be truly effective (Mihelj et al., 2019).

Project background

Monash University Library and Penn State University Libraries began to explore an international sister-library partnership in the spring of 2018 as part of a larger strategic collaboration between the two institutions (Penn State, 2018). After a successful summit, the two libraries entered into a formal relationship with the goals of sharing resources and practices, collaborating in areas of mutual interest, and, together, supporting the research and learning objectives of the larger institutional partnership. To date, the partnership has begun a no-fee interlibrary loan plan, shared professional development opportunities, and explored shared interests in collection strategy, assessment, data management services, library publishing, and library instruction. The collaboration has been largely facilitated by virtual meetings and email connections between the two partners, but the relationship has been significantly bolstered by several reciprocal visits. As described in the introduction of this article, it was the COVID-19 disruption of one of these planned visits of a Penn State librarian, Christina Riehman-Murphy, to Monash that precipitated the collaborative international library engagement baking event discussed in this article.

Early in 2020, Monash University Special Collections was exploring ways to promote awareness of and engagement with its extensive recipe book collection. Inspired by watching Instagram Live television videos of people baking in lockdown, the Special Collections librarians thought that perhaps library patrons, stakeholders, and community members could “cook from the collection.” The announcement that a novel coronavirus was expanding through Wuhan coincided with the start of the semester, and as many of the students who attend Monash University were unable to arrive in Australia due to border restrictions, the university moved all classes online. The university then began to move all student activities into a digital mode and launched Monash Social. Concurrent with these developments, Monash Special Collections proposed the “cook from the collection” idea to the library Communications Manager, Heidi Bingham, with the evolved title of the “Rare Books Bake Off.” The three goals of the project were to promote the library’s digitized collections, provide an incentive (vouchers for a local supermarket chain) that would help support students during the pandemic, and build student engagement with the library while providing a break or distraction from COVID-19 difficulties. The entries were to be judged by a library panel according to how well the cooking was captured on video, how a taste-tester reacted, and the final product’s

presentation. The recipes were hosted on a web page along with a series of brief videos that were then posted on social media showing how to cook the recipes. The resulting entries were of high quality: the students had not only baked the recipes, but also edited together high-quality videos, each of which had its own unique twist on the end product.

Penn State Libraries had also had previous experience with baking-related engagement and outreach prior to the collaborative online bake-off event with Monash University Library. At the University Park campus, one of Penn State’s 23 campuses, the libraries had previously run a local Edible Book Festival event as part of the larger International Edible Book Festival, which commemorates the French gastronome Jean Anthelme Brillat-Savarin (Penn State, 2017). First launched in 2017, the local event encouraged students, staff, and faculty to participate in the competitive event by baking a literary-themed cake, which would then be eligible to win a prize in one of five categories: people’s choice, most creative, best depiction of a classic, funniest/punniest, and most appetizing. The goal of this event was to provide the participants with an entertaining way of engaging with the libraries and literacy.

Further, at the Penn State Abington campus, Riehman-Murphy was embedded in an undergraduate research project called “What’s in a Recipe?” In this multi-year project, students transcribed digitized family recipe manuscripts from the Folger Shakespeare Library’s collection. The lead faculty member, Dr Marissa Nicosia, also independently runs “Cooking in the Archives,” a public historical recipe project where she researches, updates, and recreates early modern recipes for the public via her blog (rarecooking.com). Despite the sudden restrictions due to COVID-19 right in the middle of the final weeks of the project, the students in the current cohort were able to complete their individual research projects virtually, for which one student recreated a 17th-century recipe and blogged about the experience. Thus, Riehman-Murphy knew that engaging students with historical recipes could be successful even in a virtual environment, and that Marissa Nicosia’s experience researching and recreating them for the general public had potential for many other engagement opportunities, such as a virtual bake off.

Project planning for a new initiative: the Great Rare Books Bake Off

Organizing an online engagement event across two institutions of the size of Monash University and Penn State University requires careful logistical planning.

Ensuring a successful project required not only the coordination of, and buy-in from, multiple internal stakeholders from both institutions, but also the cross-institution coordination of those stakeholders. The project required support from marketing and design, special collections, digitization, bakers, development officers, library administration, and business offices on both sides of the partnership.

To facilitate the project work, each library assembled a project team. The two teams then communicated regularly via email and videoconferencing for full-group planning. The spirit of flexibility and comradery, which is needed when working in an international context, was clearly demonstrated in these meetings, as Penn State colleagues cheerfully agreed to meet outside of normal business hours to make the meetings work through significant time differences. As tasks were distributed and timelines established, smaller working groups were formed between the two partners around expertise or function in order to coordinate efforts. For example, marketing specialists from the two libraries worked together to develop an outreach strategy that would be conducive to both universities' environments; special collections managers and librarians from both institutions worked together to develop a robust and diverse offering of possible baking options; and the lead bakers, Marissa Nicosia and Isabel Melles-Taberner, met virtually to swap baking tips, clarify confusing or culturally specific recipe nuances, and develop an aligned look for the social media baking content.

The rules that the group established for participation in the collaborative bake-off event were simple and designed to promote users posting any and all results, whether they were successful or not. In order for a social media submission to be counted, users had to:

1. Choose a recipe from a list of either Monash or Penn State special collections materials;
2. Bake the recipe and take a photograph or video of the finished product (baking fails were welcomed);
3. Submit the entry to Instagram, Twitter, or Facebook, and include the hashtag #TheGreatRareBooksBakeOff and either #BakeMonash or #BakePennState to indicate which team they were baking for;
4. Make sure that the account it was being posted to was public, so that each entry counted.

Although engagement and cross-cultural learning were the primary objectives for the online event, the group felt that the inclusion of friendly competition

between the institutions would likely increase participation and social media engagement as well. The participation rules outlined above allowed for easy calculation of the event results and, ultimately, identifying the winner would be as simple as tallying up the tags to see which university had the most tagged entries.

During the planning, the teams decided that a week towards the end of July would be a good time to pilot this inaugural bake off. Despite this being out of term for both institutions, a July time frame would give the teams the time to select and bake recipes, source ingredients which were occasionally out of stock due to the pandemic, create content, and market the event. While the time difference between Melbourne, Australia, and Pennsylvania, USA, did not allow for a completely synchronous event, the group decided that the bake off would be launched on each institution's respective Monday, 20 July and run through the week, ending on the following Friday, 24 July. The planning teams felt that tying the competition period to a single week rather than an extended period of time would potentially add a sense of urgency to the event and increase participation.

Community and recipes

The careful selection of recipes was essential to the success of the bake off. The goal was to choose recipes from Penn State and Monash University's special collections and to reflect the local character of the food and history of each region as much as possible, thereby creating repositories of nostalgia and memory, and providing an opportunity to explore the familiar and the foreign (Weil, 2012). Therefore, in order to create a user-centric interaction for the communities we were hoping to engage with, the recipes needed to be particular to both of the local regions, represent a diversity of cultures, and reflect a classical national flavor. We also wanted the recipes to be accessible to bakers of all skill levels. Ultimately, four recipes from each university's special collections were chosen by each team, with the plan that we add recipes for subsequent bake offs. Three were simple-to-cook recipes and one was of medium difficulty for adventurous cooks. By thinking broadly, we could also showcase different types of baked goods—cookies/biscuits, cakes, tarts, and so on. Although on the surface many recipes in Australia and the USA seem quite different, there are commonalities because of eastern and central European migrants. By choosing locally relevant recipes, the libraries hoped to promote curiosity about each other's culture and evoke nostalgia for the familiar, which food history

so often brings with it. The shared exploration of the different recipes, techniques, and backgrounds behind them also served to draw both the Penn State and Monash staff together in the planning stages.

Monash recipes

For Monash, the collection of cookbooks is extensive, so the main challenge was narrowing down the options to something that would reflect differences in class, place of origin, and the Australian divide between the city and rural areas, and, if possible, include Aboriginal and Torres Strait Islanders cuisine. After making a list of some of the more popular baked goods—lamingtons, scones, neenish tarts, ANZAC biscuits, pavlova, puddings, Greek bread twists, Italian biscotti, damper—the team went looking for matching recipes, preferably in their original editions. The final choice came down to choosing four recipes that best reflected the different elements of the Australian and Melbourne food world.

The first recipe was taken from a selection of cakes put together by the artist and restaurateur Mirka Mora. Mirka and Georges Mora immigrated to Australia from France at the end of World War II, opening one of the first street cafés in Melbourne. Although the Moras immigrated in the early 1950s, there had been many earlier Jewish immigrants to Melbourne. Not only did Mora's work beautifully represent the café culture of Melbourne and its connection to French cuisine and the modernist art scene, but also the walnut cake was a classic Jewish recipe from Hungary. The second recipe was a fruit damper recipe from a beautiful artist's book put together in collaboration with Kimberley Elders; it represented a part of working-class Australian food as well as the much longer history of the baking and cuisine of First Nations people. The third recipe came from an extensively annotated recipe book from rural Victoria in 1912. The smudged, dirty recipe was for "beautiful pudding," which is better known as lemon delicious pudding, a British-style pudding that provided an interesting comparison to the US understanding of "pudding" as a custard or mousse. Eileen McMahon's pudding gave us not only insight into the social and cultural life around the food, but also an opportunity to talk about American pudding versus British pudding. The last recipe was for the lamington (a chocolate and coconut covered sponge cake), which was the classic of Australian baking from 2020.

Penn State recipes

Like Australian baking and cooking, the US national cuisine is an amalgam of flavors, dishes, and

traditions that represent the centuries-old colonization and subsequent decades of immigration from nearly every continent, as well as the lessons taken from the cultivation practices of the Indigenous Peoples of the Americas. Stereotypical traditional American cuisine often includes apple pie, hamburgers, or barbecue, but depending on your region and ethnicity, those particular dishes may be unfamiliar foods. In addition, cookery is not a particular collecting or digitizing focus for the Eberly Family Special Collections Library at Penn State's University Park campus, so options were a bit more limited for this team. To its advantage though, Penn State has 23 campuses spread across the commonwealth of Pennsylvania, many of which have their own unique special collections. So, the team reached out to its special collections and archives community of practice in order to locate already digitized recipes that may have had a connection to Pennsylvania's culinary history.

This search resulted in eight recipes, from which the final four were chosen. The first was a recipe for chocolate drop cookies, which came from the Elaine Hunchuck DeFrank family records in the Coal and Coke Heritage Center at Penn State Fayette Library. Elaine's Slovakian heritage, which she brought to the Italian family that she married into, makes it impossible to trace the cultural origin of the recipe; however, this recipe uniquely reflects the large immigrant mining community near Pittsburgh. The second recipe was for cinnamon buns and came from the Abington campus near Philadelphia. Prior to becoming Penn State Abington, it was the Ogontz School for Girls, and its archives create an intimate picture of the life of the girls who lived there in the late 19th and early 20th centuries. Although traditionally a northern European pastry, the cinnamon bun recipe at Ogontz was served for over 34 years—its belovedness documented with poems and odes to its deliciousness. The third recipe for a lemon tart came from the 18th-century Browne manuscript at Eberly Family Special Collections Library. Although a classic French dish, the lemon tart in the USA is best represented by its close cousins, lemon meringue and key lime pies. And finally, the fourth recipe came from the Penn State Harrisburg Library and Special Collections, which is home to the Three Mile Island collection and a cookbook of local recipes which were gathered to document the food that helped Middletown residents survive the worst nuclear accident in US history. It is a recipe for the uniquely Pennsylvania pie, the wet shoo-fly pie, which originated with the Pennsylvania Dutch (who were actually German immigrants) in the 1870s.

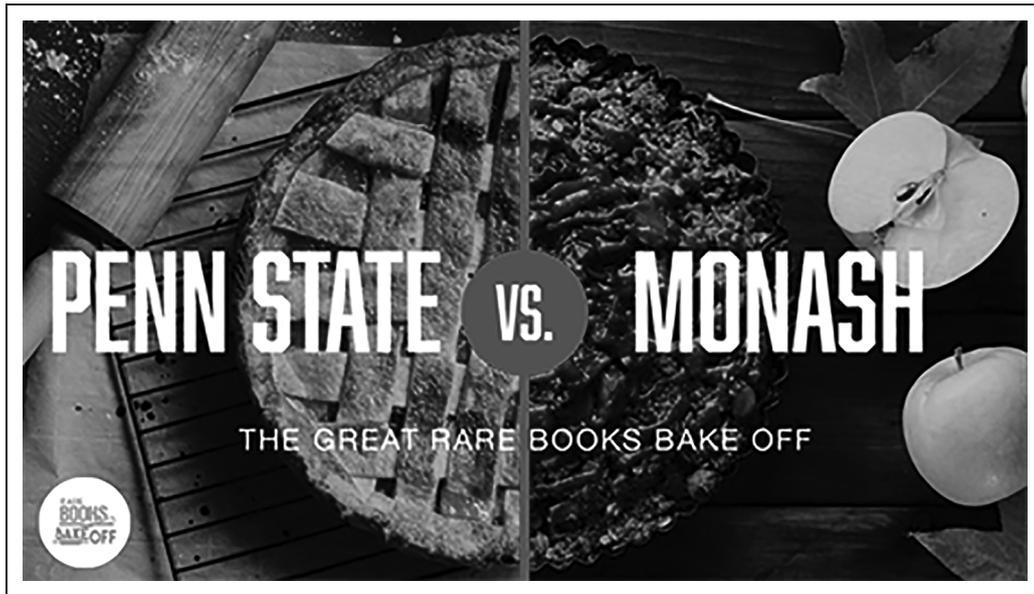


Figure 1. Penn State versus Monash social media post with two-pies image. Image credit to Eliza Liddy.

Promotion

After meeting together, the group decided that both Monash and Penn State would have their own websites to promote the event. However, in the interest of efficiency and resource-sharing, both Penn State and Monash used Monash’s May 2020 “Rare Books Bake Off” website as the template for the separate but parallel sites (Monash University, 2020; Penn State, 2020). The websites included links to the recipes, video and images of the cooking process, citations, and the rules for entering, as well as hashtags and other social media necessities.

The social media strategies included posting two to three official posts per day across both libraries’ Instagram, Twitter, and Facebook accounts. Eliza Liddy, Multimedia Coordinator for Monash University Library, designed graphics for social media use, taking the theme colors of Penn State (blue and white) to design a series of entertaining images (see Figure 1). A multimedia specialist in Penn State Libraries Public Relations and Marketing Department created a logo that would give consistent branding across the platforms. The posts’ content also included formal “banter” between the libraries designed by the communication teams, as well as other information about the collections, recipes, and cooking processes interspersed during the week. The posts were staggered so that they mitigated time-zone differences between Melbourne and Pennsylvania. Both Monash and Penn State planned posts in advance of the event, with Monash opening the competition one day ahead and Penn State ending one day later.

In addition to the libraries’ formal social media posts to their accounts, members of each planning team dedicated time during the week-long competition to elevating the community posts and interacting with any questions or comments that might come in. Hoping that the competitive team nature of the bake off would itself generate interest and incentivize participation, the group also decided to forgo monetary prizes (which had been a part of prior baking events at both institutions) and, instead, Mark Mattson, Head of Global Engagement Initiatives and International Partnerships Librarian, was put in charge of coming up with a “trophy” that would go to the winning institution to proudly display after the event. An antique pie plate from a local Pennsylvania baking company was acquired from an antiques shop near Penn State’s University Park campus and, once engraved, was designated as the prize that the winning library could display (see Figure 2). Having a physical representation of the bake-off event would also allow for the possibility of establishing an amusing tradition of trading the trophy between the partners in following iterations of the event.

Results

Because the Great Rare Books Bake Off was an event that required participants to both plan ahead (purchase ingredients) and perform, by social media standards, a relatively involved activity in order to participate, the team was unsure if the event would be appealing to a large audience. However, the resulting engagement surpassed the team’s expectations with not only the



Figure 2. Pie tin etched with “The Great Rare Books Bake Off Grand Champion” and impressed with “Mrs Smith’s Mello-Rich Pie.” Image credit to Mark Mattson.

number of participants, but also the depth of enthusiasm that the participants displayed in their posts. Participants invested time not only in decorating their final baked goods in innovative ways, but as in Figures 3-5, creating Instagrammable table settings and designs. In terms of level of participation in the inaugural event, the Great Rare Books Bake Off exceeded participation numbers from comparable past events at both institutions, and Marissa Nicosia commented after the event that the level of participation exceeded any efforts that she had previously been involved in through her “Cooking in the Archives” historical recipe project. Between both Penn State and Monash University, there were 169 items baked. Nicosia’s experience is supported by the social media metrics that were shared by the communications teams, as across both Penn State and Monash these showed an increase in engagement and reach. The Penn State web page had 1371 users, 6774 page views from 7 different countries, and a 52% bounce rate. Monash, by comparison, had 869 page views for the period of 14–26 July, which, although fewer than Penn State, still put it as the second most visited page for Monash University Library—second only to the library’s home page. Social media showed a similar increase of interactions and engagement, as well as a consistent increase in brand awareness and follower. The data on this is complex, as most of the analytics are comparative to previous years and not specific to the special collections but the wider university libraries; still, the scope of interactivity for the two university accounts increased (see Table 1).

Further evidence of the popularity of the bake off through the university accounts came in the form of

the State Library of New South Wales chiming in by baking from one of its own rare-books manuscripts to join in the hashtag, even though it was not part of the competition. The State Library of Victoria took a slightly different approach, adding a “bake the recipe” component to its membership activities email. Additionally, in the fall of 2020, Florida State University Special Collections and Archives contacted us to get permission to use the #thegreatrarebooksbakeoff hashtag for their own competition, which was inspired by ours (Hagaman, 2020). They are considering making it a yearly event, which reflects the feedback that Monash University and Penn State received, with the participants relaying that they were eager to participate in a “rematch” event the following year, that they would like to expand the event to possibly include some in-person aspects, and that they enjoyed not only the results of their baking, but also the creative and cross-cultural aspects of the event.

One element that these results and the audience engagement have emphasized is the importance of each team having a dedicated space to special collections in social media challenges. For both teams, there was some difficulty, with each communication team balancing its continued social media responsibilities to promote other areas of teaching and learning as well as the bake off. At some points, the intensity of posting meant that we were oversaturating communications. In the end, however, the high engagement was worth the disruption, but it emphasized that, to go ahead, some of the institutional social media structures will need adjusting. This is reflected in the successful branding done by Florida State University, which emphasized that it was coming out of Florida State University Special Collections and Archives, allowing for a more immediate connection to their collection promotion. By making the branding specific to each collection, Monash University and Penn State would be able to really highlight the research they did on their collection’s recipes which in turn reinforces both communities they are part of. This is reflected in the type of branding done by Florida State University, which emphasized that it was coming out of Florida State University Special Collections and Archives, allowing for a more immediate connection to collection promotion, which is important given the amount of work that both Monash University and Penn State put into their recipe choice as the underpinning of community promotion. This is one immediate way in which the engagement from users influenced the institution; in January 2021, Penn State Special Collections launched its own Instagram page to better connect with users interested in archival content.

Table 1. Social media statistics compared to the same week in 2019.

<i>Monash University</i>			
	Twitter	Facebook	Instagram
Interactions	212 (+24%)	241 (+62%)	200
Brand awareness	81 (+376.4%)	9/10	86 (+581.5%)
<i>Penn State University</i>			
	Twitter	Facebook	Instagram
Engagement	200 (+39.86%)	394 (+65.55%)	256 (+150.98%)
Followers	+13	+2	+13



Figure 3. Penn State alumni bake cinnamon buns and display their Penn State pride. Image credit to Instagram users @veravulture and @zellercat.

In addition to fitting in with the popular social media trends of 2020, the recipes had been specifically chosen to give the bake off a sense of community that drew from the international character of the competition. Despite some awkwardness in posting information about the different recipes, the choices worked remarkably well. Almost every entry reflected the importance of connecting the recipes to the history and culture of their place of origin, validating the extensive research done on the recipes' background. Within Monash, staff who were born in the USA found some familiarity in the cinnamon buns while at the same time learning about "shoo-fly pie" from a state that they had previously had less familiarity with. Other contributors shared personal connections to the recipes, expressed family traditions while using their grandparents' baking tools, or

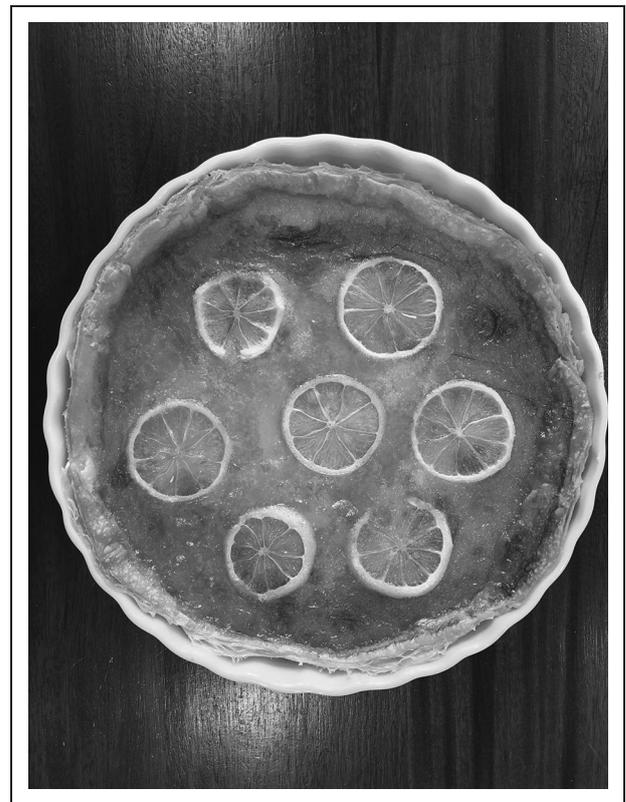


Figure 4. Monash University staff bake a lemon tart, adding lemon slices that then go viral. Image credit to Graham Harrison.

dedicated the submission to a loved one. In one case, a participant posted a photograph of her cookies and explained that she chose the particular recipe because "I identify w/ the uncertain ethnic amalgamation of their origins in western PA [Pennsylvania]" (Beshero-Bondar, 2020). In another example, a Monash staff member who was unable to bake posted photographs of her grandmother's and great-grandmother's recipe books, which she had been transcribing, pointing out how in the middle of a shopping list her grandmother had joyously written: "May the Hen laid—what a wonderful bird!" (O'Neil, 2020). The place of the



Figure 5. Monash University staff bake “beautiful pudding,” creating Instagram-worthy designs with table settings. Image credit to Instagram user @annee_24.

recipes within both Victorian and Pennsylvanian culture anecdotally brought more depth to those participants who made the activity a family event and got their children involved in the preparation, giving them an opportunity to learn about things such as Indigenous Australian culture or direct contact with the devotion that is involved in college football. In the comments, there was comradery displayed in both the baking successes and baking failures across “team lines,” with tips being shared and encouragement given to everyone, even on the posts that included props to show “team spirit” with elements like the school mascot or colors.

As referenced in our literature review, one of the main difficulties with the promotion of special collections within a university is to connect the material not only to academic researchers but also to the wider public. An important subgoal of the Great Rare Books Bake Off, alongside fortifying the international partnership, was to help promote each university’s special collection. Despite the number of people participating, the bake off was still only reaching a few very localized networks that depended largely on the organizers. In part, this can be seen to be a result of social media not being a freely open space, and instead being regulated by multiple complex algorithms and regulations which determine who sees what content and when. The result is that becoming part of the ongoing exchange in environments that are incredibly dynamic and responsive can be a hurdle that is difficult to overcome (Baggesen, 2014; Griffin and Taylor, 2013). This is true of the bake off, where posts that were information-heavy and without images

found less traction, making conveying important collection information to users difficult outside of “we have recipes.” One solution for any repeat bake off would be to carry out more research into other social media cooking influencers on each platform and make sure to engage with them. For example, to help promote the damper, it would be ideal to reach out to other online groups such as the Murrigellas, a group of Murri home cooks, and see if they would be willing to bake with us, as well as to provide cooking tips.

Other issues, such as equality and representation, are more difficult to address in a digital sphere. Despite a massive increase in social media usage for adults in both the USA and Australia during the last 15 years (Pew Research Center, 2019; Social Media Perth, 2020), approximately 30% of adult citizens in these countries do not use social media due to disadvantage, many of whom are important members of the community that both universities wish to engage. However, one area where this can be handled is in improving collecting practice. The Great Rare Books Bake Off influenced Monash Special Collections to rethink its cookery book collection, in particular how user response illustrated the importance of an individual’s relationship to cooking, cultural practices, and identity. During the competition, it became clear that the collection’s cookery books did not represent perceptions of Victorian cuisine beyond a narrow sample. For example, despite the influence of Italian migrant communities in shaping Melbourne’s food history and requests from Monash staff members for tiramisu, there was only one Italian cook book in the collection and it unfortunately did not have the

dessert. For Penn State University, the bake off affirmed that despite cookery not being a priority in the collection development plan, the distributed special collections model across geographically distributed campuses can hold a diversity of materials. In preparation for future bake offs, however, the curator is on the lookout for recipe manuscripts which may fit the competition's parameters and the scope of the collections. For Monash, future collecting will focus on updating to include new immigrant communities as part of the discourse, as well as seeking (and encouraging) local Indigenous recipes. There is also much more room for engagement with the society that Monash Special Collections is actively trying to preserve, especially the importance of consultation in finding "community" recipes in a multicultural society. The Great Rare Book Bake Off also demonstrated the importance of manuscript recipes and the immediacy they bring to people. The data proves that there are significant gains to be made from special collections engaging in this type of social media project and future iterations of the Great Rare Books Bake Off will provide more information for a targeted research study where we can explore the best methods of assessing engagement for both the users and the institutions.

Lessons learned

The assessment process included real-time evaluation and adjustments (modifying the number of social media posts to respond to engagement, clarifying areas of confusion with the rules or recipes, or adapting messaging tone), but the majority of the project assessment occurred post-event. In appraising the project post-event, the partners reviewed the participation results and outcomes in order to identify event successes, challenges, and the possibility of replicating the event in the future. The assessment process included reviewing total participant numbers, examining submissions for variations in forms of engagement, identifying points for improvement, and soliciting feedback from project team members. While the group unanimously agreed that the event was a success and that it should be further developed into an annual event, the group also identified multiple lessons that had been learned.

One of the most important lessons learned through hosting the inaugural event was the need to further clarify participation instructions. During the event, the team received various questions about how to participate using various social media platforms. Individuals sometimes posted to accounts that were set to private and were inaccessible for inclusion in the

event. Inquiries about how to participate if someone did not use social media were also an indication that further clarification of the participation procedures was needed. This prompted the team to consider a non-social-media option in future events. One clear illustration of this issue was in Monash's use of Workplace (the university's internal social media space) to find support from library staff, as well as putting out a request to enter the competition. Three days into the competition, the tallied numbers indicated that despite the fact that the Monash team seemed to be doing well, Monash entries lagged behind the entries of Penn State early in the event. This forced the group to go back to basics in order to seek more entries, and to address the fact that people were posting their entries to Workplace rather than on public social media platforms such as Twitter, Instagram, or Facebook. Many of the posts were also set to private, so the hashtags could not be counted. To remedy this, members of the planning group created Instagram accounts so that they could repost the entries of people who did not want to make their own accounts public. With a renewed push for content, as mentioned above, the final participation tally was comparable.

Related to the need to clarify participation instructions, the team also recognized the importance of using separate engagement posts and accounts across various social media platforms to promote participation to different groups. The different platforms seemed to reach different communities and audiences, and making the content and promotional materials accessible to the multiple platforms was important in reaching a large section of the universities' communities.

Further, as the event progressed, ideas for collaboration with other institutional entities and groups were identified; however, it was decided that such collaborations would need to be established in advance of the event. In addition, engaging the social media accounts of groups such as the universities' alumni associations and student groups would help to extend the community of engagement and potential participation for the event, so the team plans to work on establishing these opportunities for the next iteration of the event. In the future, this would mean that there is more of an opportunity to reach out to students as well and begin to develop a pedagogical component in the competition.

The cross-border and cross-cultural aspects of the event did seem to draw in participation and enthusiasm, but the team also needed to navigate some of the cultural differences between the audiences. While the culture of the two institutions and their home

countries are in some ways similar to each other, the team did recognize that the university environment in Australia is quite different to that of the USA. For example, Penn State University has a very strong team spirit/sporting culture, whereas Monash University does not have an official mascot or a single major sporting team, which required the group to choose the generic “green and gold” motif that Australia uses when competing internationally. Similarly, the social media posts designed to create “friendly competition” were carefully crafted through collaboration to ensure that the messaging would be culturally relevant on both sides of the partnership in terms of the use of humor and informal language. These cultural differences did, however, provide a fun opportunity within the promotional materials to play up differences, such as the use of the terms “cookies” and “biscuits.”

Another aspect of the event that the group felt could be improved in next year’s iteration was the integration of promotion for related content. For example, the team felt that there could be more special collections content and sister-library content featured on the websites and social media posts. With the attention of a large number of participants that the event drew, the team felt that it may have been possible to further engage the community in the collections by using interesting facts or perhaps additional challenges. The event might have also given a bit more background on the two libraries’ partnership and how the partnership is benefiting the two universities. These items were present in the event’s content, but they could have been featured more prominently.

A final lesson learned was in the timing of the event. The inaugural event was planned to run from Monday through Friday of the selected week. However, the team received feedback that participating in a somewhat extensive baking event on weeknights was challenging for participants with busy work–study–family schedules. In response to some of this feedback, the team is planning to include the weekend in future iterations of the event so that the event would run from Monday through the following Sunday. This expansion into weekend days will hopefully provide more opportunity for busy individuals to participate in the event and further expand the pool of potential participants.

Conclusion

Born out of the disruptions associated with the COVID-19 pandemic, the Monash–Penn State Great Rare Books Bake Off was a successful virtual engagement project that not only brought libraries and users together, but also generated excitement around selected digitized collections and the fascinating rare books

within them. As previously stated, engagement demands a relationship between the institution and the user that is reciprocal. In this project, the virtual event space was a platform for multimodal engagement where users engaged digitally with library collections and brought the library into their homes through the physical process of replicating a recipe. In sharing the recipes on social media, both teams learned about the recipes, techniques, and objects that were important to the users, which will inform future iterations of this event. This collaborative project crossed institutional boundaries as well as national borders and clearly exhibited a robust level of engagement, as demonstrated by both the number of volunteer participants and the examples of enthusiasm, creativity, and comradery exhibited by the librarians and community members from both institutions. The cross-border aspects of the collaborative project between the two academic libraries, while raising some minor complications, significantly enriched the project by fostering real-life intercultural engagement for the participants. The Great Rare Books Bake Off successfully accomplished its stated goals of engaging the institutions’ communities with their rare book collections and resources, promoting awareness of the institutions’ international partnership, and supporting their communities with a fun and creative outlet during a difficult period of time. Both Penn State Libraries and Monash University Library look forward to continued investment in their growing partnership and hosting future Great Rare Books Bake Off events in the coming years.

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Expanding digital academic library and archive services at the University of Calgary in response to the COVID-19 pandemic

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Abstract

Despite the uncertain challenges facing libraries of all types during the COVID-19 pandemic, new best practices and innovative ways of approaching services have emerged. Including the groundbreaking Taylor Family Digital Library in 2011, the University of Calgary Libraries and Cultural Resources has been contributing towards the ongoing development of the digital academic library. The COVID-19 pandemic has necessitated a rapid leveraging of digital skills, platforms, expertise, and models of service delivery to continue providing exceptional and transformative experiences for the University of Calgary community. The initiatives discussed in this article include online work teams, virtual 360-degree tours, the online library chat service, digital collections agreements, and remote services for archives and special collections.

Keywords

Academic libraries, digital libraries, reference services, COVID-19, archives and special collections

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Introduction

The university campuses of 2020 are profoundly changed since the World Health Organization (2020) declared the COVID-19 or coronavirus outbreak as a pandemic on 11 March 2020. Although concern about the coronavirus was mounting in North America throughout the winter of 2020, few recognized how radically the world would change. As the virus spread through Canada and the death rates climbed, swift action was taken at the national and provincial levels to slow the spread of COVID-19. On 22 March 2020, the province of Alberta mandated lockdowns, closing much of the province, including post-secondary

institutions. The University of Calgary Libraries and Cultural Resources (LCR) closed its libraries, galleries, and museums, sending 170 staff members home and leaving only essential workers on-site.

The University of Calgary rapidly expanded its digital teaching, learning, and research in the following weeks and months. LCR, its librarians, and staff

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Table 1. Summary of library operations and initiatives during COVID-19.

Initiative	Result of COVID-19	Benefits	Challenges	Sustainable	Continue
Digital library services					
Work teams	Yes	Impact Teamwork	Added workload	Yes	Yes
myLibrarian	No	Engagement Personalization	Uptake	Yes	Yes
Virtual 360-degree tours	Yes	Engagement	New cost	Yes	Yes
Digital instruction	Yes	Flexibility	Technology	Yes	Yes
Library chat service	No	Effectiveness Easy to scale	Staffing Training	Yes	Yes
Tutorial videos	Yes	Accessible	Time Reach	Yes	Yes
FAQs	No	Effectiveness	Maintain currency	Yes	Yes
Physical library services					
Contactless pickup	Yes	Safety Collection use	Initial volume	Yes	N/A
Bookable study spaces	Yes	Study spaces Contact tracing	Online setup	Yes	N/A
Outdoor tent	Yes	Safety Reference	Weather	Yes	Yes (during orientations)
Collections					
Field-of-study students	Yes	Student access		Yes	N/A
HathiTrust Emergency Temporary Access Service	Yes	Remote access Equitable access	Print access	Yes	N/A
Leganto	No	Collection use	Promotion	Yes	Yes

Table 2. Summary of ASC operations and initiatives during COVID-19.

Initiative	Result of COVID-19	Benefits	Challenges	Sustainable	Continue
ASC services					
Digital instruction	Yes	Flexibility	Time	Yes	Yes
Collections	Yes	Engagement Promotion	Time	Yes	Yes
Reading room	No		Access Safety	No	No
Digital exhibits	Yes	Engagement Access		Yes	Yes

leveraged their skills and expertise in digital initiatives to support students, researchers, faculty, and the community at one of the busiest times of the academic year. This article focuses on the collection of operational adjustments, innovative solutions, and unexpected results thus far. These include seven types of digital library services, three physical library services, three changes to collections, and four changes in archives and special collections. Usage statistics are shown for each initiative if available, and Tables 1 and 2 display an overall summary of the initiatives, including the

benefits and challenges. The staff at LCR were able to pivot to meet student, faculty, and staff information and research needs during the early months of the pandemic. The COVID-19 pandemic necessitated a rapid expansion of digital skills, platforms, expertise, and models of service delivery to continue providing exceptional and transformative experiences for the University of Calgary community, which will be shared in this article. A discussion of the limitations and plans for future service delivery will conclude this article. Additional

challenges facing the institution include an economic recession and reductions to provincial post-secondary funding, necessitating that any service changes be implemented at a low cost (Anderson, 2020).

Background

The University of Calgary is a medium-sized public research university with over 33,000 undergraduate and graduate students, and was established autonomously in 1966 in Calgary, Alberta, Canada. The university is a member of the U15 Group of Canadian Research Universities (U15, 2020) and typically ranks in the top 10 in Canada and top 200 in the world (University of Calgary, 2020). LCR comprises the Taylor Family Digital Library, High Density Library, six library branch locations, archives and special collections, two art galleries, a university press, a copy-right office, a digitization unit, and more.

Since 2017, the University of Calgary has been implementing its Eyes High strategic plan and its three foundational commitments: (1) sharpen focus on research and scholarship; (2) enrich the quality and breadth of learning; and (3) integrate the university with the community. Two additional themes running through these three commitments are focuses on a safe, inclusive, and vibrant student experience and an engaging campus culture.

Student engagement is a sustained deep sense of belonging and community fostered through campus events, curricular and cocurricular activities, and collaborative learning opportunities, along with frequent interactions with peers and faculty members (Kezar, 2006; Kuh, 2009; Masika and Jones, 2016; Pike et al., 2008; Schaufeli et al., 2002; Webber et al., 2013). Studies have found student engagement to be positively correlated with academic performance, while also improving critical thinking and collaboration skills (Kuh, 2009; Masika and Jones, 2016; Schaufeli et al., 2002; Webber et al., 2013).

The library assumes a unique role in a student's experience, as a library needs to connect with students in meaningful ways at a student's point of need (Kezar, 2006; Snavely, 2012). Connections, under normal circumstances, would typically occur at a physical library location and service desk, available for students to visit. With the shift to a digital environment, libraries have developed new services and methods to connect with students and ensure accessibility through online services, resources, and extended hours of operation (Kezar, 2006; Snavely, 2012). The COVID-19 pandemic has affected how students experience the library, its services, and

resources, as well as the delivery of those services and resources.

With the opening of the Taylor Family Digital Library in 2011, LCR has been a leader in digital library services and spaces (Clarke and Hoffman, 2012; Hickerson, 2010; Thomas, 2015). Since 2018, LCR has had a strategic focus on creating indispensable and transformative services for its users, and reimagining what it means to be a digital library in 2020 and beyond (Berstler et al., 2014; Hurrell, 2019). The notion of the library as a place and space for students, faculty, and staff at the University of Calgary has taken on new meaning during these months of the pandemic.

In the COVID-19 pandemic, the University of Calgary, like many institutions (Walsh and Rana, 2020), pivoted to scale up online teaching, learning, and digital engagement with its community. In North America, a large survey of academic libraries conducted by Ithaka indicated, as of October 2020, that “roughly half of libraries are only providing instruction virtually” and about 60% are “only offering reference via phone or online” (Hinchliffe and Wolff-Eisenberg, 2020). Academic libraries have initiated creative solutions such as virtual postcards for students, virtual displays, and the promotion of open textbooks (Mehta and Wang, 2020).

In an academic health and hospital library in Belgium, requests for support for researchers and medical staff “increased dramatically during the COVID-19 pandemic” and were delivered virtually (Pauwels et al., 2020: 68). Chisita (2020) and Babalola et al. (2020) have argued that the pandemic has necessitated an urgency for librarians and libraries to continue to provide access to high-quality information for health and policy decisions, as well as educate their users on the dangers of health misinformation. A survey of academic librarians in Zimbabwe during the pandemic found that many librarians quickly incorporated virtual technology and tools to provide services to users, despite some feeling unprepared. Although users were able to access resources remotely, they still needed training and support in this process. Also, all libraries should have an emergency crisis-response plan and be prepared to offer both physical and digital services to best reach library users (Tsekea and Chigwada, 2020). An academic library in Jamaica offered its tablet loaning service for extended periods and off campus to students, as well as reference services through WhatsApp (Harris, 2021).

Creating innovative digital services in cultural institutions such as galleries, libraries, archives, and museums (GLAM) is a challenge that has been accepted by the GLAM Lab initiative (Mahey et al.,

2019). A GLAM Lab should use “experimental methods to make cultural heritage collections available in innovative, engaging and unexpected ways” (Mahey et al., 2019: 33). The COVID-19 pandemic has intensified the need for this type of digital transformation.

Digital library service delivery

Seven types of digital library services were created or expanded during the first eight months of the pandemic. Of these, four were new and three were enhancements of existing services. Together, these initiatives worked towards the goals of remote staff teamwork, student engagement, collections access, remote information literacy instruction, and high-quality reference services. All have been sustainable to implement to this moment, and it is anticipated that they will continue to be utilized.

Work teams

In April 2020, the library senior leadership team initiated new interdepartmental digital work teams with mandates focused on creating transformative and indispensable services for the primary library user groups: undergraduates, graduates, and faculty. A fourth work team was established with a focus on broad online outreach and an enhanced social media presence.

All LCR staff and librarians were invited to join a team of their choice, and a team lead was also selected. The four work teams met in May 2020 to define terms of reference and goals in relation to their specific user group. An example mandate for the undergraduate support team was to (1) work collaboratively to establish user-centric, transformative, and indispensable programs and supports for undergraduate learners, and (2) respond to the need for increased digital content and resources due to the current and likely continued short-term surge in online and distance learning. Example priorities for the undergraduate support team were to better understand undergraduate needs during this disruption; expand online communication, promotion, and outreach; decrease barriers and hurdles that undergraduate students may encounter; and work thoughtfully, collaboratively, and with vision for the future.

The team leads were directed by the senior leadership team to involve all team members in brainstorming and discussing new approaches to current challenges and library service models. The teams continue to work digitally, using Zoom and Microsoft Teams to meet and collaborate on impactful user-centric projects. The combinations of team members representing a variety of library departments have culminated in creativity, innovation, and staff engagement, even while working from home.

myLibrarian

Personal librarian programs have demonstrated increased student engagement in academic libraries (Bisko et al., 2019; Moniz et al., 2014). A pilot group of LCR librarians had been investigating the implementation of a personal librarian program since 2019. In 2020, with students learning from home and feeling disconnected from campus, a new student engagement program offered online was a welcome initiative to connect with students.

The myLibrarian personal librarian program was piloted in a soft launch in September 2020 (Libraries and Cultural Resources, 2020c). It includes an opt-in program with newsletters, virtual events, and workshops, and new ways for students to be linked with a librarian or library staff member. Students can find “their librarian” by their discipline, which promotes the existing liaison librarian model with simpler personalized terminology. The program is the first of its kind to offer a way to connect with a librarian or library staff based on the student’s personal background (e.g. mature student, student parent, or transfer student) or primary language spoken (e.g. Spanish, Mandarin, or Tagalog).

The program and its content are focused towards, but not limited to, new incoming undergraduate students. It has been well received by new students and campus partners, and leverages existing subject-based support while offering new connections aimed at reducing the potential barriers facing students.

Virtual 360-degree tours

The newly formed undergraduate support team, as mentioned above, determined that one of its primary initiatives would be to create virtual 360-degree tours of library spaces. The goal was to highlight currently available digital services during the pandemic while also introducing new users to library spaces. LCR subscribed, at a modest cost, to an online tagging service from ThingLink (2020), which provides a user-friendly platform to create interactive 360-degree tours. The team used existing technology equipment available in the library to take 360-degree images, helping to keep the costs low. A Vuze+ camera and its software were used to take and edit the 360-degree picture files, which were then uploaded to the ThingLink platform.

The interactive tours link to online services (see Figures 1a and 1b) and current service information in the respective physical space in the library. Examples of tags include: the library chat service, computer workstation booking, contactless pickup information, research guides, relevant databases, and the librarian

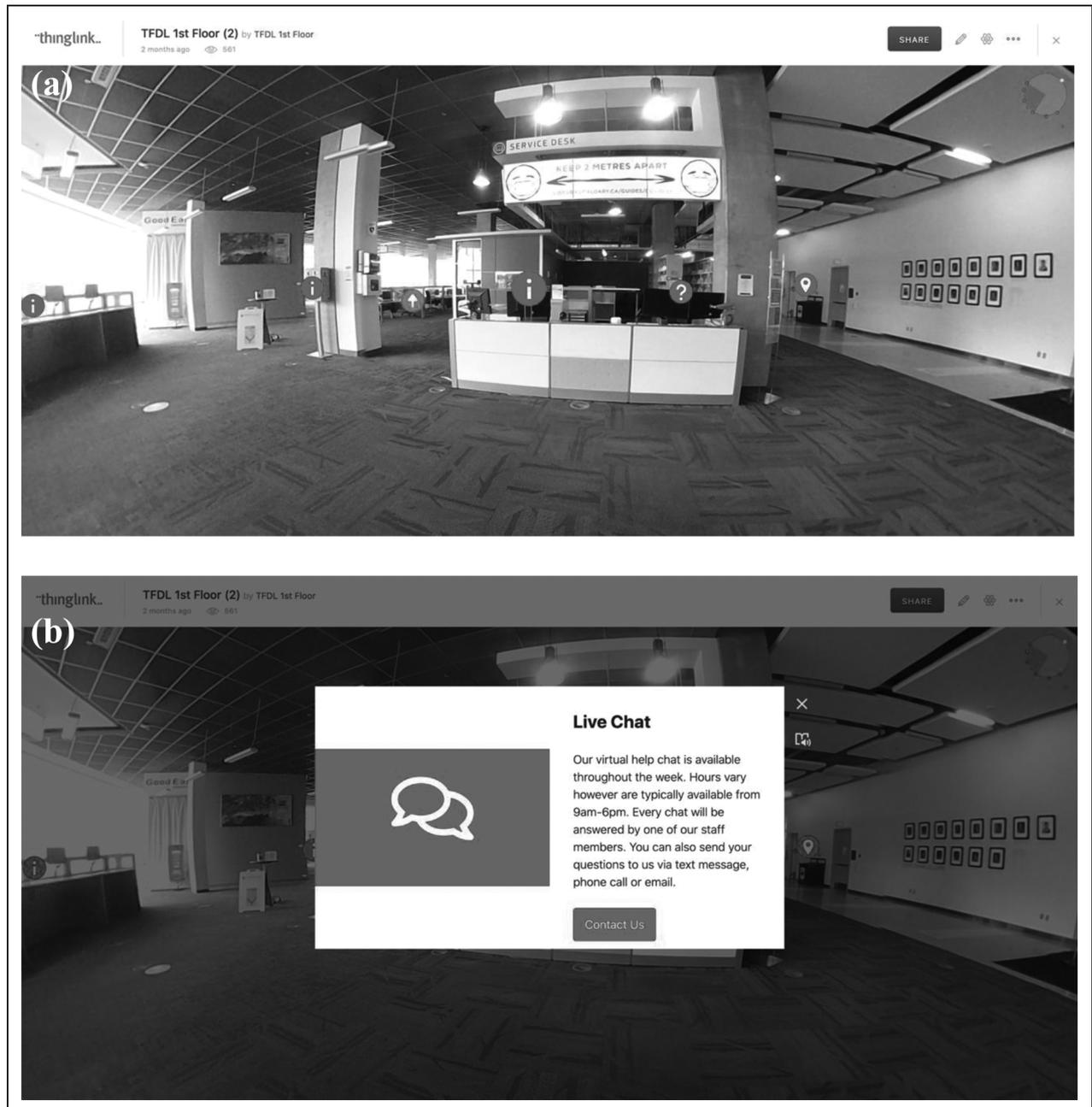


Figure 1a. Virtual 360-degree tour of the Taylor Family Digital Library.

Source: <https://www.thinglink.com/mediacard/1348347513706381313>.

Figure 1b. Virtual 360-degree tour of the Taylor Family Digital Library.

Source: <https://www.thinglink.com/mediacard/1348347513706381313>.

consultation form. Experts, including the Emerging Technology Specialist based at Lab NEXT, the technology hub of the Taylor Family Digital Library, supported the project work. Branch library teams also supported determining the tags for their respective branch locations.

The virtual 360-degree tours have been promoted on the library's home page, as well as on social media, in instruction sessions, and to other partners, including the university orientation teams. Since launching on

10 August 2020, the initial landing tour has had 1759 views (see Figure 2), while other tours typically have between 100 and 500 views. ThingLink includes detailed statistics on click rates, helping to determine what types of information are most in demand from library users. Figure 2 indicates a steady uptake in views prior to fall classes and a pattern of sustained level of online user engagement. In the future, the virtual 360-degree tours will be used to present art gallery exhibitions and virtual book displays.

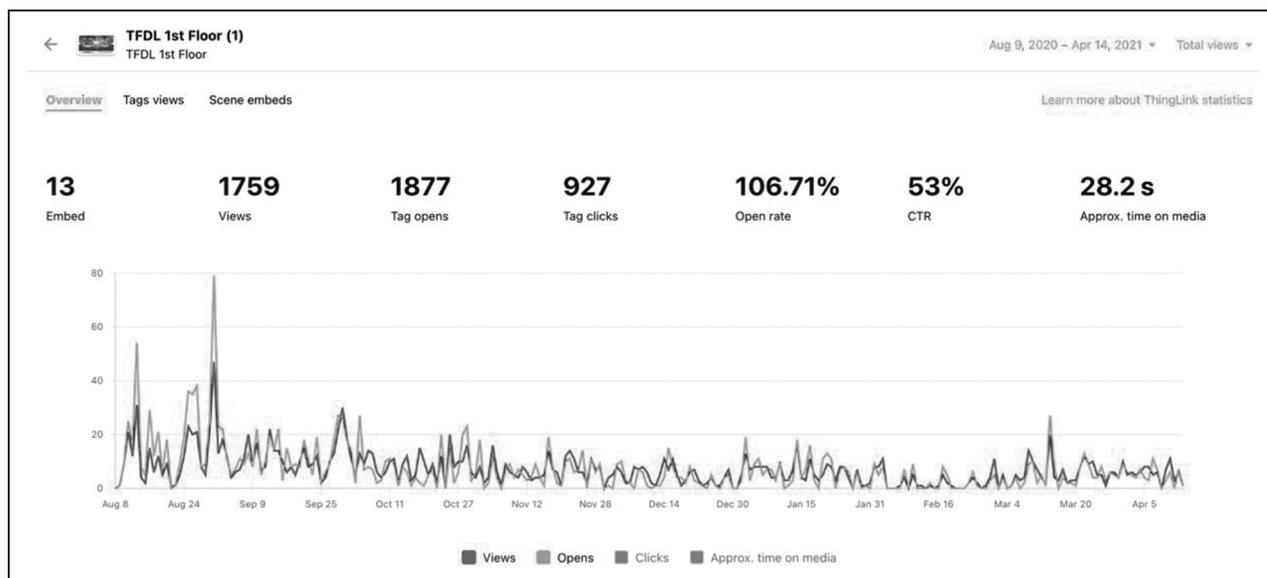


Figure 2. Usage statistics for the Taylor Family Digital Library’s 360-degree tour for August 2020 to April 2021. Source: ThingLink (2020). CTR = Click through rates.

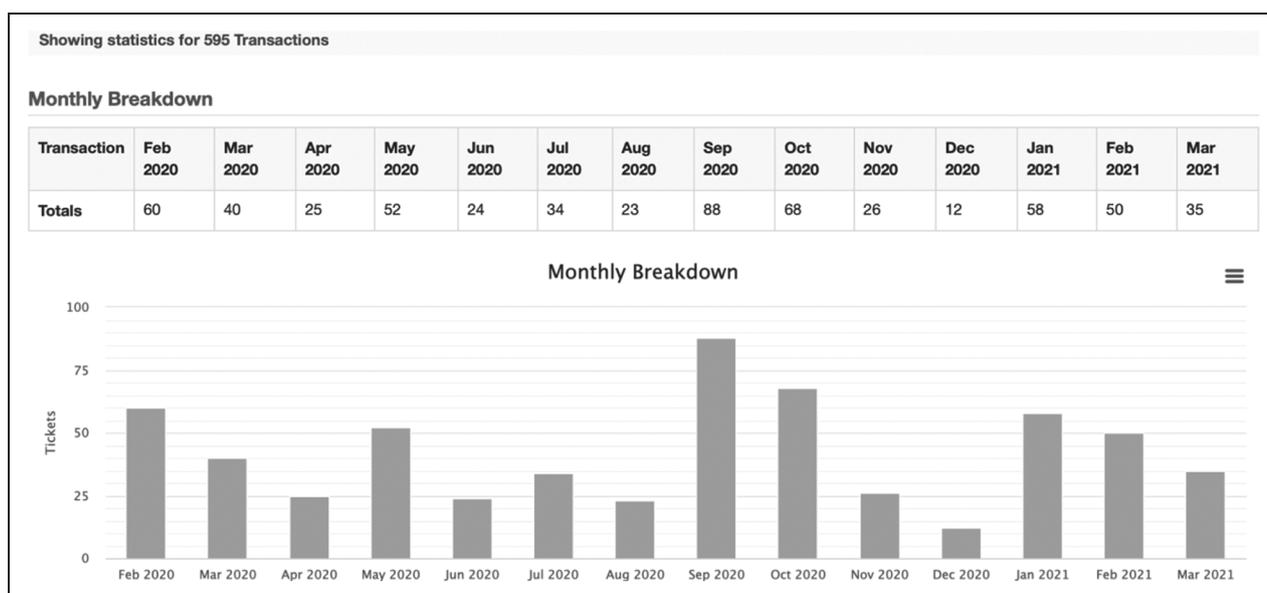


Figure 3. Library instruction per month between February 2020 and March 2021 (total: 595). Source: Springshare (2021).

Digital instruction

Librarians, archivists, curators, and other LCR staff participate in a variety of instruction for the campus community. As with all teaching on campus during the pandemic, library instruction rapidly shifted online, using platforms such as Zoom, Microsoft Teams, and Desire2Learn (the university’s content management system). When comparing library instruction statistics from the COVID-19 pandemic time period with the same period in the previous academic year (see Figures 3 and 4), instruction has

remained comparable, with a 13% decrease. There is likely a smaller difference than reported, as not all most recently delivered instruction sessions have been entered and therefore captured in the data. Interestingly, the first seven months of the pandemic (February to August 2020) had 16% more instruction than the equivalent time period in 2019, whereas the latter seven months of the pandemic had a 28% decrease over the equivalent time period from the previous year. Further research could explore what influences the pandemic had on instruction requests.

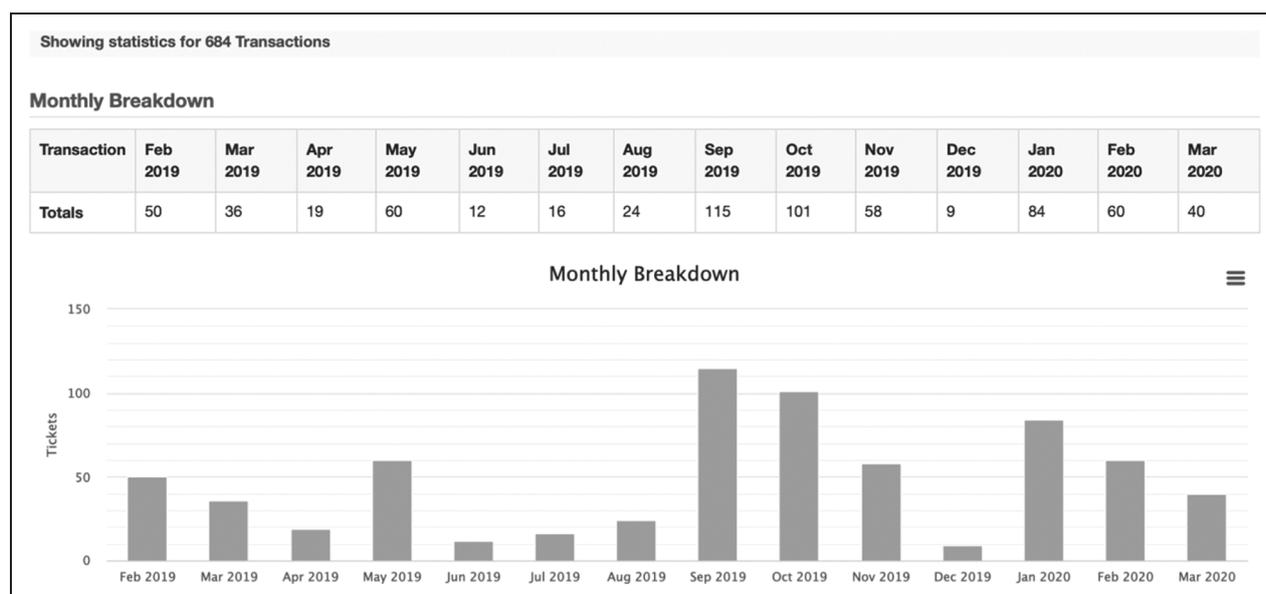


Figure 4. Library instruction per month between February 2019 and March 2020 (total: 684). Source: Springshare (2021).

Further research might also explore differences in library instruction delivered digitally versus in-person. These statistics illustrate that librarians and staff adapted to online teaching and have maintained a capacity to promote and teach information literacy skill development on campus.

Library chat service

Remote work resulted in a significant change in the approach to the LCR chat service. Prior to COVID-19, the chat service was available for 43 hours, 7 days a week. The service was staffed exclusively by the Taylor Family Digital Library learning commons team, a group of eight support staff (Information Specialists) who also primarily staff the library information desk. The library chat service had a maximum of two operators and a minimum of a single operator at any given time.

In the pandemic transition, focus shifted to training librarians, support staff, and student workers from all library locations to expand the chat service. To create a consistent and positive user experience, an LCR “chat best practices” document was developed and distributed to all operators. The “best practices” document is designed to help operators provide a consistent, accurate, and beneficial interaction for each library user, and is organized into four sections: operator expectations, patron interaction best practices, referral best practices, and best practices for creating a ticket for follow-up. It includes the basics of conducting virtual reference interviews. A series of training sessions was provided to all staff to become

familiarized with the chat interface, creating tickets, and referring users to other departments or individuals. LCR was able to leverage the subject knowledge of liaison librarians to train others on how to provide basic reference assistance for different subject areas and departments.

Numerous schedule variations were developed to determine the optimal number of staff working, while ensuring equity as to the number of shifts. All staff and librarians were able to work their chat shifts from home, using the LibChat feature of the LibApps platform. For fall–winter 2020, the chat service was available for 85 hours, 7 days a week, with between one and four operators.

There were 19,310 interactions on the library chat service during the first 12 months of the pandemic, which, when compared to 7846 interactions in the 12 months pre-pandemic, corresponds to a 246% increase (see Figures 5 and 6). The service has been popular and well used during the pandemic, although it has also been promoted more extensively as a remote option for connecting with the library. It should be noted that a portion of these increased statistics is likely due to several factors, including the activation of a proactive chat function (6 March 2020) and the HathiTrust Emergency Temporary Access Service material recall (30 September 2020).

Tutorial-video production

To provide more digital library instruction and way-finding help, librarians and staff created new short online tutorials. These are being added to YouTube

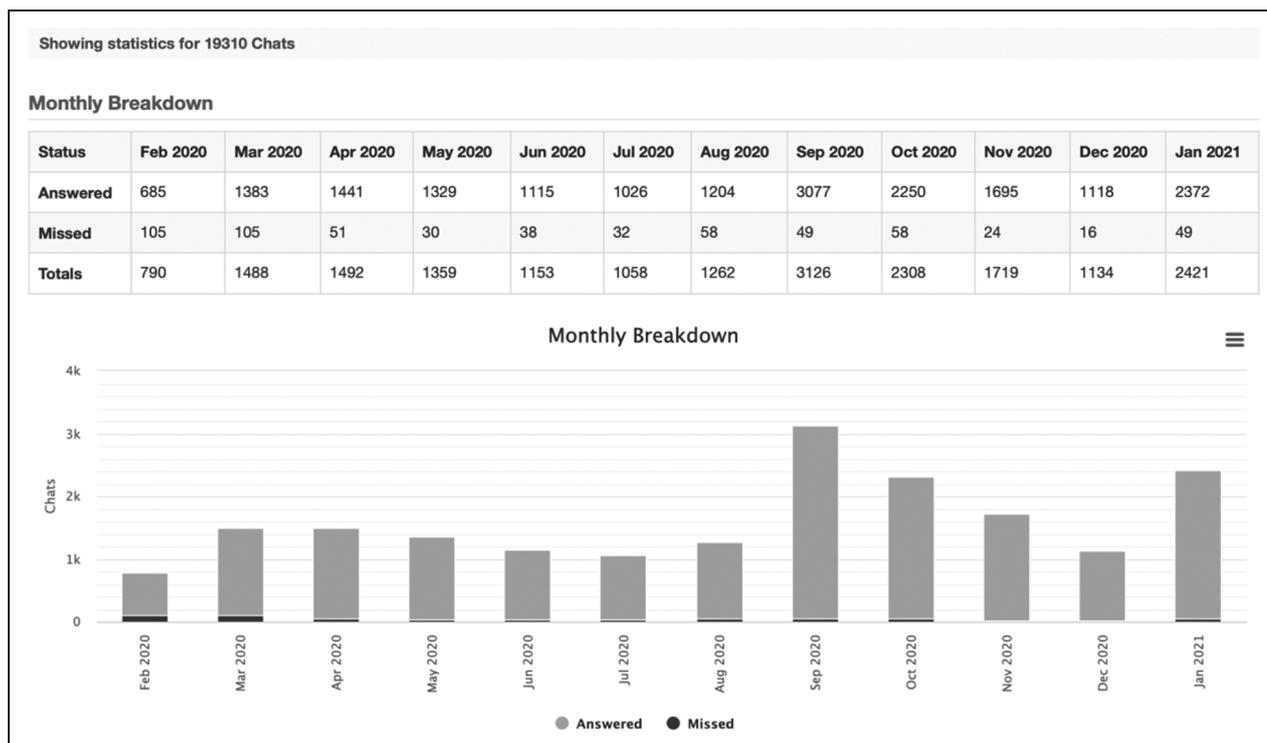


Figure 5. Library chat service statistics for February 2020 to January 2021 (total: 19,310).
Source: Springshare (2021).

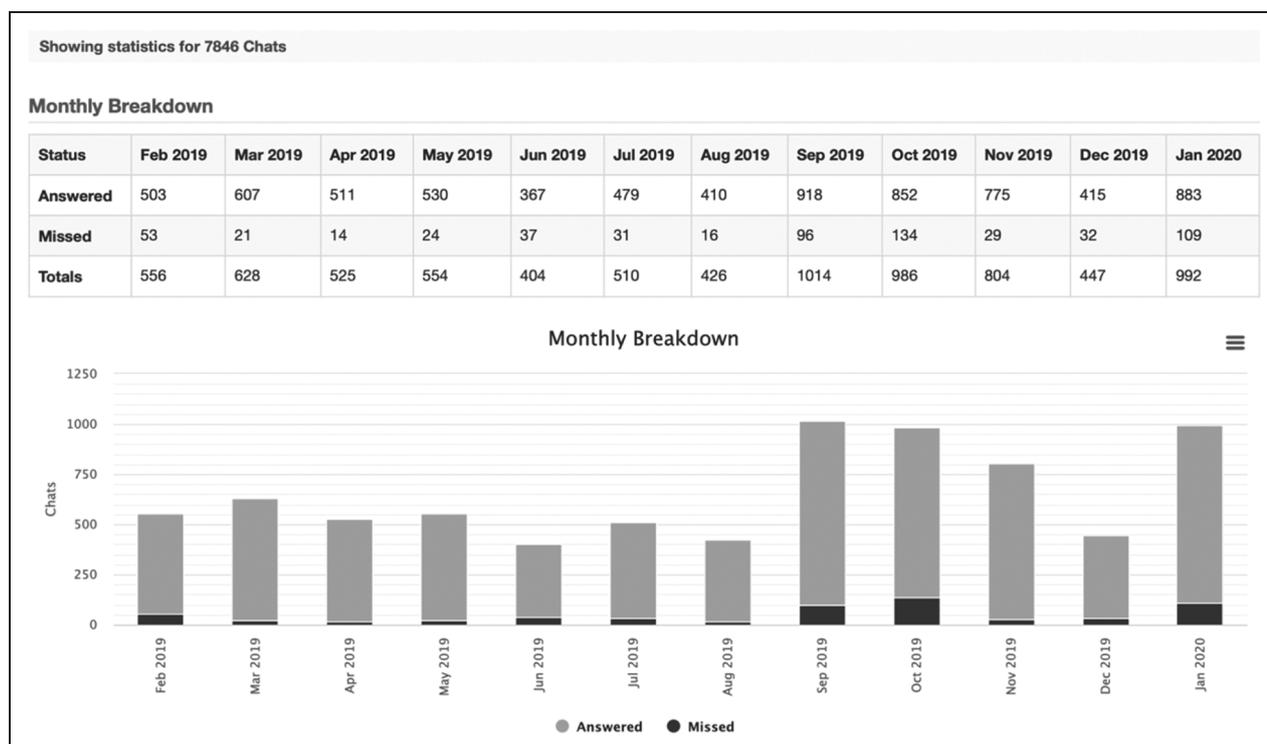


Figure 6. Library chat service statistics for February 2019 to January 2020 (total: 7846).
Source: Springshare (2021).

and social media, and embedded into FAQs (frequently asked questions) on the library website. To ensure the information in the videos is current to COVID-19

protocol, the undergraduate support team developed guidelines for standardized tutorial-video production. The Taylor Family Digital Library houses four audio/

visual editing suites, which were used to create screen recordings and professional-level audio (Libraries and Cultural Resources, 2020a). Intro and outro sequences, slides, and background music were created and approved to ensure a consistent look and feel for all the tutorial videos. All members of LCR were invited to narrate tutorials to create a diverse range of voices across the video collections.

The guidelines determined by the team included using QuickTime software to create screen recordings and capture the audio narration simultaneously. This allowed for the synchronization of video and audio, as well as the addition of slides and background music. The post-production of the video tutorials was done in iMovie or Final Cut Pro. These guidelines, as well as the production files, were shared in Microsoft Teams for other staff to access. The primary hosting platform is YouTube, which allows for easy embedding into other learning platforms, including FAQs and Desire2Learn, and sharing on social media. Staff will monitor the use of these videos over the next year to gain insights into their effectiveness for student learning.

FAQs

Over the past five years, LCR has developed over 350 short online FAQs, which are available on the LibApps LibAnswers platform. These are accessed by users on the library website or used by service desk staff and library chat operators to ensure the provision

of consistent information across the entire library system. As FAQs are individual web pages, they are indexed by Google and therefore show in search engine results should users search specific questions in relation to the library. In 2019, managers began planning how best to streamline and reduce the overall number of FAQs to improve user experience and prevent duplication of questions.

An inventory of the FAQs was conducted at the beginning of the project, which led to the discovery that most of the questions had been last updated between 2015 and 2018. The FAQ team determined that all entries would be classified in one of the following categories: borrowing; directional; reference; citing and writing; printing and technology; open access and digitization; and copyright.

With the COVID-19 pandemic and the need to enhance online information about LCR services, the team seized the opportunity to update the FAQs to incorporate COVID-19-specific information and updates. The FAQs were also easy to integrate into the virtual 360-degree tours as information tags, and assisted in the development of the scripts for the tutorial videos. The team continues to consult with different departments to ensure that the FAQs are comprehensive and accurate. As illustrated in Figure 7, public views of the FAQs during the first 12 months of the pandemic totaled 25,125. As some FAQs are significantly more popular than others,

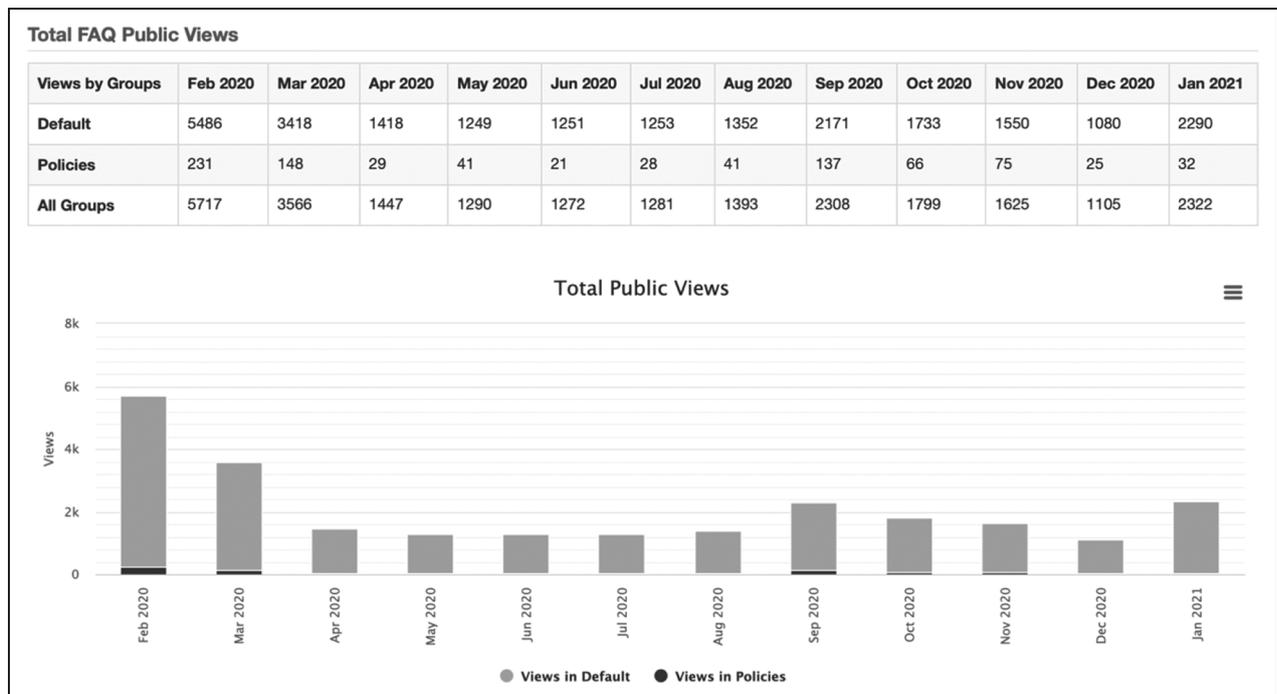


Figure 7. FAQ public views for February 2020 to January 2021 (total: 25,125). Source: Springshare (2021).

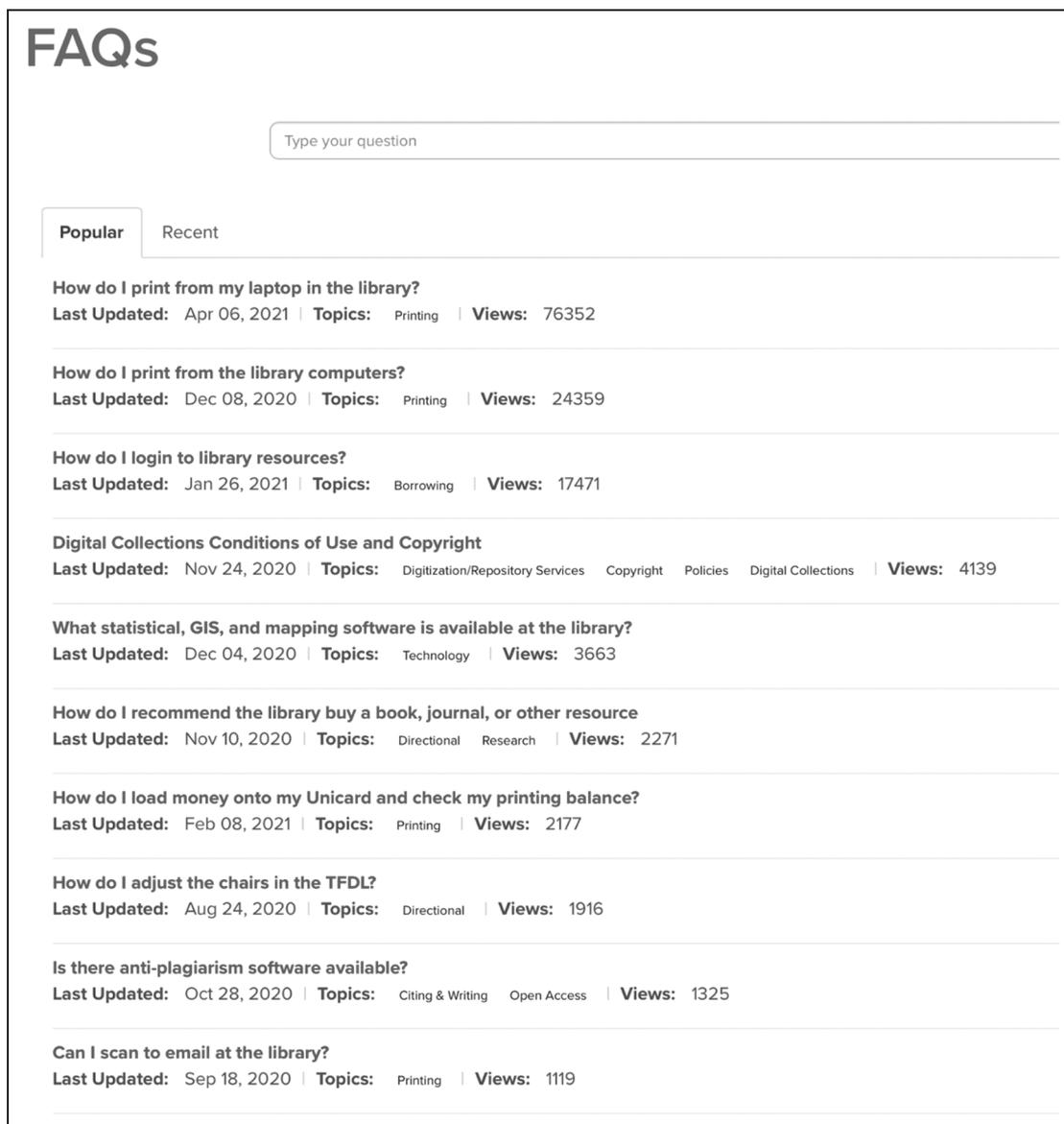


Figure 8. Sample of FAQs by popularity.
Source: <https://libanswers.ucalgary.ca>

Figure 8 illustrates a sample of the most popularly visited questions.

Physical library service delivery

An early goal in the COVID-19 pandemic was for LCR to develop a strong and effective online presence to support the teaching, learning, and research of the university community. It became evident through interactions on the library chat service that students, faculty, and staff were disappointed by the unavailability of the physical space and materials. After extensive consultations between LCR's senior leadership team and the university's emergency management team, it was determined safe for the Taylor Family Digital Library to reopen for specific

in-person purposes. Two physical services were identified as high priority, with the goal of having them operational prior to the start of the fall 2020 term: contactless book pickup and bookable study and computer spaces. To assist in the facilitation and safety of these services, a new approach was considered. The result was setting up a temporary outdoor tent and check-in desk that was staffed daily so that users could ask questions and obtain assistance at the point of need.

Contactless pickup

From the outset, use of the library and the contactless book pickup service has been restricted to current University of Calgary students, faculty, and staff. All

individuals entering the building are required to show proof of university affiliation at the check-in desk. The desk is positioned immediately inside the entrance of the Taylor Family Digital Library to assist in directing users to the book pickup and confirming computer and study space bookings.

The desk is equipped with a laptop for staff to confirm space bookings, a plexiglass barrier, face masks, a hand-sanitizing station, and a floor map of the bookable spaces. The purpose of the desk is not to answer circulation or reference questions, but to direct individuals to booked spaces or to requested material. This is to prevent lineups and extended exposure. Users are recommended to connect with LCR staff through the library chat service or at the outdoor tent if they have further queries.

On 6 August 2020, the contactless book pickup service started. After a user places a request through the library catalogue, the item is pulled from the shelf, signed out to the user's account, and placed in a transparent bag with a hold slip positioned on top of the item(s). The requested items are placed on long folding tables and labeled corresponding to the users' last names. The user receives an email notifying them that the item is ready and providing details of how and where to collect the item. The pickup and grace periods have been extended to seven business days to ensure that users have sufficient time to collect their items. High volumes of requests were anticipated at the launch of the service. To provide relief to the team fulfilling and preparing the requests, each authorized user was restricted to a maximum of 10 active requests on their account. The pickup service experienced overwhelming success, with 3683 requests being made between 6 August and 17 October 2020.

Bookable study spaces

Bookable individual study and computer spaces began on 10 August 2020 in the Taylor Family Digital Library. Of the six floors of the building, the first floor was made available with about 30 computer stations and 30 individual study spaces. In mid-September, after the first week of the fall term, the second floor was opened, offering additional study and computer spaces. With the second floor open, the library could offer a dedicated graduate study space in what was formerly a quiet reading room. On a typical day, approximately 15%–20% of the spaces are booked. For the December 2020 examination period, LCR removed all restrictions on the number of bookings an individual could make in a week, to provide students with additional access to study spaces.

Outdoor tent

After the contactless book pickup service commenced, it soon became evident that students wanted to be able to discuss their library account or, if they were new to campus, talk to a university staff member to help navigate the campus and learn more about what services were available. At that time, no other university department was providing in-person services. To address the lack of in-person student support, the outdoor tent was established on the quad outside the Taylor Family Digital Library. The service was launched on 24 August 2020, two weeks prior to the first day of classes, and ran on weekdays from 10 a.m. to 2 p.m. Students, both new and returning, as well as staff and faculty, came to the desk and asked a wide variety of questions. On a typical day, staff answered from 80 to 150 questions over the four-hour period, indicating that the service was appreciated and filled a gap that was not addressed elsewhere on campus.

The outdoor tent was quick and simple to set up and take down daily. The service point consisted of a canopy tent, folding tables, a branded tablecloth, and chairs. iPads were used to look up information for visitors, as they were portable and easy to sanitize between uses. It was not possible to set up the tent on 2 of the 24 days the service was offered due to wind or cold temperatures. Despite the vagaries of the Canadian weather, staff readily agreed to take shifts, as they could see how helpful the service was to the campus community.

Collections

Field-of-study students

As a result of demand and through collaborative efforts between LCR and the Faculty of Graduate Studies and graduate program advisors, LCR was the first research library in Canada to offer a curated collections service to support field-of-study students as of April 2020 (UToday, 2020b).

Bibliographies required for field-of-study (candidacy) and PhD defense examinations were sent by graduate program advisors to the library collections supervisors and to the respective liaison librarian. Collections staff and the liaison librarian worked through the list of sources, determining what was available in physical and electronic formats. If an item was unavailable physically, the collections staff attempted to purchase an electronic version or the librarian suggested alternative options. Fulfilment staff gathered together the items and, once they were ready to be collected, arranged a pickup time with the

graduate student. The service was received with appreciation by graduate students and their respective supervisors.

HathiTrust emergency agreement

In July 2020, the University of Calgary signed up to the HathiTrust Emergency Temporary Access Service. LCR has been a member of the HathiTrust Digital Library since 2012 and, in this agreement, approximately 1.2 million items in the physical collection have been made available online (UToday, 2020a). While the emergency online access service was in place for the fall and winter 2020–2021 terms, physical items were not loanable, and the loan policies for these items were updated to reflect this in the catalogue. Although some patrons expressed discontent with not being able to access print materials, the resulting increased online access was determined to be more equitable to students, staff, and faculty working from home or abroad.

Leganto (Reading List Tool)

In May 2020, LCR licensed Leganto, an Ex Libris course-reading-list software tool, to create online reading lists, as well as clear digital course reserve items, with the library's copyright office more efficiently. The timing of this supported the library ceasing physical course reserves in response to the pandemic. A newly formed Leganto service design team promoted the software as the "Reading List Tool" to communicate clearly what the tool provides. It was made accessible via the University of Calgary's learning management system, Desire2Learn.

The tool allows instructors to create reading lists entirely within Desire2Learn, reuse them, and link directly to sources in the library's collections or subscriptions. The library attempts to acquire electronic versions of any additional physical materials that faculty request as reserve readings. The tool provides metrics, allowing instructors to track student engagement with assigned readings. Additionally, instructors can tag added materials to be digitized or purchased, which is sent directly to the library services platform, Alma, for processing.

To promote the Reading List Tool to faculty and instructors, the library collaborated with the Taylor Institute of Teaching and Learning at the University of Calgary. LCR held several online workshops to promote the new tool and created a research guide on how to use the tool and troubleshoot (Libraries and Cultural Resources, 2020b).

Archives and Special Collections services

Archives and Special Collections (ASC) at the University of Calgary has two locations and provides access to over 5 km of materials ranging from archival records to theses, yearbooks, and campus newspapers, as well as the private archives of influential Canadians. The collections include rare book holdings; significant literary, historical, musical, and cultural archives; collections of popular and science fiction; important works on the Arctic; the largest collection of Canadian architectural drawings and records in the country; and the corporate records of the University of Calgary. From comic books to the EMI Music Canada Archive, the Taylor Family Digital Library and Archives, the Canadian Architectural Archives, and the papers of Nobel Prize-winning author Alice Munro, the holdings in ASC attract researchers from around the world.

ASC is located in the Taylor Family Digital Library on main campus. A second site is located at the Spy Hill campus. The High Density Library is a specially designed facility for storing, processing, preserving, and conserving this physical and audiovisual collection (Government of Canada, 2019). This state-of-the-art building continues to have several staff experts on-site daily so that projects continue, materials are received and processed, and conservation projects stay on track. Since the beginning of the pandemic lockdown, some staff in the cataloguing department have been working from home and others split their time between on-site and home working. Very few staff are in on a daily basis, and those who are perform essential duties, such as receiving and processing, conservation, and preservation.

Moving services and teaching online

ASC was also affected by the provincially mandated lockdowns that began on 22 March 2020. LCR refocused its services to primary users: students, faculty, and staff. The Glenbow Western Research Centre Reading Room, located in the Taylor Family Digital Library, was closed for in-person services. Information specialists for each of the repositories adapted their work to online delivery and began to work from home. Updates on the COVID-19 impact on services were regularly posted on the website. Patrons—students, faculty, staff, and community users—were directed to email addresses for support.

Prior to the pandemic, email contact had become a primary method of contacting ASC staff. This method of contact remains the primary way of obtaining reference services for users. In the September 2020 to March 2021 period, ASC staff answered 1009

reference questions, compared to 2560 in the September 2019 to March 2020 period. This decrease reflects the move to online classes by the university, as well as the shift in how course content is delivered by faculty. With no physical visits to the reading room or in-person teaching due to its closure, there are no retrievals for researchers or students. Often, following an on-site instruction session, students will request materials from the class. However, with instruction being moved online, students are searching for digital content to study instead of the physical items.

Requests for scans and copies were able to be met. However, the response time was slower as fewer staff were on-site to perform these tasks. When the University of Calgary campus was open to essential staff only, this also meant that in-person tours were paused. Due to COVID-19 transmission concerns, in-person visits and large groups have not been permitted. In the future months, it is anticipated that in-person visits to the reading room and modified tours may be offered through a video link or by appointment.

Teaching and learning requests in the early months of the pandemic were limited in number as the academic year was shifting to final classes before examinations began. This meant that teaching requests did not come in until late spring 2020, which coincided with the announcement of summer 2020 classes being offered online. Teaching in the ASC's purpose-built classrooms has enabled instruction to include archival materials and rare books as part of the student learning process for primary source literacy. Instruction in ASC follows the Association of College and Research Libraries' (2018) "Guidelines for primary source literacy." Prior to instruction being moved online, students would have a hands-on experience with archival and rare materials. Learning would take place in the classroom through the core concepts of conceptualization, access, summarizing, interpretation, evaluation, and incorporation.

Moving to an online teaching environment was a new experience for the librarians and archivists, as well as for the faculty members who requested instruction for their students. The question of how to deliver content online that has traditionally included the physical examination of archival materials and rare books was a challenge and opportunity to do things differently. Librarians and archivists have been pushed to incorporate the Association of College and Research Libraries' core ideas into online instruction using digital content. Turning to the digital collections for instructional content revealed possibilities for inclusion for instruction. The switch to online learning due to the pandemic has underlined the importance of the digital collection and the crucial

work needed to continue to add content. ASC instructional sessions moved online successfully for the fall and winter 2020–2021 terms.

Collections: digital content, gifts, conservation, and preservation

The physical collection continues to grow due to the recent addition of the Glenbow Library and Archive from the Glenbow Museum (Beaulne-Stuebing, 2020). This special collection, when fully moved from the Glenbow Museum in downtown Calgary, will add another 5 km of materials to ASC for researchers, students, and faculty. When the Glenbow Museum reopened in a limited capacity in summer 2020, the collection moves were safely able to resume. Collections staff were able to continue their work, whether on-site or at home, by adjusting workflows and handling.

The digital collection continued to grow during the pandemic, despite staff working at home and coming on-site on a limited basis. Now, more than ever, the importance of adding content to digital collections has taken on a new priority. LCR's digitization unit continued to process materials. The launch of a new data asset management system was timely, as it has enabled work to progress in loading content and adding user-friendly features. The digitization unit's staff have been able to curate several ASC digital collections during the pandemic period. Promotion of these online exhibits via social media platforms, as well as an online newsletter, has garnered interest. Creating digital collections and successfully promoting them broadly has been especially meaningful in connecting with the campus community and beyond.

Gifts were accepted for consideration prior to the pandemic. However, in late March 2020, new donations were transitioned to a case-by-case basis. With limited staff on-site to receive materials, capacity has been reduced for this activity. Furthermore, materials received from outside the University of Calgary environment are subject to quarantining protocols prior to handling. These protocols have been implemented based on the recommendations of Library and Archives Canada, the Provincial Archives of Alberta, and the OCLC's REopening Archives, Libraries, and Museums (REALM) project.

Conservation and preservation work has continued since March 2020. ASC has a conservation laboratory, and the conservation advisor has been on-site daily as his work is considered essential, thus ensuring rare and fragile materials are being properly handled and treated.

Glenbow Western Research Centre Reading Room

The closure of the reading room in March 2020 as part of the University of Calgary's response to COVID-19 shifted patrons to online services. However, preparations began in summer 2020 for a modified reopening. The health protocols of the province of Alberta, city of Calgary, and university, as well as best practices from archives and museums across North America and beyond, were reviewed and discussed in the context of local needs. The OCLC's REALM test data for quarantining materials such as paper, leather, and plastic,¹ as well as the recommendations of Library and Archives Canada and the Provincial Archives of Alberta,² formed the basis to shape a document for reopening. Given the high-touch nature of the collections and interaction between staff and patrons with materials, extra caution and consideration have been factored into reopening plans. Logistics abound, with patron-safe entrance and exit, the safe storage of coats and bags, limiting the number of researchers in the reading room, arranging furniture for greater spacing between tables, and critical quarantine measures needing to be in place for safety. Discussions are ongoing about the timing and restrictions needed in order to open with minimal risk.

Results

As with our academic library colleagues across Canada and the world, LCR teams have endeavored to maintain a high level of service while complying with local safety measures to keep our staff and community safe. The COVID-19 pandemic has thrown into flux previous workflows and forced us to think creatively about new and innovative ways to continue providing indispensable and transformative services to our campus community. With an economic recession and reduced provincial post-secondary funding added to the scenario, it was necessary that the implementation costs of these initiatives remain low.

Despite these challenges, LCR has been able to work towards the university's strategic goals of enriching the quality of learning and engaging our library users, whether new undergraduates, graduate students, or faculty. Starting from a tradition of embracing digital tools and technologies, LCR has been able to leverage and enhance new digital initiatives to meet and exceed user expectations.

Tables 1 and 2 present a summary of the initiatives created or enhanced during the COVID-19 pandemic, including: whether the initiative was a result of COVID-19; the key benefits of implementation; the key challenges of implementation; whether the initiative has been seen as sustainable; and whether the

initiative is likely to be continued in a post-pandemic setting (if applicable).

Discussion

LCR has been able to leverage existing digital services and collections, as well as add additional ones, to meet demand. New digital methods of strategic teamwork and collaboration have proven successful. A tailored personal librarian program has enhanced student engagement, especially with new undergraduates. Adapting to digital tutorials and instruction has facilitated the building of information literacy skills for students.

Providing high-quality reference services has pivoted online through a greatly increased and promoted library chat platform, as well as targeted FAQs delivering quick answers and directional support to users. The chat service was utilized prior to the transition to the online environment; however, the intention is to continue with the chat service as a primary service point, while capitalizing on the expertise of all LCR staff to provide users with the best reference experience. FAQs will continue to be updated and maintained to reflect current services and policies.

Contactless pickup, bookable study spaces, and an outdoor information desk have supported these digital initiatives by allowing users to access print materials, use library spaces in a controlled manner, and seek assistance safely. As the physical space will be unable to reopen for 24-hour study, LCR is encouraged to offer the chat service for extended hours to assist the study and research of students, faculty, and staff. With the continued high usage of the chat service, the library is exploring implementing a chatbot service for times when there are no chat operators working—for example, in the evenings, at night, and during holidays. The chatbot would direct users to relevant FAQs or library web pages corresponding to their inquiries. With the success of the outdoor tent, a temporary service point will be made available at the beginning of the fall term in the years to come. The tent offers a unique opportunity to connect and engage with students and faculty in an informal manner outside of library spaces.

The services of contactless book pickup and bookable study spaces will continue for the duration of the pandemic. As more library locations reopen, the circulation of materials will return to operating procedures akin to those that were in effect prior to the shift online. Library users will be able to request items for pickup and sign out material for themselves, and eventually be able to physically search the collection. Study spaces will revert to a first-come, first-served

basis, with workrooms and studios reopening and being the only bookable spaces in the libraries.

ASC users will be supported online and by telephone for reference and research assistance. It is anticipated that there will be a steady demand for instruction to be delivered online based on early successes in the online classroom. Adding to the digital collection is a priority task for staff, as it will provide enhanced online access to unique and rare items. Staff will continue to build web pages and add content to the ASC website, as well as add point-of-need information to the FAQ pages. Plans are underway to create digital exhibits drawn from the collections, which is an exciting new direction for outreach and community engagement. The Glenbow Western Research Centre Reading Room will reopen in a modified way that complies with all local, provincial, and federal COVID-19 health and safety protocols.

With the spread and persistence of the COVID-19 virus, the world will continue to be affected. It follows that post-secondary institutions globally, and their libraries, will be challenged in the ways that teaching, learning, and research are supported. The librarians, archivists, curators, and staff at the University of Calgary's LCR have shown that, with imagination and creativity, and by leveraging skills and expertise in digital initiatives to support students and researchers, this adaptation can be successful. Through the initiatives discussed in this article, the University of Calgary's LCR continues to play a critical role in the academy through creative and innovative academic library services to support students, faculty, and researchers in achieving their goals.

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Notes

1. See the OCLC's REALM project website at <https://www.oclc.org/realm/home.html>
2. See the Library and Archives Canada website at <https://www.bac-lac.gc.ca/eng/Pages/home.aspx> and the Provincial Archives of Alberta website at <https://provincia.larchives.alberta.ca/>

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Continuity during COVID: Critical digital pedagogy and special collections virtual instruction

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Abstract

When the world began to take notice of the growing risks of COVID-19 in early spring 2020, the University of South Florida Libraries–Tampa Special Collections shifted to virtual instruction sessions to provide students with access to rare books and primary-source archival materials. To respond to the need for a quick shift to online instruction, the department formulated a plan to support students with an open-access digital learning experience using ArcGIS StoryMaps. Building on critical digital pedagogy and feminist digital humanities, the sessions provided online teaching resources for faculty who could not schedule students for physical visits. Over the first year of remote work, the department created sessions for 15 course sections. Looking to the future, Special Collections will continue providing the option of virtual sessions as part of its instruction. The digital nature of the courses lends to a recursive pedagogy, allowing for continued adaptation that is complimentary to academic cycles.

Keywords

Distance education, library and information science, education, pedagogy, special collections, rare books, collection development, archival collections, services, multicultural populations, user populations, digital libraries, virtual libraries, information providers

Introduction

As spring break 2020 neared, hand in hand with the end-of-term research push, the University of South Florida (USF) Libraries–Tampa Special Collections found itself in the familiar position of preparing for multiple instruction sessions. As news of COVID-19 became impossible to ignore, preparations for a remote work continuity of operations plan seemed like a hypothetical exercise. Within a few days, and with infection levels in Florida quickly rising, USF directed non-essential employees to work from home. The timeline is a familiar one for many. The library's staff and faculty packed up project supplies to hold them over for an estimated two weeks, but left the building armed with a thorough plan to sustain a longer stay.

Special Collections approached the shutdown as if it would last through the summer to best prepare for

instruction. The department recognized that while staff and faculty might return within two weeks, students had been sent home for the remainder of the term. Faced with their absence and the unknown, the team quickly brainstormed options for maintaining an instruction schedule. The plan involved reaching out to faculty with upcoming sessions and offering to provide documents for their courses. Building off experience with collections, library instruction, digital humanities, and digital pedagogy, the authors offered the faculty a proposal to create asynchronous virtual sessions to replace planned live ones. One of the three instructors with sessions on the books

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accepted the offer to migrate the session to a digital platform. The instructor the team collaborated with had two sessions planned, providing the department with two opportunities to illustrate the layout and approach. Special Collections used the sessions to springboard a successful program of virtual instruction sessions anchored in theories of critical and feminist digital pedagogy ideologies, which allowed the team to meet learning objectives while allowing the students to work through the sessions in their own time.

This case study addresses the response of USF Libraries–Tampa Special Collections to the COVID-19 pandemic and its application of digital humanities theories to produce high-impact virtual instruction sessions remotely. At their core, a single-page layout on the ArcGIS StoryMaps platform was adopted to encourage continuous scrolling through courses, which could model moving from source to source like students would in a live instruction session while still encouraging independent pacing and exploration. The department created 32 StoryMaps to support outreach about Special Collections' rare books and archival materials in the first year of working remotely due to COVID-19, with 17 of those directly supporting instruction in 15 course sections. Other online exhibits promoted various library events and initiatives. By rethinking how archival instruction could be administered, the team adapted to create a successful virtual instruction workflow that will continue beyond the pandemic as a core program for Special Collections to complement in-person instruction.

Literature review: adapting digital humanities pedagogy for libraries

Digital humanities offers library professionals a rich framework for virtual instruction methodologies. When libraries can combine archival instruction with digital humanities, Giannetti (2019) argues, they are able to teach using their collections while also introducing students to valuable digital humanities tools. Faculty relationships with archives staff allow for a mutually beneficial system where students have the opportunity to work with rare materials, both raising awareness of their existence and keeping their interest in the coursework (Vetter, 2014). Waddell and Clariza (2018: 231) have illustrated the success of critical approaches for library instruction, particularly when they concern issues of sensitivity and diversity. They write that “[c]ritical digital pedagogy is a method of empowerment” (p. 231) for students, who can learn more about themselves through the digital

storytelling process. Their work builds directly from Tewell's (2015) writings on critical information literacy in libraries and the body of work put together by digital humanities scholars like Jesse Strommel.

The theoretical approaches of critical digital pedagogy forwarded by Strommel (2014) advocate for community-based learning that decentralizes authority in the classroom, making them particularly useful for instruction that is remote by necessity. In his seminal article defining the term, Strommel (2014) argues that “Critical Pedagogy is an approach to teaching and learning predicated on fostering agency and empowering learners (implicitly and explicitly critiquing oppressive power structures).” Moreover, he suggests that the method is *critical* in every sense, from essential to interpretive to condemnatory. Building off Paulo Freire's rejection of the banking methods where knowledge is deposited to students, Strommel's argument against prepared “content” creates inherent challenges to applying critical digital pedagogy to prepared asynchronous library instruction modules. By its very nature, virtual instruction requires content and structure to provide a comprehensible product. Through an adoption of critical techniques and an effort not to overly teach or curate items, the instruction sessions created tools that aspired to the goals of critical pedagogy within the limits placed on the department, faculty, and students in the midst of the pandemic. During in-person visits, students are faced with multiple doors to reach Special Collections, and materials are brought out and presented to them. In the virtual environment, those walls can be removed in some ways to provide students with a glimpse into the closed stacks and demystify archival research.

Like critical digital pedagogy, feminist digital humanities and critical feminist pedagogy place students at the center of the learning process, decentralizing authority in the classroom. When students are learning remotely, that authority is already decentralized. Special collections instruction is perfect for this type of pedagogy, as the goal is to orientate students to resources for their research, leaving them with the room to make connections. Rodríguez Milanés and DeNoyelles (2014) describe feminist pedagogy as a way to encourage the “breakdown of hierarchy and [to] foster a space where everyone is invested in and responsible for the content, process, and learning.” Although necessarily curated, due to constraints including staff, time, and limits on how many megabytes a StoryMap can handle before it suffers from slow loading speed, the asynchronous self-paced layout allows students to choose how they interact with the sessions. In addition, the drafting process for the sessions included a team of diverse voices from across

the department to bring together multiple perspectives on the content to include. Wernimont and Flanders (2010: 433) argue in their article “Feminism in the age of digital archives: The Women Writers Project” that “even if the archive does productively represent a formal and thematic variety, it does not necessarily represent either diversity or comprehensiveness. The textbase reflects the social reality.” This was a challenge the team dealt with throughout the planning phase for the courses, as some topics lent themselves to diversity more than others. By embracing critical feminist pedagogy as an aspirational goal, it prompted the team to look beyond the items that Special Collections commonly pulls for classes to present a more balanced representation. This critical approach to the sources will have a lasting impact on the types of items used for courses going forward.

Hybrid Pedagogy scholar Chris Friend provided yet another foundational goal for the instruction sessions. Simply, Friend asks readers “*not to teach.*” Rather, to destabilize the notion of hierarchy, teachers must remove themselves from the notion of showing and telling. As with the issues posed by Wernimont and Flanders (2010), the nature of library personnel providing sources creates hurdles in this area. The idea of not teaching as a method of instruction seems counterproductive, but opening the course to more free exploration allows for new ideas beyond what the organizer may have even considered. With the Special Collections virtual sessions developed on StoryMaps, students are given options on how to navigate the course page(s) through hyperlinked sections or scrolling options. Through the asynchronous delivery of the instruction sessions, students have the opportunity to ingest the content at their own pace and in the order they desire. Should they choose, they could also follow the outline in the order established by the team. The limited previews of documents or introductions to collections both served practical needs and were designed to encourage personal exploration of more materials from Special Collections beyond the virtual session.

Giannetti’s (2019) “‘So near while apart’: Correspondence editions as critical library pedagogy and digital humanities methodology” provides a helpful assessment of how she merged critical library pedagogy with digital humanities. Her discussion on a project integrating the Text Encoding Initiative into information literacy instruction includes the value of integrating more diverse voices through the conscious inclusion of digital humanities theories. She argues “for seeing digital humanities methodologies and information literacy as entwined, mutually supportive frameworks that produce a new information literacy

paradigm” to resist structures of hierarchy in small ways (Giannetti, 2019: 2). In her case, Giannetti viewed the adoption of the Text Encoding Initiative as a means to incorporate the 2015 appeal to the value of the student’s role in learning through “A Student Collaborators’ Bill of Rights” (Di Pressi et al., 2015). Giannetti’s (2019: 10) promotion of “small DH [digital humanities]” serves as an encouragement for Special Collections as her methods note that not all interventions need to be large to support shifts in pedagogy. Similar to her incorporation of digital humanities into her information literacy facilitation, Special Collections worked to incorporate the frameworks of critical digital pedagogy and feminist digital humanities into its development of virtual instruction sessions.

Adopting and adapting critical digital pedagogy for library professionals raises important questions about how libraries interact with faculty for instruction, or how they can develop their own pedagogical strategies that compliment mutually agreed-upon learning objectives (Varner, 2016). In some ways, the term “instruction” feels too prescriptive for the sessions. Instruction was accomplished by providing students with the tools needed to explore primary resources and learn about accessing materials within Special Collections to complete their course research. More broadly, the team focused on integrating foundational elements of critical and feminist pedagogies to create tools that provided students with a spark to encourage them to pursue research that supported their needs. The department also kept digital pedagogy best practices for accessibility in mind by making the material easy to navigate and functional with screen readers, and using image captions and describing the physical objects in most cases. As will be discussed in more detail below, the team began to systematically transcribe the handwritten primary sources.

Special Collections continued to offer live virtual instruction when appropriate, but the majority of faculty requested asynchronous introductions to department resources since many students had returned home to different time zones across the globe. When selecting a platform, the department prioritized making the asynchronous sessions easily visible without the limitations of a paywall or required login. By removing barriers for viewing, the use of the public StoryMaps allows users to quickly access, share, and return to sessions whenever desired, without the limitations of restricted-access learning management systems. One instructor provided feedback that this unexpected benefit made them favor the virtual method going forward, writing:

I know we turned to the digital format out of necessity, but the more I use the digital exhibits, the more I think they could be such a wonderful supplement to the in-person sessions as they allow students to return to some of the items after the fact.

The practicalities of completing the projects with a modest team and under the restrictions placed on library staff by COVID-19 left many areas for growth to further dismantle hierarchy in the pedagogy, but also created a space to experiment with innovation. Early hurdles in creating content that aligned with critical feminist pedagogy ideologies through diverse authorship have been overcome in the first year through the inclusion of student assistants, interns, and now other library departments in the creative process. The transition to remote work necessitated a change to Special Collections' workflow that provided Special Collections with the unexpected opportunity to add a new type of instruction session to its more familiar live, in-person formats, and the duration of the closures has provided the team with the time to analyze and adapt the work. Through a combination of both practically having more time to collect digital versions of sources and reflection on the overarching goals and student reception, each iteration has involved gradual changes to best facilitate student learning while raising awareness of Special Collections.

Responding to need

Under normal operational circumstances, Special Collections hosts an average of seven in-person instructional sessions per semester, primarily for faculty and students in the English, History, and Art History departments. Both undergraduate and graduate students partake in these sessions, with the majority falling into the first classification. Traditional sessions are arranged with professors, either with a generalist approach focused on primary-source research methods or specifically targeted materials requests by the professor. Books and archival materials are tabled, with at least one item per enrolled student. In addition to learning about primary research methods, the sessions introduce students to material culture and the idea of the book as an artifact. Thus, materiality and a tactile experience typically play vital roles in the interactive teaching process.

During the transition to remote work in March 2020, USF Libraries administration encouraged all departments to remain engaged with faculty and continue to provide vital services for instructors and students to assist with the unexpected changes everyone faced in that moment. After USF courses transitioned

online and the university directed non-essential employees to stay at home, safety provisions precluded any in-person appointments with individuals or classes. Special Collections' continuity of operations plan arranged for staff to contact faculty with scheduled instructional sessions to see if they were interested in a yet-to-be-defined form of virtual instruction, primary-source scans, or cancelling the sessions. The three faculty members on the schedule had held previous classes in the department and were familiar with the staff. Having a working relationship with teaching faculty helped navigate initial outreach, which was facilitated by a message of support from the Head of Special Collections. Recognizing that faculty were coping with their own abrupt transition to remote work, the department sought to ease the change by limiting disruption to their lesson calendar. One of the three professors, a member of the English Department, wished to proceed with the new venture, providing the department with an opportunity to adapt by taking its workshop virtual.

With less than one month until the scheduled delivery date and very fluid conditions regarding staff access to the building, the logistics of planning were less than ideal. The instructor requested sessions for Introduction to Literary Methodology, a course previously collaborated on, and Eighteenth-Century Britons: At Home & Abroad, a topical elective. Having been conducted before, the first session posed fewer preparation concerns, since the department could rely on documentation from its Aeon tracking system to pull materials from previous in-person sessions. Although most faculty request similar materials for Methodology courses, particularly those showing progressions in publishing over time, new materials were also integrated that complemented the virtual format.

The Eighteenth-Century Britons course covered a different time period than previously conducted sessions. The initial planning was conducted through the remote use of the library's catalog, in consultation with the course syllabus and external research into the time period. Curating an entire session solely on catalog descriptors proved challenging, as not all of the seemingly promising materials were visually appealing in person. The chosen platform—ArcGIS StoryMaps—offered flexible options to stage material, including gallery views. However, some materials, once viewed, were not judged dynamic enough to sufficiently engage students without the added dimension of physical interaction and discovery. Other issues regarding the identified materials included reproduction limitations or difficulty obtaining good image quality due to the size or binding of the materials. Without consistent building access to redo any

blurry or obscure images, the only options were to make use of accumulated digital files from past projects or to streamline the materials offered. The literary nature of the courses also meant that it was not possible to leverage many materials from USF Libraries Digital Collections, which focuses more on archival collections. Instead, two staff members visited the department in shifts to take photographs and make scans of materials for use in the sessions. Taking shifts, the team was able to use a mixture of cameras, book scanners, and flatbed scanners to make reproductions.

Although the team had experience hosting Literary Methodology courses in the past, simply reusing previous text selections proved problematic. The purpose of this session was for major students in the English Department to learn about literary and publishing history, and the academic benefits of studying primary-source material, and to interrogate the ways in which narratives can be constructed and analyzed in manners that differ from their traditional readings of texts in class. Thus, the time span of the chosen exhibit materials was sweeping, including very contemporary items. Another key aspect of this course is the study of intertextuality and what literature students can learn by comparing preprint, finalized, and influential source material. Special Collections holds original manuscripts of published works, as well as draft illustrations for graphic works.

Attempting to use some of the team's preferred examples was very difficult, if not impossible, when hosting the session on publicly published, and thus openly accessible, software. Early decisions for digitization did not take these restrictions into account, and the team ended up with a portion of the scans that was not usable for that platform. Increasing local cases of COVID in early April 2020 also meant that the staff's building access became entirely infeasible at a crucial juncture in the project. Creativity and some reverse engineering led to a contingency plan. The team scoured past social media posts, shared departmental drives, and used materials from the library's Digital Collections repository for any materials that had clear custodial paperwork on record.

The Eighteenth-Century Britons course offered few complications in terms of copyright, as the majority of the materials included are in the public domain. Reissued texts such as a Limited Editions version of Jane Austen's (1971) *Northanger Abbey* proved problematic, as the accompanying illustrations were produced later and are protected intellectual property. The initial plan for the sessions was to host all of them in an open-access manner for later inclusion on the departmental exhibit web page, which limited the

ability to showcase copyrighted selections. When item previews were excerpted due to reproduction limitations, it was clearly noted in the session to both educate the viewer on the significance of copyright and encourage in-person visits to view the full resources, when safe. After drafting two prototypes, the department referred the sessions to USF's Copyright and Intellectual Property Librarian for review. To retain previews of such books, fair use for educational purposes was considered, as was the staging and grouping of multiple works to create a display that was unique enough to warrant transformative use. This cross-departmental collaboration became a standard part of the workflow for virtual instruction sessions.

Admittedly, there was no standardized template or system in place to track the workflow of the early projects, partially because the remote and on-site work situation was precarious. The proposed items were entered into a shared spreadsheet, which tracked the item, collection, and call number information for retrieval purposes. Limited time and personnel, and a lens issue with the overhead scanner through most of the fall term, meant that a combination of scans and photographs developed. Unexpected technical issues, lower-than-desired scan resolution rates, and trial and error were unavoidable and provided valuable learning opportunities. Although a basic outline for the session formats was established prior to executing the StoryMap, it became clear that a more detailed back-end process would help to streamline workflow and make uploading easier.

In addition to text generation, quality control of the images was another pressing matter of concern. Staff had different levels of experience with Adobe Photoshop as well, and the team collaborated to learn techniques that improved the overall quality of all of the visuals used in the sessions. The department agreed to an overall look for the images, including a standard color balance and exposure scale. When choosing and editing the images, it was also important to curate a selection of text that the students could explore in more detail, as well as avoid simple, flat scans that did not convey the material aspect of the items. The purpose of the session was to mirror the in-person experience as closely as possible, using a combination of close-ups, binding overviews, textures, and other tactile elements to capture the essence of the selected archives and rare books.

Collaboration between Special Collections staff and faculty members ensured that the courses met both their goals for archival instruction sessions and the course learning objectives. For the entry-level Literary Methodology course, this conversation resulted in a set of guiding questions to accompany each

Gallery A: Alvin P. Yorkunas papers

Alvin Yorkunas was a Tampa resident who served in the Army Air Forces during the Second World War. During his service, Yorkunas wrote approximately 650 letters to his wife Mary Ann, and maintained a daily journal while stationed in Saipan and Guam (1944-1945). These records are distinct due to Yorkunas's artistic talent and elaborate decoration of each missive.

For Consideration:

1. Over time, Army censors objected to the level of detail in Yorkunas's letters, prompting him to speak cryptically and maintain a daily journal for objectionable material. How is your interpretation of the narrative impacted by this limitation?
2. After seeing Noel Wisdom's artistic rendition of his experiences during the First World War, consider the ways in which Yorkunas's account of the Second World War differs and resembles that of Wisdom's.

Figure 1. Questions for consideration accompanying the Introduction to Literary Methodology galleries. © 2020 University of South Florida.

gallery in the session (see Figure 1). Broad in scope and designed to introduce undergraduate English majors to a variety of material types, these open-ended questions encouraged the students to linger on items and explore the selections in different ways. The instructor reflected that the number of questions—approximately three per item—helped students consider multiple angles about the sources and allowed them to guide the discussions in their class. Not all classes adopted the question-driven approach, but each course brought in a different layer of instructor participation. Instructor input about the granularity of the textual elements, book arts vocabularies, and minute details was a guiding force in some of the gallery designs. For instance, a faculty member requested that a fall 2020 instruction session on the literature of Geoffrey Chaucer and Patience Agbabi focused on the History of the Book be updated for a graduate section in spring 2021. Accompanying live discussions about the History of the Book course allowed students to pose questions and discuss the areas they found more compelling. By working with the professor to adapt the course for advanced students, we expanded the galleries and descriptions for the session to allow for a more nuanced conversation about historical context, book printing, and literary eras.

In contrast, the Eighteenth-Century Britons course had a more succinct viewpoint and geographic scope, and sought to familiarize students with various approaches to the course themes for their final

biogeography project. The course was open to upper-level undergraduates and did not offer specially formatted guiding questions, but provided a general introduction to items within that time period to offer suggested lines of inquiry. Rather than visit a synchronous virtual class meeting to guide discussion, it was instead decided that an overview of Special Collections resources at the beginning of the session would mimic the type of introductory speech usually given in person. This served to support the accessibility of the course as well, since it meant that students could view the page at any time and have the same background as their peers. The guiding questions, instructions, and suggestions sought to familiarize first-time researchers with archival methodology in a similar fashion to a worksheet that was usually issued at in-person sessions. The StoryMaps format, however, provided more opportunities to engage in a feminist pedagogy, as it removed the element of a printed sheet that would leave students feeling the need to immediately reply with what they may interpret as correct answers, and instead left the door open for them to consider the materials in their own time and guide a later conversation.

Despite trial and error with the digitization, page layout, storyboarding, photography, and photo-editing, the virtual instruction sessions were well received by faculty, and survey input by students indicated an interest in the subject material and the success of the formatting. Interrupted workflows between Special Collections and Digital Scholarship Services,

as well as a desire to minimize multiperson contact with items, meant that internal staff were responsible for all digitization and photography for the first sessions. Traditionally, larger-scale projects and scans of materials that meet current institutional strategic areas of emphasis are handled by Digital Scholarship Services and then supplemented by metadata management before being published in the library's digital collections repository. Digital Scholarship Services follows an established workflow in these instances, but Special Collections staff did not have practical experience with the process and collaborated virtually to improve their work after the first session.

Library administration took an early interest in the creation of the virtual sessions and supported the short-term changes in work roles that complimented the library's dedication to providing vital services remotely. A large-scale adoption of virtual sessions was not floated from the beginning. Rather, they represented a temporary strategy to continue scheduling services to support instruction. Early sessions were shared with upper administration to showcase what was possible with limited resources and how this proof of concept could be adopted in the future, either in terms of remote work or normal operations. The courses offered an early example of the many ways that library staff adapted to remote work, and the dean chose to share the Eighteenth-Century Britons session with the university provost to illustrate how the library staff continued to support student success remotely. With this gesture, the administrative investment that was crucial to the expansion of the virtual instructional session model was cemented.

Establishing a workflow

Over the summer of 2020, Special Collections performed a systematic curriculum assessment to determine which courses would best lend themselves to virtual instruction. Staff and faculty divided up campus departments to identify potential instruction opportunities based on a variety of categories, including the significance of primary-source research required by the instructor. Subjective evaluation of related collections and copyright concerns further limited the possible opportunities. Through this methodology, the department identified 108 potential courses that would pair well with materials housed in Special Collections in the fall semester.

In addition to curriculum assessment, the department invested considerable time in the formation of an ArcGIS Hub to promote the library's Florida Environment and Natural History (FLENH) initiative, which included six StoryMaps pages highlighting

different aspects of the meta-collection. The FLENH Virtual Tour signified a critical turning point in the workflow pattern of the department's approach to virtual instruction creation, as the scope forced the adoption of more systematic storyboarding to allow for multiple collaborators to work on the project simultaneously. Through preemptive research of potential courses that allowed more time for planning and the experimental practice of creating the FLENH Virtual Tour and its associated exhibit pages, the team found themselves more prepared for the technical elements in the fall.

Word of mouth about the spring and summer sessions, along with personal outreach to instructors who had visited the department for courses prior to the pandemic, ended up filling the calendar. By mid-August 2020, Special Collections had committed to sessions for five courses. Four of the courses requested instruction sessions similar to the Eighteenth-Century Britons or Introduction to Literary Methodology course layouts, while the History Department asked for an adaptation that would offer a large assortment of complete primary-source documents across several themes. With the majority of USF courses being hosted remotely, and uncertainty over when and at what capacity the library would reopen, faculty reached out to see how they might use digital collections to support their students' abilities to engage with primary sources. Building off its experience with constructing the multipage FLENH Virtual Tour, the department adopted a hub layout to create a History Primary Source Document Hub session. The six StoryMaps pages shown in Figure 2 illustrate how sources were broken down into topic area packets looking at US History, Local History, War & Society, Gender & Sexuality History, Regional History, and Environmental History. More than a simple instruction session, the hub has created the backbone for a long-term reusable document resource that incorporates information about conducting research, details on the acquisitions process, curated access to excerpts and full-text primary sources from across the collections, and accessible transcriptions of handwritten documents. It should be noted that the virtual format of the hub offers a greater impact in terms of student reach, as scheduling multiple sessions of a course for extended in-person sessions to review dozens of documents would be unfeasible, or at least far more cumbersome in terms of scheduling and personnel. The History Department's standardization of its Methodology curriculum, which can be taught concurrently by multiple professors, lent itself well to the use of the virtual instruction session format, which adopted an open

Document Packets

Below, you will find links to six document packets, each with several documents for you to explore.



Topics in US History

HIS 3002 - Research and Methods - Packet 1

Explore



Topics in Local History

HIS 3002 - Research and Methods - Packet 2

Explore



Topics in War & Society

HIS 3002 - Research and Methods - Packet 3

Explore



Topics in Gender & Sexuality History

HIS 3002 - Research and Methods - Packet 4

Explore



Topics in Regional History

HIS 3002 - Research and Methods - Packet 5

Explore



Topics in Environmental History

HIS 3002 - Research and Methods - Packet 6

Explore

Contact

We are available to help with your research. Contact us!

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Figure 2. The History Primary Source Document Hub grid. © 2020 University of South Florida.

format for students to browse but can be updated based on needs and requested subfields.

Once established, a workflow helped the team to move through larger sessions more effectively. In total, the department completed 16 new StoryMaps pages and significantly edited the Literary Methodology course for use in the fall of 2020. While the first semester of virtual sessions targeted faculty with existing departmental relations, the fall semester brought in some instructors who had never previously collaborated with Special Collections, virtually or in person. Drawing on the initial model, a correspondence system was formed. Special Collections staff reached out to the interested party, obtained information about their expectations and delivery preferences, and arranged for a draft deadline and final date for completion.

Virtual instruction sessions provided Special Collections with an excellent opportunity to incorporate the department's five students who were also working

remotely. While working on a history course about American Empire, staff trained the student employees as members of the production team with tasks that included research, storyboard organization, description authorship, photo-editing, citation drafting, and copyediting. Depending on their academic major and interests, the department focused on finding meaningful work for the student assistants that would also allow them to develop skills they could apply to their résumé. Due to limited peer-editing capability in StoryMaps—something that has since been updated and changed by ArcGIS—the students did not have any access to the department's account for creating the final product seen by faculty.

As the first course fully integrating a widely collaborative creation method, the American Empire course grew larger than anticipated. Production of the course on a single StoryMaps page proved unsustainable, as the team learned that sessions larger than approximately 400 MB began to lag. The total course

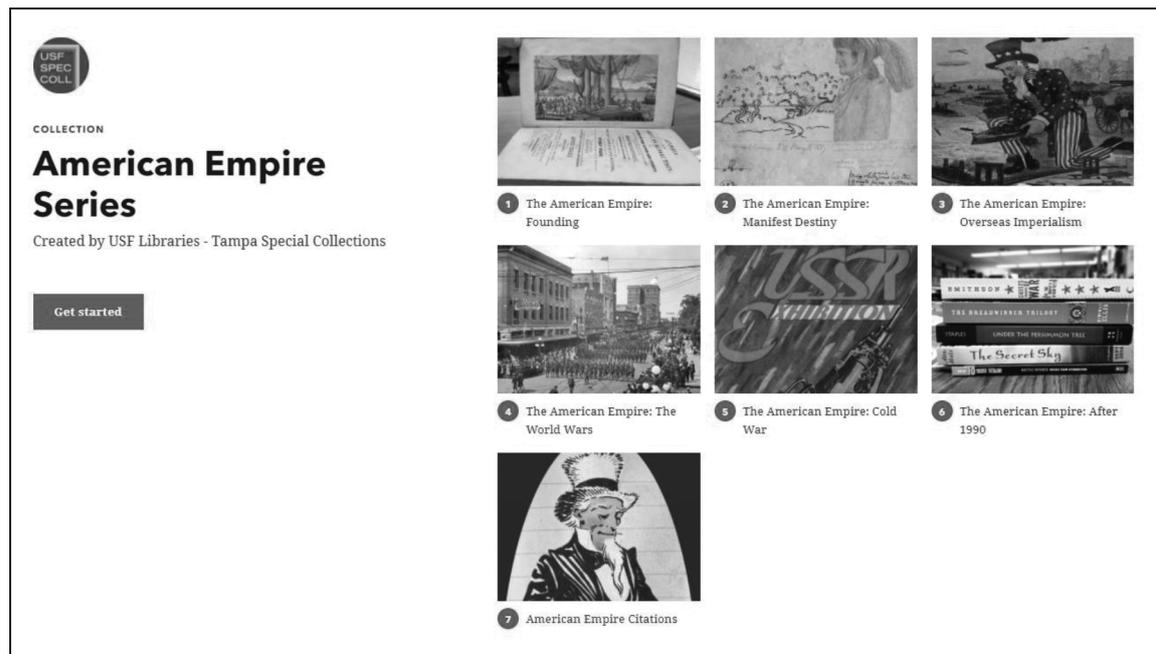


Figure 3. Navigation menu for American Empire course collection. © 2020 University of South Florida.

included over 2000 MB and would either load very slowly or crash. The unified course was first presented to the faculty member as one page, but they were warned of the loading time. They originally planned to keep the course as one page to prevent students from growing confused, but the dialog was kept open to possible alternatives, including splitting the page with buttons to link them. After a day of working with the session, the faculty member accepted the offer to divide the course into chronological sections that they could assign to accompany corresponding lessons. Students could still navigate between sessions and lead their own learning through a series of buttons provided on each page. Since the faculty member expressed an interest in updating and reusing the course in the future, a newly released StoryMaps Collections feature was applied in the spring of 2021, which offers a clean organization of all pages of the session on one link (see Figure 3). The instructor appreciated the transition to multiple pages, which they could integrate more naturally into their course as smaller units released across the semester. For Special Collections, this was a mutually beneficial option, as it reminds students throughout the term about its materials and services.

External to the team's own workflow, updates to the StoryMaps software, like the introduction of Collections pages, have altered the project's capabilities since the inception of the virtual instruction sessions. Dynamic features have included synchronous group editing, which has allowed for greater efficiency in content creation and revision. The Collections feature,

which aggregates multiple URLs onto a single landing page, has enabled streamlined delivery to professors. The department has also adopted this option to house and neatly present the five internship projects created via StoryMaps during the 2020–2021 academic year. A comprehensive visual of multipart sessions allows for a better overview of the scope and themes, as well as the option for paced release of different modules over the course of a semester.

The foundations in critical digital and digital feminist pedagogies meant that the department consistently strived to develop course content reflective of USF's diverse student population, and a course on Women and Crime Fiction offers a strong example of this work (University of South Florida Office of Decision Support, 2021; University of South Florida, 2021). The fall 2020 session lent itself to the integration of diverse subjects, authors, and content formats with its contemporary focus and subject area. Within this session, the faculty member and staff worked together to experiment with the limits of the traditionally accepted cannon. Building from 19th- and 20th-century crime novels to contemporary science fiction and LGBTQ+ (lesbian, gay, bisexual, transgender, queer/questioning, and others) fiction, the range of materials pushed students to interrogate their own boundaries on what they considered to be a part of the genre. Complimented by true-crime archival materials, the virtual instruction session presented students with multiple access points to analyzing or crafting works of crime fiction. Praising the session in a later follow-up, the faculty member shared that her

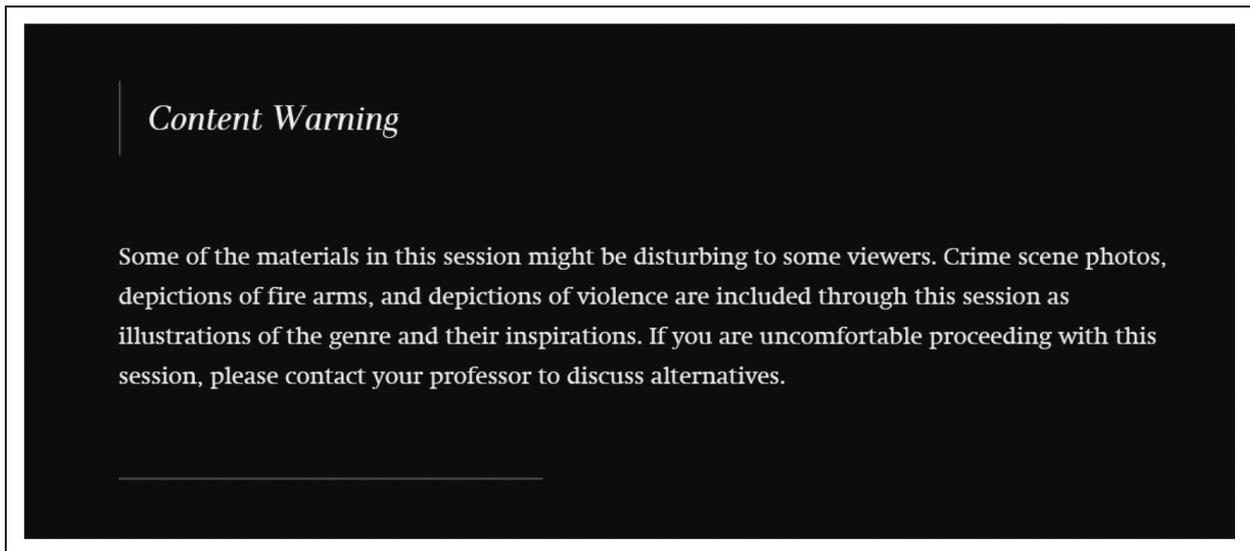


Figure 4. Content warning for Women and Crime Fiction course. © 2020 University of South Florida.

students “commented that it helped them better understand a genre they were unfamiliar with (women’s crime fiction) and gave them a solid foundation on which to then read our assigned course texts.” Since the faculty member had requested a preterm delivery for this session so that it could be integrated early in the semester, it allowed them to integrate the information throughout their conversations for the duration of the term.

The graphic nature of the course, including potentially triggering textual and photographic representations of violence against women, prompted the department to consider a content warning for all sessions (Figure 4). Since the content was cleared by the faculty members, those who chose not to proceed were advised to work with their professors, since the team would not be able to manage those concerns in relation to course content. As a repository for historical materials, Special Collections holds materials with objectionable content that are preserved for research value. The content warnings differ by course and allow Special Collections to indicate the presence of potentially upsetting or problematic materials for viewers to allow them to explore other options with their instructors.

In the 2020–2021 school year, Special Collections hosted three digital humanities internships that simultaneously supported the growth of the virtual instruction offerings while providing students with skills in critical digital pedagogy theories, archival research, digitization, Photoshop, and instructional design. As a final project, the interns created StoryMaps to highlight underrepresented areas in the virtual exhibits. While not working on specific course requests, the interns approached the sessions with the anticipation

that they be designed to support courses on campus. In some cases, the interns had taken courses that had previously used Special Collections’ instruction sessions, and thus were familiar with the virtual format. One intern had taken three courses that had used the virtual instruction sessions, including the Eighteenth-Century Britons and Women and Crime Fiction courses, and the undergraduate section on Chaucer and Agbabi. Having seen the courses in action, they provided valuable feedback on what aspects of the classes worked for students and where students might like more or less guidance from Special Collections. Through working with them, the department learned that large courses offered a lot of options for exploration, but the narrow courses helped students focus on areas of interest without becoming overwhelmed with the content. Incorporating student assistants, interns, faculty, and staff across the department reinforced the team’s dedication to a diversity of voices in the creation process.

Assessment

Throughout the 2020–2021 academic year, Special Collections performed anecdotal and qualitative assessment while setting up a plan for quantitative assessment moving forward. Part of the considerations, related to the use of texts and their alignment with critical digital pedagogy and feminist digital humanities principles, offers a possible first step to analyzing how to adapt future courses. The curation of items supports learning objectives set by the course syllabi and through proposal discussions with faculty members. Post-session discussions with faculty are being geared to directly address how the sessions met

Table 1. Qualtrics survey questions for student response.

Were you aware of the USF Libraries–Tampa Special Collections before this class?
Were you familiar with primary sources before this instruction session?
Have you used primary sources before?
After this session, will you be more or less likely to use primary sources for your research?
In your opinion, what are the advantages of using primary sources?
If you do not anticipate using primary sources for your future research, why not?
How well did the instruction session help you understand the materials you were shown? (Click and drag the icon, with 1 being not helpful at all and 5 being extremely helpful)
How relevant were the materials to your course? (Click and drag the icon, with 1 being not at all relevant and 5 being very relevant)
What was your favorite part of the session?

those objectives. Future sessions will be embedded with a survey for students, and they will be sent a reminder at the end of the term as well. While student engagement with the surveys in the first year was low, the Special Collections student assistants who had taken the courses allowed the team to pinpoint certain areas to improve in this first year.

In total, the reach for all of the instruction sessions was approximately 300 students across 15 course sections in 2 humanities disciplines. This does not include the hundreds of students and community members who viewed the sessions independently. To gauge the success of the sessions and level of student engagement, Special Collections will use Qualtrics surveys to collect responses. In addition to evaluating satisfaction, the responses will guide digitization priorities, areas of interest, and projections for staffing needs in Special Collections. The questions (Table 1) have evolved over time to assess how students engaged with the materials and whether the session altered their view of primary-source research at the library.

Although the data collection is ongoing and response was voluntary rather than exhaustive, trends did emerge. A majority of the respondents noted that they had been previously unaware of Special Collections and engaging with instruction sessions increased their connection to the library while partaking in online learning. In terms of research, most students indicated that they anticipated using primary sources as part of their coursework and that, additionally, they were now more likely to do so in future.

Students ranked the relevance of the sessions to their coursework, suggesting that items were curated successfully. It should also be noted that professors had access to the sessions before the students, and the English faculty member teaching the Women and Crime Fiction course indicated that they took inspiration from the excerpted works to spark discussion throughout the semester and foster this relevance.

Through internal assessment, the department adopted a broad accessibility project to enhance all sessions, which included more detailed captioning and in-house transcription. Commentary describing visual elements is crucial for non-sighted or visually impaired students who may rely on screen readers and alternative text (Croson, 2020). Additionally, the archival documents featured in historical sessions are often handwritten in cursive, which is difficult to read. Documents were not scanned in a manner that allowed for optical character recognition conversion. The ongoing project relies on collaboration with student assistants, who study best practices established by digital documentary editors to adapt digitized archival documents into accurate transcripts that meet Americans with Disabilities Act (ADA) compliance (Gray and Price, 2016; Roncevic, 2020).

The methodology for the transcription priorities was to isolate handwritten materials and save typeset documents for a later date, with the hope that optical character recognition can be employed. Manuscript items are time-consuming for transcription and can require specialized historical knowledge of writing styles and foreign language competency, both of which the graduate student assistants at Special Collections can offer. The department started the project with the History Primary Source Document Hub, and has been steadily adding transcriptions to the pages. To date, 1690 pages have been identified for transcription during the handwriting phase, out of a total of more than 3500 pages of documents in the hub. By focusing on accessibility, the instruction sessions can reach an even broader audience and increase how students are able to use the materials in the classroom.

Although the inception of the virtual instruction session model was small in scale to help remediate the difficult transition to fully virtual classes, its scope quickly expanded. StoryMaps software has also been employed for library-wide initiatives, including the creation of the FLENH Virtual Tour Hub, a tribute to the late Florida Representative T Terrell Sessums, and Hispanic Heritage and LGBTQ+ History Month information portals. Library administration acknowledged and applauded efforts to support students and faculty remotely by providing more avenues for engagement like virtual instruction. Administrative

investment in the philosophy and success of this venture further reinforces departmental plans to carry the virtual instruction model beyond the pandemic.

After a flurry of requests and short turnaround periods in the fall 2020 semester, the department settled on more efficient workflows that better met the goals of critical digital pedagogy and feminist digital humanities through collaboration. Starting with little concrete direction to guide the project, the team learned every day. Reflecting on the successes and failures of the pandemic year, the department set realistic expectations to create clear best practices for future implementation of virtual instruction sessions. Reserved guidelines on the size and scope of sessions will ensure that the quality remains consistent, files are backed up sufficiently, work is tracked, and all virtual offerings provide students and patrons with tools for their personal research needs.

Conclusion

Pedagogy formation succeeds only with regular reflection, assessment, and adaptation to suit the needs of the student. As Special Collections moves forward with the use of virtual instruction sessions, it has already begun to make changes to improve past sessions by updating navigation methods, incorporating new or better images, and providing more links to relevant materials. These changes are vital to the recursive process of critical digital pedagogy to further improve the decentralization of hierarchy in virtual learning. Integrating new elements like full-text options, videos, and live follow-up discussions with students is further enriching the process.

USF remained in Phase 2 of COVID-19 safety protocols throughout the 2020–2021 academic year, with most students enrolled solely in online sections. Greater confidence in digitization techniques and the inclusion of live videos to encourage discussion and address real-time questions inspired outreach programming within the department. A live show-and-tell showcased the FLENH Hub in September 2020. Special Collections also launched a new live Activism in the Archives discussion series in October 2020, with the inaugural event on “Researching LGBTQ+ History” co-sponsored by USF’s Office of Multicultural Affairs. The live-presentation element exhibited materiality and introduced new researchers to the diverse material types in the archives. High-resolution images of these selections were simultaneously shared in the Microsoft Teams chat during the event. A primary goal for this event, and all virtual instruction sessions, has been to introduce primary-resource research to undergraduate students and

encourage use of Special Collections in a way that minimizes barriers to entry. In the weeks following the event, reading room appointment requests increased, with many users engaging with the LGBTQ+ collections.

In addition to providing more instruction options, the impacts of critical-digital-pedagogy-based virtual instruction have been leveraged in other areas of Special Collections’ outreach and resource development. Staff and students collaborated to create a bank of digitized resources, which is home to approximately 15,000 document scans and photographs from the first year of virtual instruction. Having a tagged internal database has proved useful for promotion, and it is used regularly for social media and in external dissemination by the USF Libraries Communications and Marketing team. Due to limited appointment availability, the Special Collections team has responded to increased digitization requests from remote researchers. Having established a clear workflow for quality control and storage, the department has been able to incorporate patron scans into a photograph bank for future use. The foundational work of the virtual instruction sessions was also instrumental in the success of a social media proposal for a departmental Instagram page, which launched in November 2020. The photograph bank helped illustrate that Special Collections could provide consistent content, and could build and incorporate accessibility principles, so all posts use medial capital format standards to ensure that written content is available to users who rely on screen readers.

When COVID-19 forced the closure of USF Libraries–Tampa, Special Collections left the building with a vague idea to offer some limited services virtually. Through a process of trial and error, the department has been able to launch a new content delivery method that aspires to shrink the digital divide through the application of critical digital humanities and digital feminist humanities methodologies that encourage student-driven exploration, diverse voices in creation and content, and accessibility. In addition, the changes opened multiple pathways for professional development opportunities for student employees and full-time employees in digital humanities and instructional design. Overall, the projects have provided a fun and engaging way to remain connected to the USF community through the pandemic, which encouraged the department to collaborate on instruction in new and critical ways.

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The experiences of the Universidade Federal de Santa Catarina's Library Working Group on COVID-19 Prevention

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Abstract

This article presents a brief overview of the consequences of the COVID-19 pandemic in the context of Brazilian university libraries, as well as the efforts made by those institutions. It aims to report the experiences of the University Library Working Group at the Universidade Federal de Santa Catarina, located in southern Brazil, in COVID-19 prevention. It describes the guidelines that the Working Group established and the perspectives for returning to face-to-face work. It considers the relevance of the role of libraries in accessing and disseminating science information. It highlights the opportunities for change and advances in study, research and services aimed at libraries in general. The article concludes that the University Library at the Universidade Federal de Santa Catarina, through the Working Group fulfilling its role of supporting teaching, made it possible to articulate an information exchange network about COVID-19 with public servants, where the Working Group has carried out research and guided the management of the University Library in conducting the provision of face-to-face and remote services securely, both for users and the BU/UFSC staff (or employees).

Keywords

University library, pandemic, library services, Brazilian libraries

Introduction

On 30 January 2020, the World Health Organization declared that the outbreak caused by the new coronavirus (SARS-CoV-2) constituted a public health emergency of international importance. On 11 March 2020, through the International Statistical Classification of Diseases and Related Health Problems (ICD-20511), the coronavirus – popularly known as COVID-19 – outbreak was considered a pandemic due to its geographical distribution over several continents (Pan American Health Organization, 2020).

The contemporary world has never experienced anything as unique and impactful as the COVID-19

pandemic, which represents one of the greatest sanitary, social and economic crises in the history of humanity and is still being experienced today. Faced with this scenario, which has been challenging us to rethink values, principles, behaviors – in short, the entire logical order of actions, structures and social organizations – many people, institutions and areas

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are taken by a paralyzing feeling of helplessness that has been putting part of the societies waiting, almost statically, for what will come.

With the exponential spread of COVID-19, inequalities have been exposed, which has led us to rethink the 'sociology of absences' (Santos, 2020), since some social groups suffer from both the burden of the disease and the exclusion of public policies (such as quarantining or social distancing). The pandemic has also exposed the fragility of reason in times of 'post-truth', with an increase in misinformation (messages deliberately produced to deceive, manipulate and cause damage for political, financial or socio-psychological reasons) related, for example, to the origin of the virus, COVID-19 treatments and control measures (Lima et al., 2020).

Following Santos's (2020) thinking, attention to measures to contain the spread of the virus and the search for a more definitive solution – that is, a vaccine to allow a faster return to the 'normal' experienced before the COVID-19 pandemic – has occurred in the global sphere precisely because the rich countries of the North have also been affected. Furthermore, Santos (2020: 27; author's translation) points out that 'in emergencies, prevention or containment policies are never universally applicable. They are, on the contrary, selective. Sometimes, they are openly and intentionally adept at social Darwinism'. In other words, they propose to guarantee the survival of the most socially valued bodies, the fittest and the most necessary for the economy. As for the others, these policies limit themselves to forgetting or neglecting bodies that are considered of little value.

Located within the so-called 'epistemologies of the South' (Santos and Meneses, 2010) there is Brazil, a country marked by slavery and a colonial heritage, by capitalist exploitation, and by various forms of inequality, discrimination, intolerance and prejudice, especially of ethnic racial origin, and misogynistic and heteronormative in nature. Given the complex situation in which we live in Brazil, the federal government has shown its unpreparedness in confronting COVID-19. This has been evidenced by the various speeches and silences of the president of the republic, minimizing the importance of the disease and its real impact on the number of lives lost, and fiercely defending drugs without scientifically proven efficacy. The replacement of health ministers over a short period amid the pandemic crisis, and clashes with health authorities and governors who have defended the adoption of social-distancing measures, accentuates the lack of an effective strategy within the federal government (Garcia et al., 2020).

In this context, two notable institutions – which have been constantly attacked in recent times by the governments of the right and ultra-right have been essentials in confronting the COVID-19 crisis: the Unified Health System (SUS) and the public teaching and research institutions, such as the public universities and the federal institutes. In Brazil, despite being recently established, the public universities have consolidated as a cornerstone of national scientific production and the training of specialized human resources, being responsible for more than 95% of the current national scientific production.

Given this scenario, this article, which is qualitative and exploratory in nature, aims to report the experiences of the University Library Working Group on COVID-19 Prevention (hereafter, COVID-19 Working Group) at the Universidade Federal de Santa Catarina (UFSC), with an emphasis on the strategies and planning adopted during the pandemic period. It should be noted that the University Library (Biblioteca Universitária; hereafter BU) is located in the state of Santa Catarina in the southern region of Brazil, and is directly linked to the University Rectorate; it consists of the Central Library, 2 reading rooms and 10 sectoral libraries located in the following cities: Araranguá, Blumenau, Curitibanos, Florianópolis and Joinville (Universidade Federal de Santa Catarina, 2021c).

A brief outline of university libraries and their roles in the context of the COVID-19 pandemic is presented. The BU is then described in this context, which is followed by a discussion of the UFSC's directions; the directives established by the COVID-19 Working Group that have guided the actions so far; and the perspectives on a safe face-to-face return based on the phases of the pandemic characterized by the UFSC and local contexts of each university campus.

Background

The scope of universities goes beyond research and teaching. It also covers extension. Universities are not only oriented towards the academic community, but also have a mission to transfer knowledge and services for the whole society. To get an idea of the scale of universities' efforts towards tackling COVID-19, a survey released by the National Association of Directors of Federal Institutions of Higher Education (Andifes) in July 2020 pointed out that Brazilian federal universities are developing 1260 research projects about COVID-19 – highlighting that science has gained greater social recognition and strength during the new coronavirus pandemic (Bond, 2020).

Researchers' efforts have also resulted in other action, such as testing to detect the coronavirus itself. By the end of 2020, there were 71 such projects, totalling 56,956 tests. Another contribution of public universities is related to the treatment of patients. The number of beds in federal university hospitals added to the beds available in partnerships for the construction and operation of field hospitals is expressive, with 2,502 of these made available in total and 656 in intensive care units (Bond, 2020).

In addition, academic communities dedicated time to the production of personal protective equipment (PPE). According to Andifes, in 2020, production totalled 251,034 face shields; 103,848 cloth masks; 12,500 protection visors; 29,000 pairs of gloves; 20,200 different units; 6600 aprons; 2000 hoods; and 10,000 caps. On top of this, there were 300 garbage bags with a capacity of 100 litres; 227 nasotracheal tubes; 1,028,108 litres of alcohol gel; and 915,000 litres of liquid alcohol (Bond, 2020).

In universities, libraries are the bodies that are capable of articulating the information exchange network in the service of the university community and society. They are a reflection of the higher education institutions to which they are linked, and their essential objective is to support teaching, research and extension activities through their collections and services. In addition to supporting the university community, internal actions are being taken to promote and develop new services, accessibility, knowledge management, purchase planning and lifelong learning. It is in this context that the COVID-19 Working Group at UFSC is situated.

University libraries in the context of COVID-19

Throughout the history of society, university libraries have been adapting to social, political, economic and technological changes. From the custodians of classical texts restricted to clerics and members of the aristocracy, university libraries have become centres of democratic coexistence, inclusion, interaction and exchange of information, whether in their physical or virtual spaces (Nunes and Carvalho, 2016).

Currently, these information units are necessary and able to play a very important role in the development of autonomous learning capabilities and information literacy, including critical and ethical literacies, and political and citizen awareness. All these actions, however, are directly associated with the university library's role in supporting specialized teaching and research through information resources and services

aimed at complex problems in different areas of science and technology (Lutz and Schonfeld, 2020).

In addition, libraries fulfil important missions in circumstances of health crises and global emergencies, as shown by the evidence provided by the healthcare information for all (HIFA) Project on Library and Information Services, developed between 2017 and 2018. The project identified alternative functions for libraries – in addition to the dissemination of information – where such institutions would serve as shelters or reception centres, and offer free Internet access or rooms for spiritual or psychological assistance. Moreover, new librarian positions have been identified, such as being experts in disaster information or global health, supporting emergency response teams with timely, concise and quality information (Tanus and Sánchez-Tarragó, 2020).

The evidence raised by the project also pointed to the use of social networks as instruments for disseminating and monitoring information, as well as public communication. Given this, the project pointed to the importance of considering inequities concerning the availability of technologies and the full development of literacy information among members of affected communities (Tanus and Sánchez-Tarragó, 2020).

Other discussions related to how libraries can take action in relation to disasters and emergency issues have been led by the Evidence for Global and Disaster Health Special Interest Group of the International Federation of Library Associations and Institutions (IFLA, 2020b), as well as the National Library of Medicine in the USA, which provides training programmes for librarians focused on disaster information, as well as a bibliography on the subject National library of medicine (NLM) (2021).

The unique characteristics of the COVID-19 pandemic, with its unprecedented clinical and epidemiological aspects, have been affecting all areas of daily life in a complex way, in addition to challenging the areas of activity of institutions in general - such as libraries. The social distancing needed to contain the spread of COVID-19 has resulted in the closure of schools, universities, businesses, stores and a wide range of other entities that are considered non-essential (Tanus and Sánchez-Tarragó, 2020). Remote working was introduced in a range of organizations in order to maintain some services and activities. Most libraries in Brazil and around the world – as shown on the IFLA's (2020a) web page 'COVID-19 and the global library field' – also suspended their face-to-face services indefinitely, and began to adopt mechanisms to continue offering some services remotely or in other variations without personal contact.

However, it is important to emphasize that Brazil has not had any unified systematization of services to deal with and define the procedures for pandemic circumstances for libraries. It is noteworthy that no information unit had been previously prepared to deal with such an extreme situation. Because of this, throughout 2020 and 2021, there was a remarkable race to acquire knowledge, carry out tests and verify what measures would be necessary to resume in-person activities safely.

The BU in the COVID-19 pandemic

Until 16 March 2020, the UFSC's library system, as well as the entire university, had been carrying out its activities normally. On that day, the University Rectory published its first Normative Ordinance (No. 352), which had a temporary, exceptional and emergency basis, and allowed for daily work to be performed remotely or on work schedules. However, on the same day, as a result of the increasing public health emergency, a new Ordinance (No. 353) was issued, suspending in-classroom lessons, the university restaurant and UFSC libraries' face-to-face services (Universidade Federal de Santa Catarina, 2021f).

On 18 March 2020, the UFSC had its on-site working hours suspended for seven days, except for the health and safety care sectors and any urgent situations or activities of a non-postponable nature. Considering that there has been no forecast of the end of the COVID-19 pandemic or even an improvement in the situation, other ordinances have been issued in the intervening time (Universidade Federal de Santa Catarina, 2021f).

The BU suspended its external activities on 17 March 2020 and, on the following day, it began with remote working, serving in person only cases of a non-postponable. A work plan was prepared and all of the activities that were to be developed were published on the library system's website and social network site. Remote services were maintained and others were adopted, such as individual assistance via videoconferences, training through YouTube and synchronous assistance via chat (Universidade Federal de Santa Catarina, 2021g).

The BU already used computerized systems for internal institutional communications (Rocket.Chat), electronic mail, videoconferencing (MConf) and file sharing folders, among other systems on the administrative side (Universidade Federal de Santa Catarina, 2021b). It also had a library collection management system (Pergamum), which ranges from requests for material acquisition to technical processing, user

registration, collection research and circulation processes (reservations, renewals, loans, returns), as well as administrative management (reports, statistics, inventories). Access to subscription electronic databases and made available by the Ministry of Education and Culture, such as the CAPES journal portal, was made possible through the virtual private network, in addition to open-access databases. During this period, publications about COVID-19 were also compiled (Universidade Federal de Santa Catarina, 2021a).

Also, in the first week of remote working, a civil servant proposed to the library director that a study should be made of COVID-19 to help with proposals for preventive action and orientation for staff and the workplace. Considering the BU's distributed leadership management, the director promptly indicated that a working group should be formed. First, the members of the group who had worked on the BU's Contingency and Emergency Plan were invited to join; the invitation was then extended to all library BU/UFSC staff (or employees), which added two more workers and resulted in a team of five members and the director.

The team decided to incorporate the instructions as an appendix to the existing Contingency and Emergency Plan due to the need for guidance on crisis management issues in the context of BU/UFSC (Universidade Federal de Santa Catarina, 2020b). In addition, other guidelines were drawn up through specific training and instructions both for the employees and for the management of the BU/UFSC, such as an experience report, an experience report published by the COVID-19 Working Group, and a livestream presentation about the possible return to face-to-face activities (Rossi, 2020; Soares et al., 2020).

At the beginning, because of the limited availability of national guidelines, it is important to emphasize that most of the COVID-19 Working Group's first orientations were based on international publications. From Brazil, the main references were the university guidelines, which issued a specific normative on March 17, 2021, with its update republished on June 18, 2021. This might have occurred because UFSC researchers, who supported the University Rectory's actions and referrals, had based their work on a much more solid scientific referential. Their studies had been seeking a solution to the COVID-19 crisis at the UFSC, while the COVID-19 Working Group was making efforts towards preventive and protective measures for library workers.

The COVID-19 Working Group, which is subordinate to the BU Board, which in turn answers to the University Rectory, always observed all the ordinances, resolutions and guidelines that were published

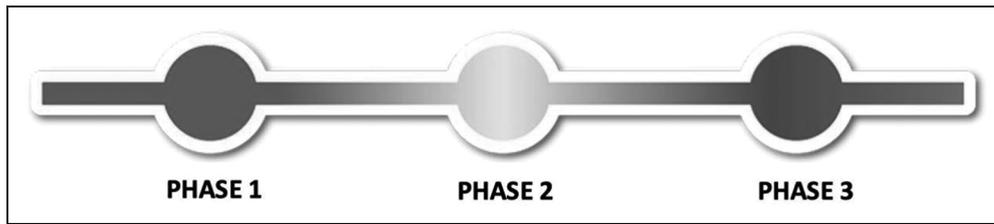


Figure 1. Three phases of university life. Source: Universidade Federal de Santa Catarina (2020a).

by the university's central administration. Throughout the period, there was a constant consultation of institutional websites; it is important to mention one that has been used to centralize the UFSC's guidelines for the university community – 'With science, for the life' (available at <https://coronavirus.ufsc.br/>) – as well as others with equal relevance, including the Pro-Rectorate of Development and People Management (Prodegesp), the Department of Health Care and the Multiprofessional Team for Monitoring Servers with Disabilities (EMAPCD).

Guidelines from the COVID-19 Working Group regarding the phases established by the UFSC: general context

Since the conception of the COVID-19 Working Group, it has been providing protective and preventive measures for face-to-face emergency services and guidance for social coexistence in workspaces in the COVID-19 pandemic context; established actions by the BU/UFSC and by other departments of UFSC; expanded face-to-face services; and made management recommendations, taking into account the changes in the epidemiological scenario corroborated by the three phases of university life at the UFSC (at the time of writing, in December 2021, we are in Pre Phase 2; see Figure 1).

According to institutional documents, the UFSC (2020a) has three possible activity scenarios in the pandemic context, and with each there is a gradation of face-to-face services and remote activities. In Phase 1 (red), the virus is not under control in Brazil or in Santa Catarina, with the number of cases and deaths increasing and a high rate of contagion; in this scenario, only essential face-to-face activities or activities with an impact on COVID-19 are approved by the upper management. In the other restriction scenario, there is Pre Phase 2, which authorizes face-to-face activities, and essential services to prepare face-to-face activities for the less restrictive phases. Pre Phase 2 began on 20 September 2021 according to the university's ordinances and improvements in local health indicators.

For Phase 2 (yellow), the UFSC has drafted a scenario with a decreasing number of daily cases and deaths in the macro-regions of each university campus for two consecutive weeks. Also, for phase 2, the prerequisite of lower occupancy was established in the criteria for hospital beds in an intensive care unit of the Unified Health System, which must be less than 60%. In this phase, the circulation of people on campuses has been expanded, enabling general semi-presential administrative and pedagogical activities. This is a scenario in which remote working and face-to-face class activities coexist.

Finally, Phase 3 (green) corresponds to the end of the health emergency scenario, and is characterized by the availability of a vaccine, a decreasing number of new cases for 60 consecutive days, and weekly deaths equal to or less than 1 for at least 30 consecutive days. Only under these conditions is the resumption of all face-to-face activities at the university foreseen.

After observing the institutional criteria for pandemic management, the BU provided guidance on face-to-face activities related to each of these scenarios, highlighting relevant preventive measures in the libraries' activities, in particular about the attendance service.

Guidelines and actions carried out by the COVID-19 Working Group in Phase 1

During Phase 1, which comprised the period from 16 March 2020 to 19 September 2021, the guidelines shown in Figures 2, 3 and 4 were given via the Contingency and Emergency Plan, with updates to Appendix C in the 2nd edition and Appendix D in the 3rd edition, and the COVID-19 Working Group recommendations for the BU system: 'Actions to confront COVID-19 in face-to-face work' (Universidade Federal de Santa Catarina, 2021e).

In the case of the Central Library, which is a larger library covering more than 9000 square metres, the services, as of August 2020, were moved to the library's entrance hall and the quarantining to the periodicals reading room, according to graphic models included in the COVID-19 Working Group's recommendations for the UFSC's library system:



Figure 2. Guidelines from the COVID-19 Working Group in Phase I (Remote working). Source: Universidade Federal de Santa Catarina (2021d and 2021e).

‘Actions to confront COVID-19 in face-to-face work’ (see Figures 5 and 6).

Figure 5 presents the entrance to the Central Library from the sidewalk, with the left door for entry only and the right door for exit only. The reception desk near the entrance is for temperature checks and entry and information registration. There is a sign directing customers to wait in a queue for services and a sign to the users’ access area, where there is a distance of 2 metres between the service desks (one for returns and three for loans). There is a support table for books that will be borrowed on the day and a printer located on a table near the turnstile. At the bottom of the access ramp, there is a sign indicating that only materials that have passed through quarantine will be able to be returned to the shelves. Also,

the periodicals sector involves most of the quarantine area on this scheme. There are three sanitation stations at strategic locations (indicated by the blue squares in Figure 5) with covered rubbish bins, alcohol gel, masks and gloves – one near to the attendance desk services, one near to the quarantine area, and the third near to the bathrooms. Furthermore, in the quarantine area there is a sign that advises the employees on quarantined materials, with seven available to allocate returned items.

Figure 6 shows the Central Library’s entrance hall, highlighting the division made by the service desks: on the right-hand side, there is the customer area and, on the left-hand side, the restricted access area, where only staff, security, receptionists and maintenance workers are allowed.

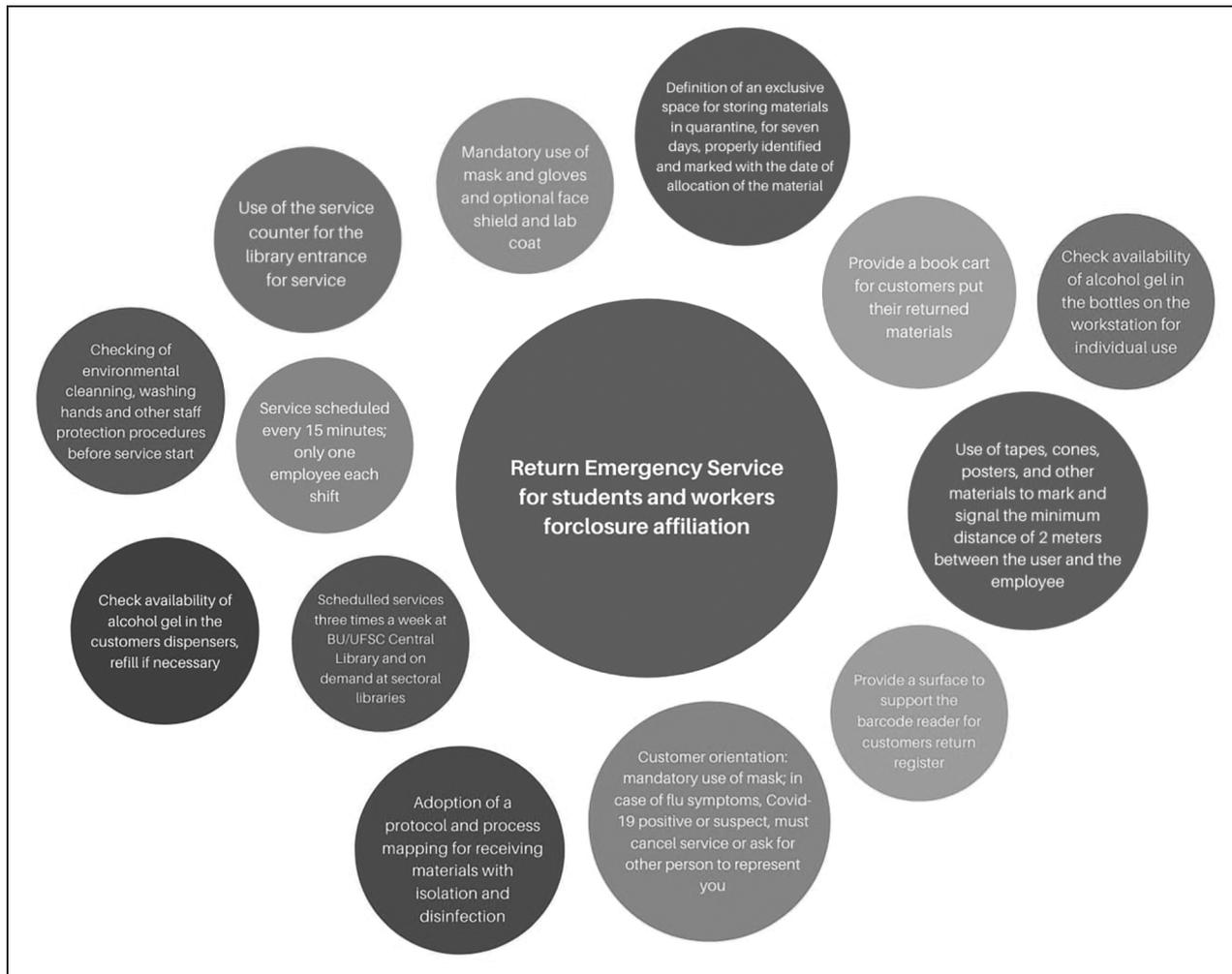


Figure 3. Guidelines from the COVID-19 Working Group in Phase I (Face-to-face work I). Source: Universidade Federal de Santa Catarina (2021d and 2021e).

There were also guidelines for general conduct (Soares et al., 2020: 11), which involved avoiding the use of accessories; wearing closed-toed shoes; keeping long hair tied up; being close-shaven or having a trimmed beard; having clean and short nails; frequently sanitizing one's hands with alcohol gel or, preferably, washing hands with soap and water whenever possible; covering one's nose and mouth with a disposable handkerchief or directing one's face into one's forearm, even when using a mask, when sneezing or coughing, and washing one's hands with soap and water immediately afterwards; blowing one's nose in the bathroom and washing one's hands with soap and water before and after the procedure; avoiding greeting people with handshakes, kisses or hugs; and not sharing personal items such as pens, pencils, cups or mobile phones.

In addition, the BU's director and leaders were responsible for drawing up the face-to-face service schedule, taking into account reductions in staff

numbers due to absences, being deemed a member of an 'at risk' group and vacations; instructing about the staff and the outsourced workers permanence during cleaning, surveillance, reception, maintenance, and other activities at the UFSC's libraries during quarantine; not allowing users access to tables, chairs, collections or restrooms; enabling the acquisition of PPE and collective protective equipment (CPE); requesting the UFSC's central administration to reinforce the surveillance and security team; prioritizing remote services; and recognizing the stress and challenges that the context of the pandemic was causing, directing staff to the UFSC's support teams.

The BU's Commission of Planning and Execution of Acquisition Processes also played an important role during this process, working directly with the UFSC's Emergency Purchasing Committee to purchase all feasible PPE and CPE. The BU's Communication and Marketing Commission carried out the standardization of the visual identity of the library system's

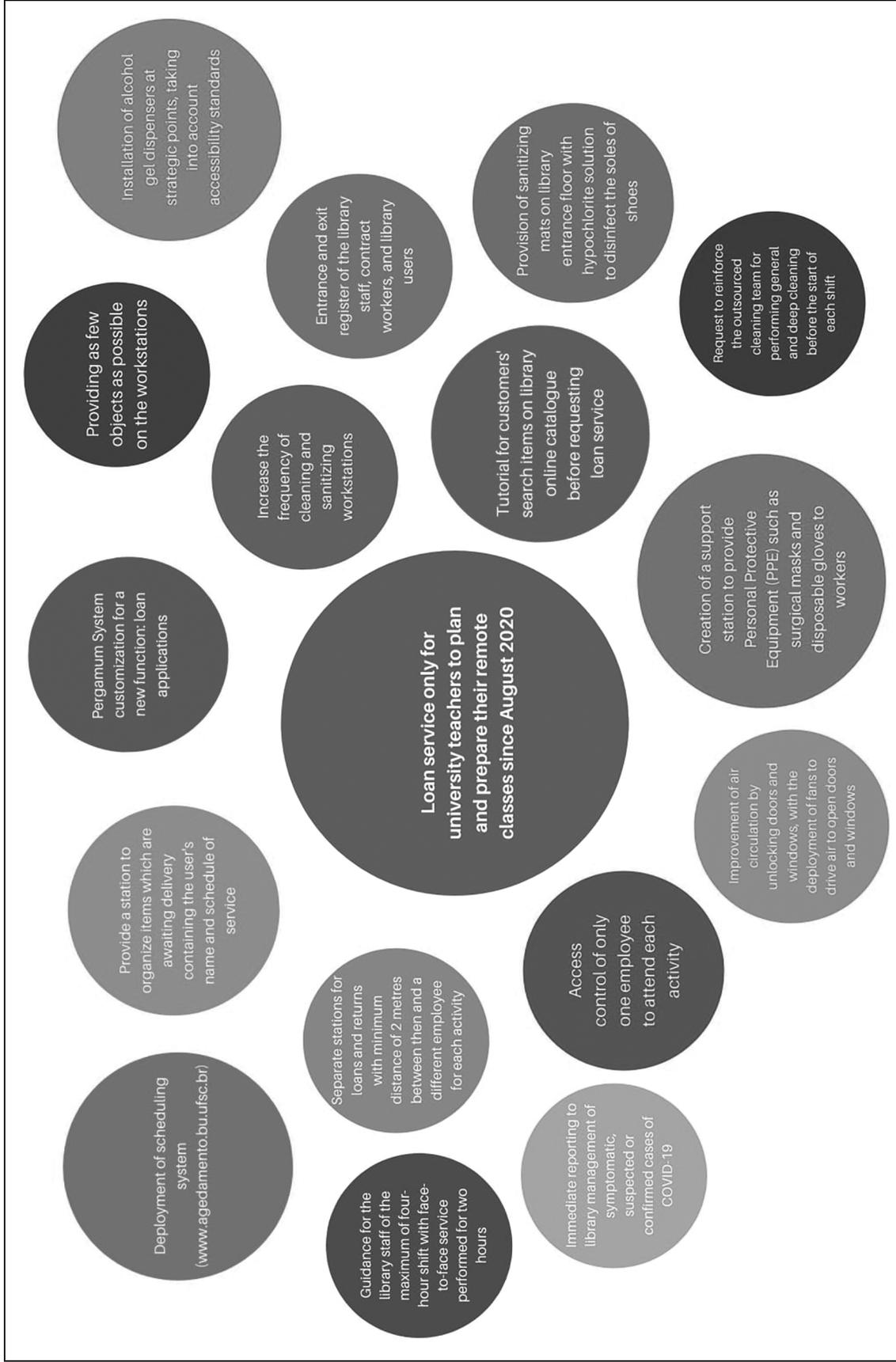


Figure 4. Guidelines from the COVID-19 Working Group in Phase I (Face-to-face work II). Source: Universidade Federal de Santa Catarina (2021d and 2021e).

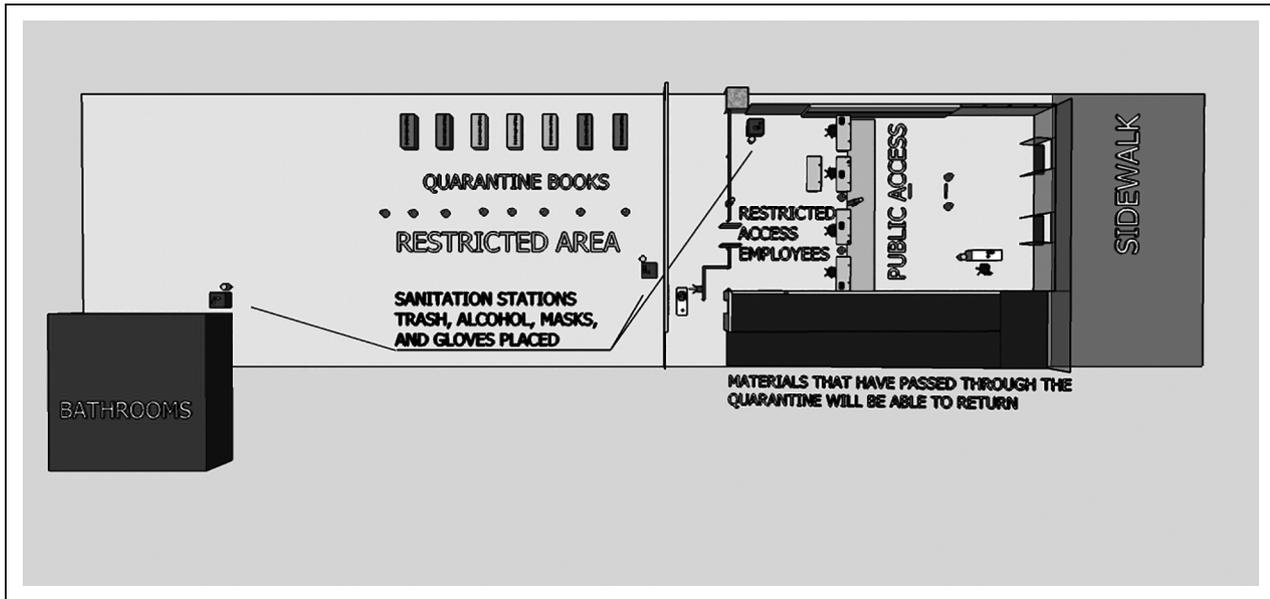


Figure 5. Illustration of the service and quarantine areas at the UFSC Central Library. Source: Universidade Federal de Santa Catarina (2021e).

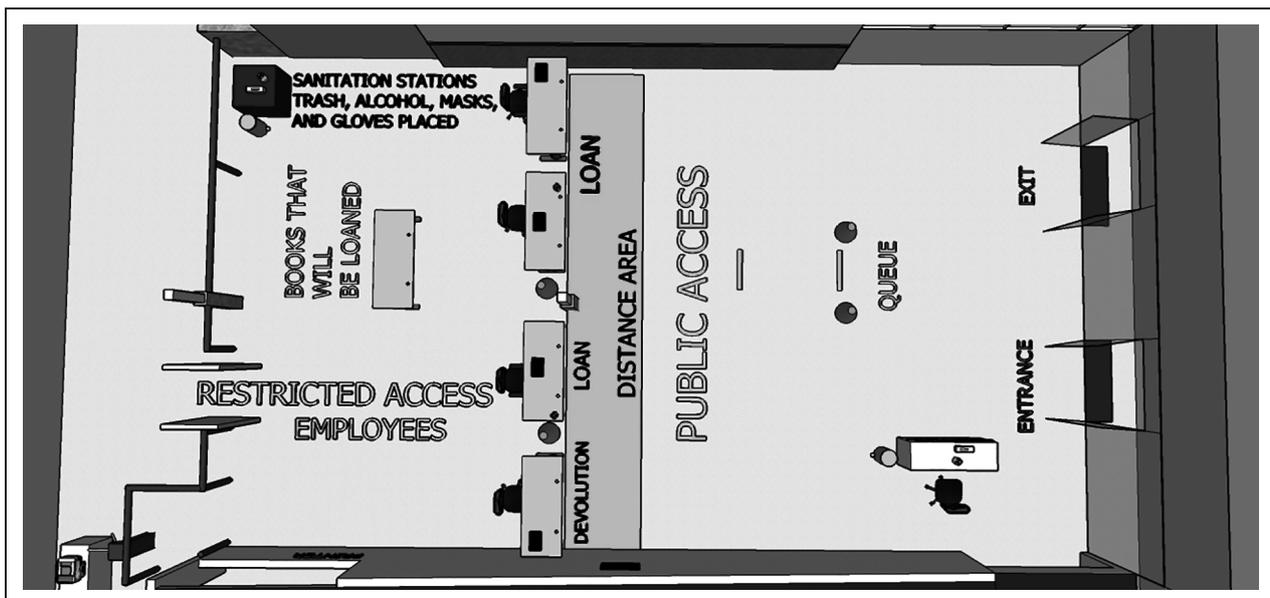


Figure 6. Illustration of the UFSC Central Library's entrance hall prepared for face-to-face services. Source: Universidade Federal de Santa Catarina (2021e).

instructional material, the content of which was prepared by the COVID-19 Working Group. These signs were made to be fixed up in physical environments, reinforcing good practice and social distancing. Also, digital versions of these signs were used to publicize the services that were being offered to the community on websites and social networks. The was supported by BiblioCenters, a team that promotes the BU's services to the university community through other communication channels.

Work safety assistance and guidance was requested due to the adoption of new protocols that increased risk and were unusual in the exercising of the BU's activities, such as the storage of large amounts of alcohol. For this,

it was recommended that alcohol should be kept in its original packaging; in tightly closed bottles to prevent evaporation and leakage; in an airy place, protected from heat sources, direct sunlight and sparks; and also the

alcohol should not be kept in personal lockers (author's translation). (Soares et al., 2020: 13)

The proper use of alcohol was reinforced by library management, such as labelling bottles and not carrying them in one's lab coat pockets next to the body. In the same vein, people were warned that smokers should preferably wash their hands with soap and water rather than 70% alcohol or even gel because they are flammable, and 'in general, hands should be washed with soap and water after handling chemicals due to the risk of intoxication' (Soares et al., 2020: 13; author's translation).

In 2020, the COVID-19 Working Group held a training course for staff on 'Coping actions for COVID-19'. Since May 2021, a weekly article in the internal bulletin – 'What's news?' – has informed staff about the potential risks in the regions where the UFSC has campuses. Fortnightly, articles are published on exercising caution when providing services; good habits and daily care; collections management; sharing and cleaning objects and equipment during the COVID-19 pandemic; the use of masks and other types of protective equipment; and the transmission and prevention of, and vaccination against, COVID-19.

Also in Phase 1, several training sessions were offered on the use of systems and attendance guidelines, among other subjects, based on the BU team's own knowledge. The library management team strengthened staff participation through online courses and lectures. It also entered into partnership with the Department of Health Care and made possible a collective talk about mental health issues in the workplace with an invited specialist.

Guidelines and actions carried out by the COVID-19 Working Group in Pre Phase 2

At the time of writing (December 2021), the library system is in Pre Phase 2 according to Normative Ordinance No. 405/2021/GR of the UFSC, where it resolves to

Authorize the gradual and full-time resumption, from September 20th, 2021, of on-site activities in all administrative and academic units of the Federal University of Santa Catarina (UFSC) with the character of preparation of environments and identification of needs for adjustments in routines and procedures... associated with meeting the sanitary conditions of the environment in the units. (Universidade Federal de Santa Catarina, 2021f; author's translation)

Based on this ordinance, the BU has been carrying out the following guidelines and actions in Pre Phase 2 for the continuation and expansion of the guidelines stipulated by the COVID-19 Working Group in Phase 1 regarding face-to-face care, the measures necessary for this, and the management's recommendations:

1. The reorganization of activities for remote working conditions and redistribution of tasks – mainly for people deemed members of an 'at risk' group;
2. Expanded work schedules with the shift schedule adjusted to maintain the face-to-face services that were resumed, and extending loan services to other categories of library users;
3. Planning for the rearrangement of the BU libraries' furniture and workstations to ensure a minimum distance of 2 metres between people;
4. Elaboration of other signage about good practice for staff and customer safety at the BU;
5. Distribution of PPE to staff who have starting to work on-site and CPE on support tables close to other workstations;
6. Planning the expansion of library cleaning and material collection;
7. Improvement in communication and interaction with the internal and external community through courses and dissemination (continuous learning) of concise information on social media about COVID-19 at the BU and in the general context of the pandemic;
8. Promoting the accessibility of information resources by thinking about people with disabilities in the university community, with the support of the Commission for an Accessible BU (CABU), it being the main body that is in charge of implementing accessible practices and an inclusive institutional culture at the BU;
9. Providing a place where meals may be eaten safely;
10. A maximum capacity demarcation for each indoor environment;
11. Demarcation on the floor of 2 metre distancing between users and attendants, as well as waiting lines for services;
12. Reflecting on the environments that can be made available for access and the permanence of customers at UFSC libraries;
13. The feasibility of training courses and the selection of reliable information sources

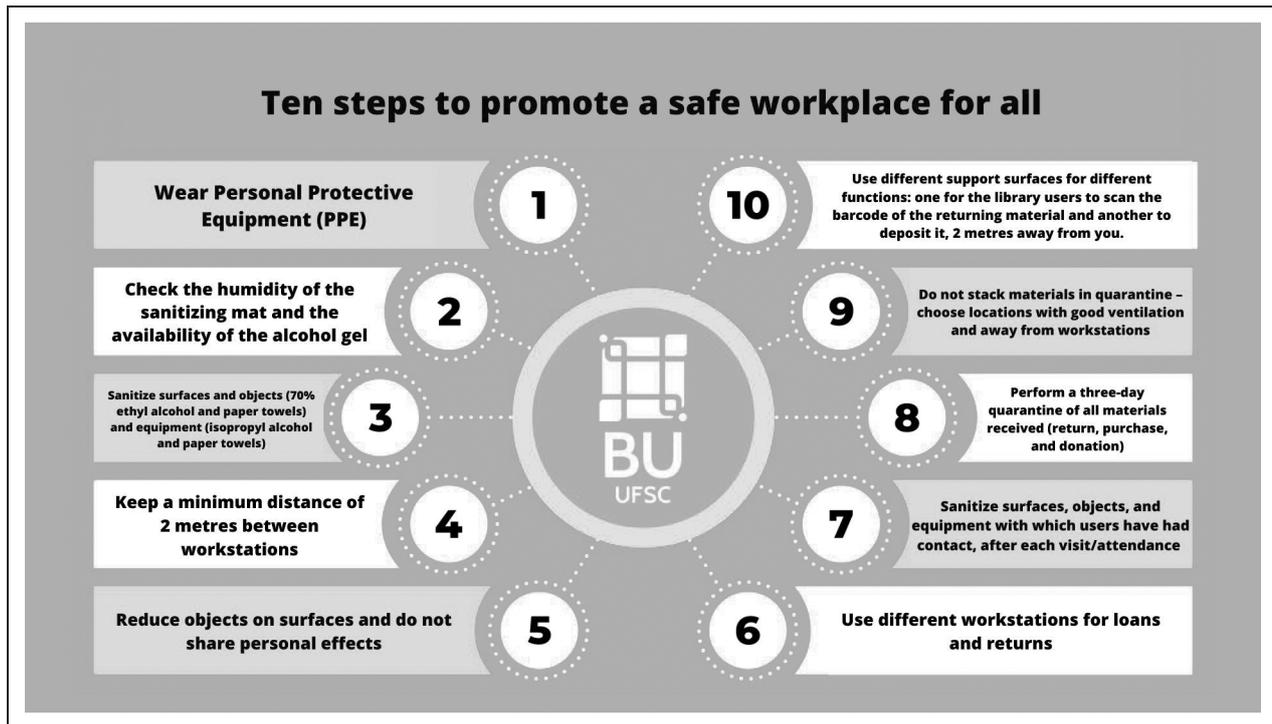


Figure 7. Ten steps to promote a safe workplace for all. Source: Universidade Federal de Santa Catarina (2021e).

about COVID-19 to deepen the knowledge of BU staff;

14. Monitoring the risk indicators published by the State Health Department (controlled, low, moderate, high, very high) and established by each region, and taking appropriate measures.

The COVID-19 Working Group held a training course on 'Biosafety measures for Pre Phase 2', and an internal course is being constructed to expand staff knowledge, with concise general information about COVID-19 at BU, such as lifelong education. To illustrate this discussion, Figure 7 presents the infographic created by the COVID-19 Working Group, entitled 'Ten steps to promote a safe workplace for all' (Universidade Federal de Santa Catarina, 2021e). The steps are as follows:

1. Wear PPE;
2. Check the humidity of the sanitizing mat and the availability of the alcohol gel;
3. Sanitize surfaces and objects (70% ethyl alcohol and paper towels) and equipment (isopropyl alcohol and paper towels);
4. Keep a minimum distance of 2 metres between workstations;
5. Reduce objects on surfaces and do not share personal effects;

6. Use different workstations for loans and returns;
7. Sanitize surfaces, objects, and equipment with which users have had contact, after each visit/attendance;
8. Perform a three-day quarantine of all materials received (return, purchase, and donation);
9. Do not stack materials in quarantine – choose locations with good ventilation and away from workstations;
10. Use different support surfaces for different functions: one for the library users to scan the barcode of the returning material and another to deposit it, 2 metres away from you.

Some thoughts

It should be noted that, throughout 2020 and 2021, BU workers could stay in touch with the COVID-19 Working Group members and were also invited to meetings and to join the Working Group. Over this period, workers participated who brought local demands and had their questions answered. After 11 months of activities, the Working Group doubled its membership. The training courses were also very important, where 75% of the staff participated and 90% of leaders and managers.

Although users were physically absent from the UFSC because they had remote classes, they were able to obtain information from the BU through its website and social networks. In addition, users could ask for library services by email, via the Institutional Service Portal or even through a synchronous chat service. This helped to respond to demands, and the BU could adjust its direction, respecting the restrictions imposed by the UFSC and COVID-19 pandemic.

Thus, at sensitive moments like these – especially in a country like Brazil – and aiming at the effectiveness and continuity of the COVID-19 Working Group's guidelines and actions, we support the precepts of information literacy and lifelong learning, which go beyond and enable the individual to deal with the diversity of information resources available. They incorporate active and permanent learning, critical thinking, and the ability to reflect and have a critical attitude towards the information universe that is available to people in a globalized world and they also emphasize the creative or even solidary capacity of the human being (Spudeit et al., 2020).

When experiencing the drawbacks of the current social conjecture, it could be inferred that it demands and sustains the need to create or optimize the information processes necessary for an information society, especially regarding groups and individuals in situations of vulnerability. At this time, we are all weakened, whether by the physical risks of infection or the misinformation disseminated by media outlets.

Over time, libraries and their professionals have been put to the test, facing political, cultural, social and technological changes, and reaffirming their role in preserving knowledge and transferring scientific-cultural information to society, regardless of any external support. In times of crisis or social conflicts, libraries and information units tend to reinvent their services and adopt new postures quickly and effectively to meet contemporary needs, consolidating themselves as a support base for their community (Sala and Moura, 2020).

It is worth highlighting that, to meet this new reality, libraries, as drivers of social transformation, must view themselves as increasingly virtual spaces, creating spaces for reconnection and connection after COVID-19, being aware of agile decision-making needs, being flexible and adaptable in the face of the sudden changes that are so prevalent today, and modifying their services according to demand (Sala and Moura, 2020). It is therefore necessary to redemocratize information and knowledge in media outlets, which implies a greater appreciation of official and

scientific channels in response to the movement to combat misinformation, while fostering critical thinking and involvement with different sectors of society.

Conclusions

The actions of the COVID-19 Working Group within the scope of the BU/UFSC's library system have been focused on the preservation of lives and, faced with the pandemic scenario, the group has been making efforts to provide what is necessary to promote initiatives and studies on security in the context discussed. Certainly, the guidelines are not a guarantee of the complete prevention of COVID-19. Nor, by themselves, are they capable of controlling transmission in the library environment. This virus brought an opportunity to learn how people are interdependent and jointly responsible for each other's lives and well-being.

Although in a complex and problematic way, the COVID-19 pandemic has been created opportunities to build new services and for libraries to seek a leading role in the dissemination of and access to scientific information, intensifying the fight against fake news and misinformation, as well as highlighting their role in the development of information skills. It is undeniable that the pandemic has marked the history of humanity deeply, and the consequences of this pandemic are (and will be) reflected in everyday life.

Without the support of Brazil's federal government and being obligated to fight to overcome the dissemination of misinformation, with an academic nature, the UFSC has been cautious in forwarding actions during the pandemic, based on the guidelines from researchers and on scenarios that have taken into account the new daily case figures, the number of beds occupied in the Unified Health System's intensive care units, and the number of deaths in the macro-regions that have a UFSC campus.

Through the COVID-19 Working Group, the library system, fulfilling its role of supporting education, has made possible the articulation of a network for exchanging information about COVID-19 with public servants. Moreover, the group has conducted research and guided the BU's management team in offering face-to-face and remote services securely, both for users and workers.

The COVID-19 Working Group is continuing with its research and preparing the UFSC's libraries for customers to access and use individual and group study rooms, and for the greater circulation of people. It is also studying shorter deadlines for quarantine based on OCLC's (2021) Reopening

Archives, Libraries and Museums Project, and intends to establish an automated way of controlling the number of users inside each library to respect the capacity limit foreseen according to carbon dioxide measurements.

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Dissemination of information in the COVID-19 era in university libraries in Nigeria

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Abstract

In Nigeria, the first case of coronavirus (COVID-19) was reported on 27 February 2020 and as at date, there are about 13,000 confirmed cases across Nigeria. The spread of COVID-19 forced the lockdown of libraries. This study investigated the dissemination of information in meeting the information needs of library patrons during the COVID-19 pandemic and lockdown of university libraries in Nigeria. Using a descriptive survey design, a sample population of 178 librarians from federal, state and private universities in Nigeria was questioned. The findings show that libraries disseminated information on personal hygiene to their patrons (hand-washing, cleanliness and the use of hand sanitizers) and sensitized the general public to COVID-19 by using posters and flyers. The findings also reveal that libraries disseminated information and links to e-resources to support patrons' ongoing research. Moreover, It was revealed in the findings that lack of coordination, strike action by the Academic Staff Union of Universities (ASUU) and none subscription for data for librarians to work from home were challenges.

Keywords

Dissemination of information, COVID-19, coronavirus, library patrons, university library, Nigeria

Introduction

The establishment of libraries as information centres at strategic locations in different communities, cities and academic institutions for the purpose of providing information services to support the information needs of patrons was put to the test during the discovery and spread of the coronavirus (COVID-19) pandemic in late 2019. The fundamental role of libraries remains sacrosanct and sets them apart from other information providers. University libraries in Nigeria have been at the forefront in the adoption of different methods and tools for the dissemination of current information to their patrons, irrespective of their geographical location.

Hence, the rising numbers of cases of COVID-19 in Nigeria, which led to the lockdown of critical sectors of the economy and disruption of library services, have provided an opportunity for libraries to reassess their facilities, resources, strategies and services to respond to the current situation and facilitate access to information to satisfy the information needs of their

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patrons beyond the library walls. Such strategies include but not limited to activation of selective dissemination of information (SDI) services and the use of information and communications technology (ICT) tools for the selection, organization and dissemination of information for library patrons based on their information needs. ICT tools make the dissemination of information easier, whether a library is open or closed to users. According to Omeluzor and Oyovwe-Tinuoye (2017), SDI service is a critical library service that require a conscious effort by librarians to search databases in order to find relevant information for each library user or group of library users to meet their information needs. Uzohue and Yaya (2016) insist that libraries should respond quickly to the information needs of their users through SDI and current awareness services. Hence, the activation of SDI services in libraries across Nigeria has helped with information dissemination to patrons during the pandemic. This study is limited to university libraries in Nigeria and is intended to provide a framework for understanding the efforts of libraries in the dissemination of information to their patrons in the pandemic era. The study is guided by four objectives: (1) to find out if libraries in Nigeria are disseminating information to their patrons during the COVID-19 pandemic era; (2) to ascertain the type of information materials and sources that libraries in Nigeria are disseminating to their patrons during the COVID-19 pandemic; (3) to determine the media/tools that libraries in Nigeria are using to disseminate information to library patrons during the COVID-19 pandemic; and (4) to identify the challenges facing the dissemination of information to library patrons during the COVID-19 pandemic in Nigeria.

Statement of the problem

The discovery and rapid spread of COVID-19 took the entire world by surprise and there was little preparation before the lockdown of critical sectors of the economy, including libraries. The rapid spread of the COVID-19 pandemic led the Federal Government of Nigeria to shut its land borders and all entry points into the country in order to curb the spread of the virus. That order was followed by a lockdown of interstate movement. The shutting down of educational, social, religious and economic activities in Nigeria affected the activities of libraries, resulting in the problem of library patrons having no access to information resources and services. Most university libraries in Nigeria claim to use SDI to deliver information services to their patrons. Such claims appear in the policy books, such as the handbooks and library

guides, of most libraries in Nigeria. Research has shown that the claim that information is disseminated using ICT is rhetoric in most university libraries in Nigeria (Omeluzor and Oyovwe-Tinuoye, 2017). Since most sectors in Nigeria are shut down as a way to curtail the spread of COVID-19, it is pertinent to examine the efforts of university libraries in the dissemination of information services to their patrons, who could no longer access the physical library resources and services during the COVID-19 pandemic.

Background to the study

In Nigeria, the first reported case of coronavirus (COVID-19) pandemic was of an Italian who returned from Milan, Italy, to Lagos on 25 February 2020 (Nigeria Centre for Disease and Control, 2020). Following that index case are several cases in Lagos and other states in Nigeria, including Abuja the Federal Capital Territory. The spread of COVID-19 and the increasing number of new cases, confirmed cases, active cases and deaths across states of Nigeria from the initial index case, as shown on the Nigeria Centre for Disease and Control website,¹ led the Federal Government of Nigeria, on 30 March 2020, to heed a call by the Federal Ministry of Health and the Nigeria Centre for Disease and Control to stop all movement into and out of Lagos State, Ogun State and the Federal Capital Territory for 14 days. The order by the Federal Government to restrict movement for an initial 14 days was later adopted by other states where new cases of COVID-19 were discovered, such as Oyo, Rivers, Delta, Ondo, Osun, Akwa-Ibom, Kaduna, Benue, Enugu, Ekiti, Edo, Kwara and Ogun, which later led to a total lockdown of Nigeria's critical sectors, including libraries.

The decision to shut down libraries as a measure to curb the spread of COVID-19 was not peculiar to Nigeria. Some international library associations, such as the Association for Rural and Small Libraries and the American Library Association, recommended the closure of public libraries amid the COVID-19 pandemic (Pearson, 2020). However, the shutting down of libraries has a tremendous impact on the communities they serve (Pearson, 2020). The shutting down of libraries necessitated the need to strategize on how to continuously provide and disseminate information to library patrons. In the midst of the pandemic, efforts were made by several organizations to ensure access to information. For instance, UNESCO's Education Division provided links to valuable educational resources and archives. Similarly, the Australian Library and Information Association and Libraries

Ireland negotiated agreements with national publishers and authors to ensure that public libraries could take storytimes online without having to worry about infringing copyright (IFLA, 2020). In line with these efforts, one may ask whether university libraries in Nigeria are able to fulfil their mandate through information dissemination and provision of information services to their patrons during the COVID-19 era, and what kind of information the libraries have been disseminating to their patrons.

Literature review

Information dissemination is a means of providing information services to library patrons. In any crisis situation, such as a war, pandemic or disaster, libraries have a role to play in ensuring that patrons have continuous access to reliable information to avoid misinformation and fake news. According to Ali and Gatiti (2020), the roles of librarians and information specialists in a pandemic are to promote health awareness by creating and disseminating information relating to preventive measures; support research teams, researchers and faculty by providing information regarding the latest developments, research and literature; and meeting the core needs of regular library users. Echezona (2007) highlights the role of libraries in information dissemination for conflict resolution, peace promotion and reconciliation. Shonhe (2017) reviews literature on information dissemination techniques in the 21st century. Shonhe's (2017) article aims to inform and raise the awareness of 21st-century information professionals about the use of technology in information dissemination. The article discusses various techniques that have been used, including mobile technology, mobile library services, digital content and information repositories, to disseminate information in the 21st century.

Many scholars have emphasized the need to use ICT for SDI services, among others, to reach library patrons. For instance, Uzohue and Yaya (2016) express the need for medical librarians to use current awareness and SDI services for information service delivery to their users. Similarly, Omeluzor and Oyovwe-Tinuoye (2017) assess the use of ICT for the dissemination of information in current awareness and SDI services in university libraries in the south-west zone of Nigeria. Their study reveals the use of tools such as blogs, Really Simple Syndication (RSS) feed, Ask a Librarian, Twitter, Google+, emails, online public access catalogue, Facebook and YouTube for the delivery of SDI and current awareness services to library patrons. The findings also show that few libraries adopted ICT in the delivery of SDI

and current awareness services to their patrons, while none of the state university libraries had ICT features on their web pages. Omeluzor et al. (2014) observe that the advent of ICT in libraries has enhanced the gathering, processing, storing, retrieving and dissemination of information. ICT thrives on communication media, including radio, television, computers, CD-ROMs, communication gadgets and the Internet.

With regard to the media services adopted for the dissemination of information to library patrons during the COVID-19 pandemic, the findings of Ishtiaq et al. (2020) reveal that out of the 27 respondents in their study, 15 (55.6%) used email to disseminate information to library users during the pandemic. The findings further show that mobile applications, live chats and social media such as Facebook, YouTube, LinkedIn and Instagram were used to disseminate information to patrons in the COVID-19 era by university libraries in Sindh, Pakistan. Furthermore, González-Padilla and Tortolero-Blanco's (2020) study identifies the influence of social media in the COVID-19 pandemic. The study reveals some of the advantages and disadvantages of social media with regard to information dissemination, and concludes that social media are a potent means of disseminating information quickly about new discoveries, sharing diagnostic, treatment and follow-up protocols, and comparing different approaches from other parts of the world.

The levels of response of libraries around the world to the needs of their patrons during the COVID-19 pandemic cannot be overemphasized. For instance, Duke University Libraries informed its user community on its official website that it was closing its physical access area and services to patrons as a result of the coronavirus pandemic but would continue online services to provide resources and consultation for its patrons. Duke University Libraries also extended its Ask a Librarian chat services for research and reference questions, and provided direct connections and access to subject specialists, who would provide support for remote consultation and instruction. Furthermore, Duke University Libraries made available its resources and reference services, including its digital materials and repositories, to its registered and non-registered users, while its staff worked remotely to support these services (Duke University Libraries, 2020).

Similarly, the National Institutes of Health (2020) reported that the National Library of Medicine opened avenues for support in its COVID-19 response through new initiatives with the global publishing community and artificial intelligence researchers. The National Institutes of Health (2020) further reported that the National Library of Medicine expanded access to scientific papers on the coronavirus for

researchers, care providers and the public, and for text-mining research. It also adapted its standard procedures for depositing articles into PubMed Central to provide greater flexibility and ensure that coronavirus research was readily available. Furthermore, the National Library of Medicine has engaged with journals and publishers that do not currently participate in PubMed Central but are within the scope of its collection. The collaborative efforts of the National Library of Medicine is to ensure the timely dissemination of quality research on COVID-19 to users around the world. Furthermore, Dadhe and Dubey (2020) carried out a content analysis of major technological institutions' websites and online scholarly resources on COVID-19 in India. The study shows some level of organization of online information resources, which allows for the faster dissemination and easy access of COVID-19-related information. Moreover, Elsevier Library Connect (2020) has prepared a list of COVID-19 resources, which has been shared on its website for librarians and library users to access during the COVID-19 pandemic. The aim is to disseminate and enhance access to quality and reliable information for libraries and their users.

A survey by Hinchliffe and Wolff-Eisenberg (2020) on academic libraries' response to COVID-19 in the USA reveals that access to both technologies and print materials remained largely unaffected by the COVID-19 pandemic. Their findings further show that the vast majority of libraries (80%) reported no changes to their existing technology lending programmes, while 85% reported providing access to print materials. With regard to their services, 65% of the libraries were providing reference services and 25% maintained limited hours in the provision of their available services while providing access by phone and online. The study's findings also show that 34% of the libraries provided synchronous instruction virtually. Similarly, a study by Parikh et al. (2020) reveals the reading habits of library users during the COVID-19 lockdown. The study shows that 70% of students and 53% of faculty preferred reading print books, while 7% of students and 3% of staff preferred e-books during lockdown. Their preferences in the use of information resources determined how the library would meet their needs during the COVID-19 pandemic. In the COVID-19 era, the University of the Pacific (2020) and University of Adelaide (2020) libraries transited to remote operations, making online resources and services available through their library websites. The online resources included access to e-books, e-journals, publisher databases and streaming videos, while an email address and a link to aid communication between the librarians and patrons were made available for patrons. A study by Chan et al.

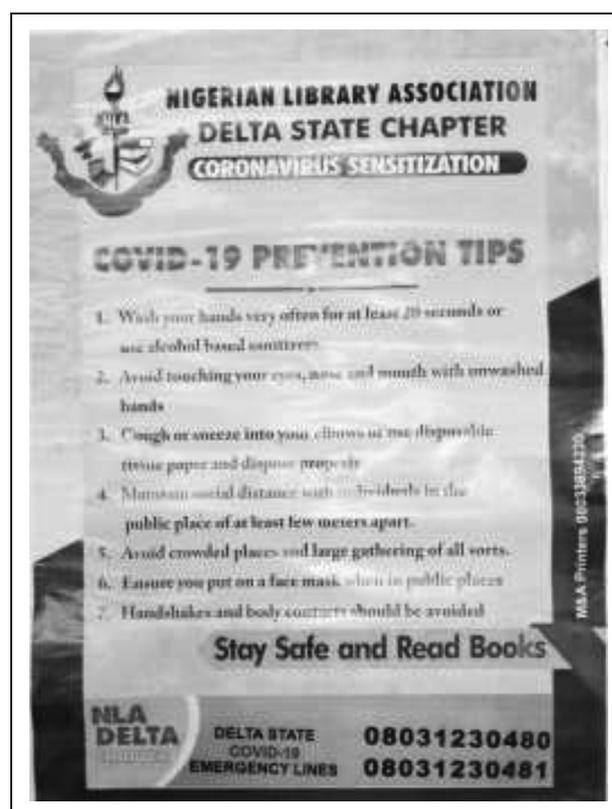


Figure 1. Poster promoting COVID-19 prevention tips.

(2020) at the Prince of Wales Hospital, a tertiary academic hospital in Hong Kong, advocates the use of social media such as Twitter and WeChat for rapid knowledge dissemination to patrons during the COVID-19 pandemic.

In Nigeria, the COVID-19 pandemic has changed the ways and manner in which libraries disseminate information and respond to users' information needs. Instead of the usual routine processes, most librarians are making use of ICT tools such as WhatsApp, Twitter and social media to share and disseminate critical information to colleagues and patrons. The Delta State Chapter of the Nigerian Library Association hosted a webinar on fake news and misinformation in the era of the COVID-19 pandemic. The webinar brought together information professionals from all over the world, who shared a common belief in the importance of ICT for the dissemination of information. As a means of sensitization and curbing the spread of COVID-19, the Delta State Chapter distributed posters (Figure 1) and flyers, in addition to hand sanitizer, to all public and academic libraries in the state.

Methods

Research approach

This study adopted a descriptive survey design. The descriptive survey design was a reliable means of

providing the researchers with the opportunity to use the data collected for this study to ascertain how libraries in Nigeria responded to the needs of their patrons through SDI services during the COVID-19 pandemic and total lockdown of some critical sectors of the Nigerian economy, including libraries.

Population

The population of this study was drawn from all university libraries in Nigeria. The sample population cut across all librarians in different sections of libraries in federal, state and private universities in all the states of Nigeria. Because of the large number of universities in Nigeria, a convenience sampling method was used to select six universities from each of the six geopolitical zones of Nigeria and one from the Federal Capital Territory, giving a total of 37 universities. From these 37 universities, a convenience sample of five respondents from each was used, giving a total of 185 respondents. The main reason for selecting 185 respondents was to use that number as a sample and to reduce the cost and time constraints in using a larger population.

Development of research instrument

The instrument for data collection was a structured online questionnaire that was designed by the researchers. The research instrument was developed using Google Forms to provide answers to the research objectives. The instrument had five sections (Sections A to E). Section A provided the demographic information of the respondents. Section B had 10 questions that elicited answers on the level of information dissemination among the libraries during the COVID-19 pandemic in Nigeria. It had questions with a 4-point rating scale, where 4 was the highest and 1 the lowest (4 = *strongly agree*; 3 = *agree*; 2 = *disagree*; 1 = *strongly disagree*). Section C had four questions and attempted to find out the type of information materials and sources that the libraries disseminated to their patrons during the pandemic. It had questions with a 4-point rating scale, where 4 was the highest and 1 the lowest (4 = *strongly agree*; 3 = *agree*; 2 = *disagree*; 1 = *strongly disagree*). Section D had 13 questions which considered the medium that the libraries used to disseminate information to library patrons during the COVID-19 pandemic. It had questions with a 4-point rating scale, where 4 was the highest and 1 the lowest (4 = *strongly agree*; 3 = *agree*; 2 = *disagree*; 1 = *strongly disagree*), while Section E was an open-ended question that required the respondents to list the challenges that libraries

encountered in the course of disseminating information to their patrons.

Distribution and data collection

The questionnaire was distributed to the respondents through their respective WhatsApp/email addresses; the addresses were retrieved from past Nigerian Library Association annual conference/general meeting attendance lists. Sending the questionnaire directly to the respondents' email boxes and WhatsApp numbers eliminated responses from unintended respondents. However, because the researchers could not contact all of the respondents via their individual email/WhatsApp accounts, we resolved to use the WhatsApp platforms of the Nigerian Library Association and the Nigerian Library Association's Information Technology Section. The use of these platforms was an alternative to using a face-to-face approach because of lockdown and spreading COVID-19. It also helped in contacting those respondents who could not be reached, since all of them were registered members of the groups' platforms. The responses received through the platforms were carefully sifted to eliminate duplicate responses from those respondents who had been contacted earlier via their personal email/WhatsApp accounts. We did not hesitate in using the Google response tool, which helped us to identify each respondent by their university, thus making it easier to eliminate duplicate responses. Out of the expected 185 responses, a total of 178 responses were received. The use of the aforementioned platforms therefore assisted the researchers in achieving a 96% response rate, which was suitable for completing the study. Before the administration of the questionnaire to the intended respondents, pre-reliability tests were conducted by sending the instrument to 15 librarians who worked in public libraries and were not part of this study. The 15 questionnaires were all returned and were analysed using the Cronbach's alpha correlation coefficient at a .50 level of acceptance, which gave a result of $r = .80$. This result meant that the instrument was reliable and good for data collection for this study since the test result was above the acceptance point of .50. Furthermore, the instrument was examined by a researcher in order to ensure content and construct validity, and it was confirmed to be suitable. The data collected was analysed using the Google Forms analysis tool and Statistical Package for Social Sciences (SPSS) version 7.0. The results are presented using standard deviation, frequency, percentage and chart for clarity. In Tables 1 and 2, the mean scores are rated as

Table 1. Dissemination of information to library patrons during the COVID-19 pandemic.

Statement	<i>n</i>	Maximum	<i>M</i> (\bar{x})	<i>SD</i>
The library disseminates information on personal hygiene (hand-washing, cleanliness and use of hand sanitizers)	124	4.00	2.7	0.98
The library supports the dissemination of electronic information resources to patrons during the COVID-19 pandemic	86	3.00	2.4	0.87
The library disseminates information using flyers, posters and handbills to sensitize the general public to the prevention and control of the COVID-19 pandemic	83	4.00	2.3	0.75
The library shares current awareness information in other areas of research interest with registered patrons	78	4.00	2.2	0.83
The library disseminates information to its patrons on the symptoms of COVID-19	72	3.00	2.1	0.55
The library disseminates information on how to curb the spread of COVID-19	72	3.00	2.1	0.55
The library disseminates flyers about government decisions on the treatment of COVID-19	72	3.00	2.1	0.55
The library shares links with its patrons to access online information in all areas of study	60	3.00	2.0	0.49
The library disseminates information to support users in their ongoing research	62	4.00	2.0	0.83
The library sends out information on how to access help for people with COVID-19	60	3.00	2.0	0.49

Note: *N* = 178. Acceptable mean score = 2.5.

follows: a mean of 0.1 to 1.9 is very low, 2.0 to 2.4 is low, 2.5 to 2.9 is high, and 3.0 and above is very high.

Results

Demographic information of the respondents

The survey cut across librarians in university libraries in Nigeria. The focus of the study was to elicit information on the efforts of libraries in the dissemination of information to patrons during the COVID-19 pandemic in Nigeria. Among the respondents, 98 (55%) were male while 80 (45%) were female. The majority (56%) of the respondents had a Master's degree, 32% had a PhD and 12% had a Bachelor's degree in Library and Information Science. With regard to the designation of the respondents, the results show that a high number (40%) of the respondents were Librarian II, 20% were senior librarians and 16% were assistant librarians or Librarian I, while 8% were university librarians. Concerning the Department of the respondents, the results reveal that the majority (47%) were ICT/automation librarians. Moreover, 24% of the respondents were serials librarians and 23% were reader services librarians, while 6% were administrators. In respect of the work experience of the respondents, the results reveal that the majority (36%) of the respondents had 11–15 years of work experience, 32% had worked between 6 and 10 years, and 24% had 16 years or

more of working experience years or more of work experience, while a lower percentage (8%) had work experience of 1–5 years. It may be deduced that a total of 92% of the respondents had worked for many years in the library sector and therefore should have been able to devise ways of supporting their patrons during a crisis such as the COVID-19 pandemic.

Findings

The first objective was to find out if libraries in Nigeria disseminated information to their patrons during the COVID-19 pandemic. The results in Table 1 reveal that libraries in Nigeria disseminated information on personal hygiene (hand-washing, cleanliness and use of hand sanitizers) to patrons ($M = 2.7$) during the COVID-19 pandemic. Table 1 also shows that libraries disseminated electronic information resources to patrons to enable them to have access to information for their research, with a mean score of 2.4. Moreover, Table 1 shows that libraries used posters and flyers to disseminate information as a means of sensitizing the general public to the prevention and control of the COVID-19 pandemic, with a mean of 2.3. The overall results in Table 1 indicate that libraries disseminated information to their patrons on all of the items that were examined in this study – for instance, information on the symptoms of COVID-19, information on curbing the spread of the

Table 2. Types of information materials and sources disseminated by libraries to patrons during the COVID-19 pandemic.

Statement	Strongly agree	Agree	Strongly disagree	Disagree
The library disseminates print materials to its patrons during the COVID-19 pandemic	33 (19%)	10 (6%)	50 (28%)	85 (48%)
The library disseminates e-books and e-journals to its patrons during the COVID-19 pandemic	45 (25%)	88 (49%)	30 (17%)	15 (8%)
The library provides access to online databases	37 (21%)	67 (37%)	44 (25%)	30 (17%)
The library delivers newspaper cuttings and new arrivals to patrons during the COVID-19 pandemic	54 (30%)	50 (28%)	33 (19%)	41 (23%)

COVID-19 pandemic, and the distribution of flyers on government decisions on the treatment of COVID-19 each had a mean score of 2.1. Furthermore, the results in Table 1 reveal that libraries disseminated information through sharing links with patrons to access online information in all areas of study to support their ongoing research, as well as disseminating information to patrons on how to access help for people with COVID-19, each with a mean score of 2.0.

The second objective was to ascertain the types of information materials and sources that libraries disseminated to their patrons during the COVID-19 pandemic in Nigeria. The results in Table 2 show that fewer respondents (43 or 25%) had access to print materials, while the majority (135 or 76%) did not. The results in Table 2 also show that libraries disseminated e-books and e-journals to their patrons during the pandemic, as indicated by 133 (74%) of the respondents. The majority of the respondents (104 or 58%) agreed that libraries provided access to online databases during the COVID-19 pandemic. Similarly, the results in Table 2 reveal that the majority (104 or 58%) of the respondents agreed that libraries distributed newspaper cuttings and new arrivals to their patrons during the COVID-19 era.

The third objective was to determine the media/tools that libraries used to disseminate information to library patrons during the COVID-19 pandemic in Nigeria. The results in Table 3 show that libraries used Ask a Librarian, online public access catalogues, email and repositories, which each had higher mean scores of 2.6. They also used FAQs ($M = 2.7$) and print media ($M = 2.8$) to disseminate information to patrons. Moreover, the results in Table 3 reveal the use of professional networking platforms and mobile technology and library services to disseminate information to patrons ($M = 2.3$). The results further show the use of websites, WhatsApp and social media ($M = 2.2$) to disseminate information to patrons, while blogs and audiovisual media were also used ($M = 2.1$).

The fourth objective was to identify the challenges facing the dissemination of information to library patrons during the COVID-19 pandemic in Nigeria. The findings in Figure 2 show that 170 of the respondents indicated that the inadequate coordination of library activities was a challenge for the dissemination of information during the COVID-19 pandemic in Nigeria. This means that libraries may have to prioritize facilities, tools and personnel to cushion the effects of such an occurrence in the future. The results in Figure 2 also reveal that 140 of the respondents indicated that the closure of tertiary institutions by the Nigerian government as a result of the COVID-19 pandemic was a challenge, and 120 expressed that the nationwide strike action embarked on by the Academic Staff Union of Universities (ASUU) of Nigeria was a challenge. The results in Figure 2 further reveal that 65, 50 and 45 of the respondents, respectively, stated that the physical closure of libraries, inadequate power supplies and the downtime of Internet connections were challenges to the dissemination of information to library patrons during the lockdown in Nigeria as a result of the COVID-19 pandemic.

Among those who responded in the 'open-ended' section of the survey instrument, one stated:

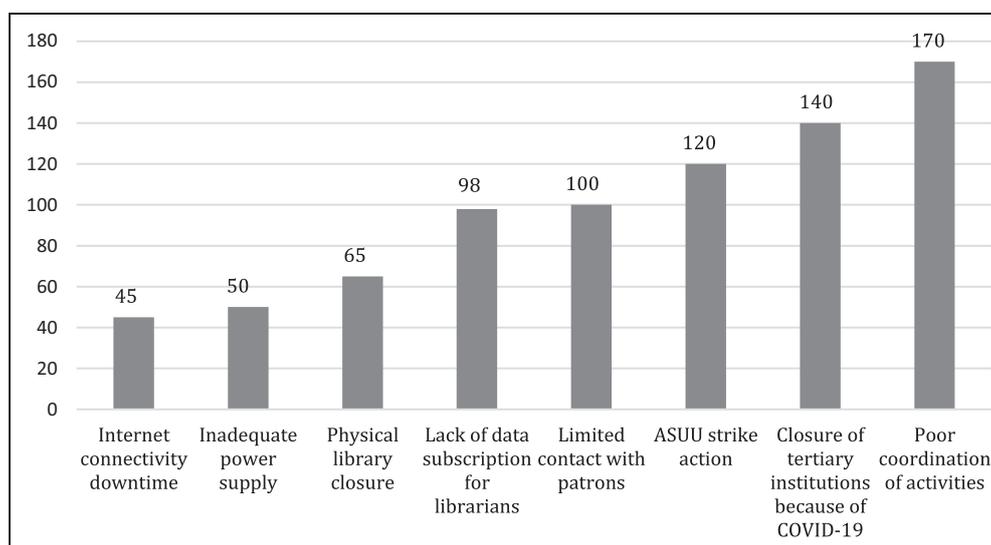
The physical library is closed because of large crowd[s] of users. But the Electronic Library (E-Library) remain[s] accessible through the Internet. The statistics show low interactions. Only lecturers and some researchers are allowed to use the library carrels. This also limit[s] the number of users during the COVID-19 period in Nigeria. Nevertheless the library continues to give out information through every available means, be it electronic or print posted on library signposts or display shel[ves].

This assertion shows that libraries in Nigeria were not open to users as a result of the COVID-19 pandemic but e-libraries were available to disseminate information and enable access to e-resources. However, the respondent reported a low number of

Table 3. The media/tools used by libraries to disseminate information to patrons during the COVID-19 pandemic.

Statement	<i>n</i>	Maximum	<i>M</i> (\bar{x})	<i>SD</i>
The library uses Ask a Librarian to disseminate information to patrons during the COVID-19 pandemic	152	4.00	2.6	0.83
The library uses Frequently Asked Questions (FAQs) to disseminate information to patrons during the COVID-19 pandemic	130	4.00	2.7	0.83
The library uses a library blog to disseminate information to patrons during the COVID-19 pandemic	68	4.00	2.1	0.56
The library uses a library website to disseminate information to patrons during the COVID-19 pandemic	65	3.00	2.2	0.83
The library uses online public access catalogues to disseminate information to patrons during the COVID-19 pandemic	142	3.00	2.6	0.83
The library uses professional platforms, such as LinkedIn, ResearchGate, Mendeley, ORCID, Academia.edu, Kudos and Research Square, to disseminate information to patrons during the COVID-19 pandemic	72	3.00	2.3	0.50
The library uses mobile technology and mobile library services to disseminate information to patrons during the COVID-19 pandemic	74	3.00	2.3	0.51
The library uses print media such as newspapers and magazines to disseminate information to patrons during the COVID-19 pandemic	165	3.00	2.8	0.82
The library uses audiovisual media such as radio and television to disseminate information to patrons during the COVID-19 pandemic	58	3.00	2.1	0.54
The library uses social media such as Facebook, Twitter and Instagram to disseminate information to patrons during the COVID-19 pandemic	85	4.00	2.2	0.83
The library uses WhatsApp to disseminate information to patrons during the COVID-19 pandemic	96	4.00	2.2	0.82
The library uses email to disseminate information to patrons during the COVID-19 pandemic	142	4.00	2.6	0.84
The library uses repositories to disseminate information to patrons during the COVID-19 pandemic	142	4.00	2.6	0.83

Note: *N* = 178. Acceptable mean score = 2.5.

**Figure 2.** The challenges facing the dissemination of information during the COVID-19 pandemic.

interactions between the librarians and patrons who used the e-library. This indicates that most of the users may not have been aware of the e-library and other available electronic resources.

Discussion of findings

The findings in Table 1 concerning the activities of libraries during the COVID-19 pandemic show that libraries disseminated information to their patrons on

all the items that were examined. The dissemination of information on hygiene is critical, as viruses such as COVID-19 thrive in a dirty environment and can easily spread from one person to another – hence the efforts of the libraries to sensitize the general public to curbing the spread of the virus. The findings in Table 1 also reveal the efforts of libraries to disseminate electronic information resources and links to external databases to patrons during the COVID-19 pandemic. The dissemination of e-resources and links to databases would have enhanced the ongoing research of patrons, as well as keeping patrons abreast of current happenings around the world during the COVID-19 pandemic. The findings in Table 1 are similar to the efforts being made by organizations and libraries in other areas – for instance, Elsevier Library Connect, UNESCO and the National Library of Medicine have provided online access to information resources and avenues to support researchers in their ongoing research on COVID-19.

The provision of access and the dissemination of reliable and up-to-date information materials are the fundamental reasons for establishing a library. Hence, during the COVID-19 pandemic, the dissemination of information materials in both print and electronic formats by libraries has remained sacrosanct. The findings in Table 2 reveal that print materials were not disseminated to library patrons during the COVID-19 era. This scenario reveals the negative impact of COVID-19 on library services. The inability of libraries to disseminate print books during the pandemic was a result of lockdown and the restriction of access to public places such as libraries. The inability of libraries to disseminate print books during the COVID-19 pandemic may have affected the reading, learning and research activities of library patrons who may prefer print books to other formats, as revealed in the findings of Parikh et al. (2020), where 70% of the students and 53% of the faculty in their study preferred reading print books during the COVID-19 pandemic. However, the findings in Table 2 show that libraries quickly adjusted to electronic resources such as e-books, e-journals and databases, as well as the dissemination of newspaper cuttings to their patrons during lockdown and the COVID-19 pandemic in Nigeria. The dissemination of e-resources during COVID-19 in Nigeria would have gone a long way in reaching people who were cut off from accessing physical libraries and their resources.

The findings in Table 3 show that libraries activated several tools and media for the dissemination of information to patrons who were not able to access the physical library services. These mechanisms included Ask a Librarian, FAQs, blogs, online public

access catalogues, professional platforms, websites, mobile technology, radio, television, print media, social media, WhatsApp, emails and repositories. The findings in Table 3 corroborate Ishtiaq et al.'s (2020) study, which reveals the use of similar tools for the dissemination of information to library patrons during the COVID-19 era. The findings in Table 3 further show that the pandemic has allowed most of the libraries in Nigeria to adopt media for the dissemination of information. It is important to state that media may have provided an opportunity for libraries to disseminate information services to a wider audience during the COVID-19 pandemic. This finding agrees with Omeluzor and Oyovwe-Tinuoye's (2017) research, which shows the use of ICT tools such as Ask a Librarian, emails, online public access catalogues, blogs, Twitter and Facebook to disseminate information on current awareness and SDI services in university libraries in the south-west zone of Nigeria. Similarly, Hinchliffe and Wolff-Eisenberg (2020) acknowledge the use of both technologies and print materials by academic libraries in the USA to disseminate information on the COVID-19 pandemic to patrons. The findings in Table 3 are synonymous with the activities of libraries around the world. For example, the University of the Pacific (2020) and the University of Adelaide (2020) libraries, among others, transited to remote operations, making online resources and online services (digital materials and repositories) available through their library websites.

The findings in Figure 2 reveal the challenges that militated against the dissemination of information during the COVID-19 pandemic. They show that libraries had a slow start because of the poor coordination of their activities. Most libraries in Nigeria were caught by surprise and had no proper preparation or structures to mitigate the sudden lockdown and COVID-19 pandemic, which affected the dissemination of information to patrons. Moreover, some libraries may have lacked personnel and the facilities to use ICT tools, and hence were unable to have a head start. The lack of coordination of libraries' activities may lead to the delivery of poor services, the duplication of efforts, a waste of time and resources, stress on librarians and delays in the dissemination of information to patrons. The need for proper coordination of library activities is necessary to achieve library goals, and will lead to the delivery of quality services to patrons.

The findings in Figure 2 also show that the closure of all tertiary institutions in Nigeria because of the COVID-19 pandemic and the ASUU strike was the major factor that affected the dissemination of information to patrons. COVID-19 and the ASUU strike

were two major events that obstructed the dissemination of information and services to library patrons, as librarians were not allowed to enter libraries. The closure of libraries due to COVID-19 did not affect patrons in Nigeria alone – the American Library Association recommended that public libraries should close their doors amid the COVID-19 pandemic (Pearson, 2020). The findings reveal the challenges of limited contact with library patrons. The COVID-19 era resulted in an increase in skeleton services, online services and the use of several platforms for the dissemination of information, thereby reducing the usual one-on-one service provision. The findings in Figure 2 show that there was no provision for data subscription for librarians to disseminate information. The findings reveal that some librarians used their personal mobile phones and data to disseminate information to patrons – this was confirmed by one of the respondents who reported using his personal mobile phone and subscription to disseminate information to library patrons. Librarians would require subscription to be able to disseminate information to the patrons from home using their mobile phone as none subscription may hinder the information dissemination to the library patrons during crisis such as COVID-19 pandemic.

The findings in Figure 2 with regard to the physical closure of libraries and inadequate power supply were less of a challenge because the figures are lower than 50% of the total respondents in this study. They may be considered as less of a challenge to the dissemination of information in the COVID-19 era because, during the lockdown, libraries were not open. Therefore, one cannot talk about power supply and Internet connections. The respondents may have been expressing the usual challenges they faced on a daily basis that affected the dissemination of information during a normal working day.

Specific findings

The specific findings from the study may be summarized as follows:

1. Libraries across Nigeria disseminated information on how to curb the spread of COVID-19, government decisions and personal hygiene (hand-washing, cleanliness and use of hand sanitizers) through social media, posters and flyers during the COVID-19 pandemic.
2. Libraries engaged their users through the provision of access to electronic resources and

newspaper cuttings to support the ongoing research of library patrons.

3. Libraries adopted tools, media and professional platforms to disseminate information to library patrons.
4. The findings reveal some major hindrances to the dissemination of information to library patrons during the COVID-19 pandemic, which should be considered by library management teams to avoid their future occurrence.

Conclusion and recommendations

The connection between libraries and their patrons lies in the satisfaction and value that patrons get from the library services, mostly through accessing, retrieving and using information, especially during a crisis. The participation of libraries in the provision and dissemination of information to patrons during the COVID-19 pandemic in Nigeria has increased the image of libraries among other information providers. The lockdown and spread of the COVID-19 pandemic brought to the fore the importance of developing libraries' ICT facilities to enhance the continuous provision and dissemination of information services to patrons, irrespective of time, space and geographical location. Libraries remain key institutions and have a responsibility to provide relevant information sources and services to the communities they serve. Hence, efforts have been made by libraries in Nigeria to fulfil their mandate by disseminating information to their patrons in the COVID-19 era. The ability of libraries to sustain the provision and dissemination of information to patrons during a crisis increases the trust that patrons have in them as their last recourse for information access and provision. The study reveals the adoption and use of media and tools for accessing information and disseminating information to library patrons in Nigeria during the COVID-19 era. Furthermore, it is clear that lockdown and the COVID-19 pandemic uncovered the level of support that libraries offer and the challenges that hinder their efforts in the dissemination of information to patrons. The adoption of viable ICT tools and electronic resources by libraries in supporting their user communities during COVID-19 is evident. Such efforts enabled patrons to have regular access to information sources and services to meet their information needs. However, the study shows that libraries still need to increase the use of online resources and ICT tools for the delivery of information services to users. Some of the challenges that this study reveals would not prevail if libraries in Nigeria consistently harnessed ICT tools and e-

resources, among other services, during a crisis such as COVID-19.

In view of the foregoing, the following recommendations are offered: (1) there is a need to overhaul the current strategies of attending to patrons' information needs in a time of crisis in university libraries across Nigeria and other parts of the world; (2) library management should assemble a team to put together a crisis management strategy that will ensure uninterrupted services for patrons during a pandemic; (3) library management, in collaboration with university management, should develop the library's ICT units with qualified personnel, adequate Internet connections and facilities that will enhance the dissemination of information to patrons; (4) libraries' ICT units should ensure the adoption of sustainable information technology tools such as blogs, repositories and professional networks (e.g. LinkedIn, ResearchGate and Academia.edu) for the provision of online information services to patrons; and (5) library management should provide adequate data subscription for librarians to enhance the dissemination of information via mobile phones to patrons at all times.

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Notes

1. See <https://covid19.ncdc.gov.ng/>

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‘The challenge now is for us to remain relevant’: Australian public libraries and the COVID-19 crisis

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Abstract

The COVID-19 crisis has had a significant impact on public libraries around the world. In Australia, almost all public libraries experienced some period of building closure, requiring libraries to adapt their services and delivery models. This article reports findings from a large-scale survey of public library managers in Australia, which was conducted in August 2020. In particular, it presents the results of a thematic analysis of the participants’ free-text responses to open questions asked as part of the survey. This analysis reveals important insights relating to responses to library closures, staffing issues, new and expanded services and programmes, relationships with parent bodies, and the role of public libraries during the crisis and beyond. While public libraries are perceived by managers to have been agile and adaptable, and to have utilised technology effectively, the findings clearly demonstrate the value to users of library buildings, with important consequences for understanding the role of public libraries.

Keywords

Public libraries, COVID-19, pandemic, crisis management, value of libraries, Australia

Introduction

Australia’s public library networks serve a diverse set of urban, regional and remote communities, with over 1500 points of access for a population of some 25 million people (Australian Bureau of Statistics,

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2021; Australian Library and Information Association, 2021a). These libraries are frequently housed in their own dedicated buildings, but in regional and remote areas they may also share spaces in schools or community centres, and some services are delivered to multiple remote communities by mobile library buses. The peak body for Australia's public libraries is the Australian Public Library Alliance (APLA). APLA has identified several important roles for public libraries, including supporting literacy and lifelong learning, creating informed and connected citizens, digital inclusion, personal development and well-being, and building strong and creative communities (Australian Library and Information Association, 2021b).

The ability to fulfil these roles was challenged during the COVID-19 pandemic in 2020 when, from 24 March, all public library sites were ordered to close by the federal government (Morrison, 2020). From that point, public libraries across all states and territories of Australia remained closed for extended periods of time, reopening only when COVID-19 case numbers reduced to relatively safe levels. The separate governance of each state and territory, along with differing levels of COVID-19 infection rates across the country, resulted in public library sites being closed for differing lengths of time. However, during this time, public libraries chose to continue delivering services and resources to their users, albeit in altered ways.

The period of closure for Australian public libraries was a difficult time for library users and staff. However, this period has given public libraries an opportunity to examine the role they play in the lives of their users, to make choices about what services and resources it was most important to maintain during a crisis, and to explore the ways in which those services could best be delivered during a time when the library buildings were not accessible. Serving as an opportunity to consider the value and importance of what public libraries offer their communities, the COVID-19 closures of library buildings facilitated an unanticipated examination of what resources and services needed to be maintained, and what could be suspended until library sites were able to open again. Such an examination has allowed Australian public librarians to consider their own perceptions of the role and value of their libraries in their communities, and to determine which of the resources and services maintained during the periods of closure were most valued by users. In addition, some Australian public libraries established new practices during the closure period to further serve the needs of their users. The stimulus behind offering these new practices is illustrative of the roles public libraries see themselves as

playing in their communities, and again it was the COVID-19 pandemic that sparked this rapid examination of roles.

Given this context, it is essential that public library responses to the crisis, and perceptions of those responses, are properly understood. This understanding will not only help public libraries to prepare for future crises, ensuring that community needs are met as efficiently and effectively as possible, but will also facilitate valuable wider reflection on possible trends in service and resource provision, and the roles and functions of public libraries, which COVID-19 has made visible. To this end, in June 2020, the authors undertook a nationwide survey of managers at all Australian public library authorities with the aim of understanding what resources and services they had offered during their period of closure, how they perceived their responses to the crisis, and what they felt they had learned about the current and future role of public libraries. The quantitative results of this survey relating to library offerings, and the ways in which public libraries adapted to the crisis, have been reported elsewhere (Garner et al., 2021). However, the library managers were also asked open-ended questions relating to the challenges, successes, plans for evaluation and lessons learned from the closures. This article reports the findings of a qualitative thematic analysis of the free-text responses to these questions. In doing so, it addresses the following research questions:

1. How do Australian public library managers perceive their response to the COVID-19 crisis in terms of service and resource delivery, and relationships with parent bodies?
2. What do the experiences of public libraries during the crisis tell us about the role and function of public libraries in Australia, both now and in the future?

Literature review

The role of public libraries in the lives of their users, and the provision of services to their communities, experienced major disruption in Australia, as in the rest of the world, when COVID-19 forced libraries to close in March 2020. Here, the authors provide an overview of the social and community roles of public libraries and how these roles have manifested in crises such as, and including, that of the COVID-19 pandemic, as reported in the literature.

Public libraries are traditionally seen to serve a range of roles in and for their communities. Many contemporary perspectives on the role of public libraries are informed by Weigand's (2003) view of

the role of the library in the life of the user, where a public library is more than a provision of public space and is also a cultural space used by individuals and groups to connect to each other and provide individual and joint growth and benefit. Public libraries are thus seen as public spaces that facilitate social activity, as well as connections between people and information (Given and Leckie, 2003). Wiegand's (2003) view of the library in the life of the user is perhaps tied to the physical availability of library spaces, particularly in the second of his three areas of the library's role – namely, as a place for people to meet to achieve cultural benefit and community connection – although Tripathi and Kumar (2010) have pointed out that information and communications technology, and specifically Web 2.0 tools, can also be used by public libraries to engage with and connect people in their everyday lives.

Associated with this 'connecting' role, Vårheim (2014) has explored the idea that public libraries facilitate the growth of social capital. Using Putnam's (1995) definition of social capital as being the outcome of coordinated action, supported by social organisation, trust and networks, Vårheim (2014) argues that public libraries build and boost trust within communities, and it is this trust that allows public libraries to bring communities together and therefore contribute to the social capital of those communities, with this function being particularly relevant in times of disaster and crisis as a means of building community resilience. Pyati (2019), on the other hand, focuses less on the capacity for public libraries to bring people together and instead argues for them to be considered as 'contemplative spaces' where individuals can escape the anxieties, chaos, distraction and commodification of the modern world.

Public libraries have sometimes established for themselves specific roles in the face of various crises that their communities have encountered. Of particular relevance in this respect has been the concept of community resilience, which Veil and Bishop (2014) have argued is frequently seen as a key contribution that public libraries can make in times of need, building on the services and activities that they already provide. Completely new services can also be provided by libraries, supporting more directly the efforts to counter a crisis. For example, librarians can volunteer their time and spaces to provide shelter and emergency relief in the face of natural disasters (Garvey, 2015; Merenda, 2015), or they can provide critical information and advice during public health crises (Featherstone et al., 2012; Hagar, 2009; Harris et al., 2005).

This last role, as a critical information provider, is, of course, also potentially applicable to the COVID-19 pandemic crisis. Links to reliable health-related information were included in the content of the American public library announcements that were sampled by Wang and Lund (2020) at the onset of the COVID-19 pandemic. The COVID-19 crisis has presented public libraries with a somewhat different situation from that of most previous crises, however, with their buildings sometimes off limits due to physical-distancing measures. Some literature that explores how libraries have responded to this different situation has already been published. Haasio and Kannasto (2020) undertook a questionnaire survey of 251 Finnish public librarians, investigating the functions and operations they were carrying out during the crisis, as well as the feelings and responses of staff in relation to work changes and disruptions. Like the Australian situation, libraries were ordered to close in March 2020, which necessitated a shift in operations to more digital services, innovation in 'new forms of services' and the 'reorganization of duties' (Haasio and Kannasto, 2020: 6, 9). Similar stories have been reported in Croatia (Holcer, 2020), Italy (Tammaro, 2020) and Portugal (Alvim et al., 2020).

Public libraries have tended to step up their electronic communications with users during the COVID-19 crisis, as well as expand their online collections and make use of online programming options. Alajmi and Albudaiwi (2020) analysed the tweets emanating from New York City's public libraries over the crisis period and found a significant number (14.5%) directly related to the COVID-19 pandemic, but also many that represented 'business as usual', the combined effect of which was, according to the authors, providing a 'feeling of normalcy' for their users. Meanwhile, the research of Alvim et al. (2020) involved analysis of data from the Facebook pages of 18 libraries from multiple Portuguese districts. Their study found that the National Public Libraries Network 'was of great importance on encouraging and engaging online initiatives' (Alvim et al., 2020: 117).

Not all public libraries closed their doors, however. In Sweden, for example, in contrast to the case in Finland, during March and early April 2020, 'approximately 85% of public libraries remained open "as usual" although general programmes and events at the libraries were cancelled' (Rundqvist, 2021: 247). Nevertheless, they did not ignore the crisis and still played a role in distributing important health information.

The authors' current research on Australian public libraries' response to the COVID-19 crisis included

an initial questionnaire, which was sent out to public library authorities across Australia. Their first article (Garner et al., 2021) focused on the quantitative data included in the survey responses, and the specific (and different) ways in which public libraries adapted. Some of the findings reported in Garner et al.'s (2021) article align with those reported by researchers in other countries, including those cited above. There has, however, been little in the way of literature to date that provides a deeper exploration of how librarians have reflected on their roles in the crisis more broadly, and whether these are an extension of or different from those they otherwise play in their communities. This article aims to contribute to the filling of this gap.

Method

In order to better understand how Australian public libraries responded to the COVID-19 crisis, a survey of library authority managers was conducted in August 2020. The survey was undertaken with the support of the APLA, the peak body for public libraries in Australia, and the research received approval from the Charles Sturt University ethics committee.

The questionnaire was designed and delivered to the library authority managers online using Survey Monkey, and comprised a mixture of closed and open questions exploring how public libraries responded to the crisis. The respondents were asked to identify their state or territory and the type of locality in which their service is based. They were then asked questions related to the closure of library sites, the services and programmes offered during the crisis period, their relationships with parent bodies, how their responses had been evaluated, the usefulness of existing plans or policies, the challenges faced by libraries, and the role libraries played in supporting the community. The design of the questions was heavily informed by discussions with APLA representatives and existing evidence of public library responses to the crisis. An initial draft of the questionnaire was sent to members of the APLA board for pilot testing, and a number of suggestions relating to the wording of the questions and additional question areas were made. These suggestions were incorporated into the final draft of the questionnaire. The APLA provided the research team with a comprehensive distribution list, which included the names and email addresses for the managers of every public library authority in Australia. A link to the survey was sent to all 477 contacts on this list, with a reminder email one week later. In total, 213 complete responses were received, representing

Table 1. Distribution of survey responses by state/territory.

State/territory	Invites sent	Survey responses	Response %
New South Wales/Australian Capital Territory	92	45	49
Northern Territory	13	3	23
Queensland	75	21	28
South Australia	92	44	48
Tasmania	1	1	100
Victoria	50	22	44
Western Australia	154	67	44
No state given	–	10	–
Total	477	213	45

an overall response rate of 45%. Table 1 shows the distribution of the responses by state/territory.

The responses to the closed questions were analysed quantitatively and have been reported in Garner et al. (2021). This article presents the findings from an analysis of the free-text responses to the open questions. It should be noted that, in general, the respondents provided detailed responses to the open questions. In total, these free-text responses amounted to more than 60,000 words. This data was analysed using thematic analysis, following the principles laid out by Braun and Clarke (2006). Due to the large volume of data, the analysis was distributed across the project team. The members of the team were each assigned specific open questions and undertook a process of collating the responses and identifying key themes. This work was undertaken in a shared Excel document. The project team then discussed and refined these themes. Once the themes had been agreed, each free-text response was coded, with the researchers mapping each response to relevant themes. This work was subsequently reviewed by the co-leaders of the project, with some refinements made to ensure consistency and accuracy across the data set. The data could then be organised by theme, allowing for the generation of rich insights into library managers' perceptions and experiences.

The quotations from the participant responses included below have been very lightly edited for spelling and grammar, but are otherwise reported verbatim.

Findings

Overall perceptions of library responses to the crisis

It is important to begin the presentation of the results with an acknowledgement that the respondents expressed pride in both their services' response to the

crisis and the response of public libraries in general. As one participant put it: 'I commend all libraries. Reading on the e-lists what each one was doing was inspirational and innovative. Each area has their own set of challenges and issues, but all seemed to overcome and adapt'. In many cases, the managers' positive perceptions of their services' responses were based on feedback received from the community: 'The amount of positive feedback from community members about the library, staff and services has been amazing'. The managers also wrote positively about the resilience and adaptability of their staff, while some respondents also noted that libraries had been acknowledged within their councils as handling the crisis more effectively than other units: 'Overwhelmingly the feedback from others outside libraries has been that libraries were the stars in this crisis – being agile to adapt service delivery, jumping in and creating online content, supporting the community in new ways'.

The notion that public libraries were particularly agile in their response was echoed in the managers' replies. It was described in terms of staff ('Public libraries' staff's capacity to step up, be agile and flexible has been the most positive aspect in the response'), the services and programmes that were developed and delivered ('I have been hugely impressed with the speed and agility that libraries switched from traditional service delivery models to new and innovative services'), and their willingness to work with new technology and platforms ('Public libraries have shown themselves to be agile in this crisis through their desire to embrace new platforms for service delivery'). This was frequently achieved in challenging organisational contexts: 'Public libraries once again have proven how responsive and adaptable they are to community needs, using initiative and innovation to think outside and around restrictions and constraints'.

While the overall tone of the comments tended to be positive, it should also be noted that some of the respondents identified issues with the public library response. A small number of the participants suggested that some libraries were too 'risk-averse' – not in the sense of health risks, but in terms of their willingness to implement innovative new services. One manager noted that library users had complained of a lack of urgency on the part of the library in adapting services to the crisis conditions, particularly in comparison to non-local-government entities:

Clients... expressed frustration that we weren't changing services quickly enough (e.g. providing home delivery or click and collect) but we were seeking approvals

and developing detailed documentation to support new ways of working. Clients did not understand the documentation and approvals required for us to develop and deliver something new – when they could see small local businesses and retail businesses pivoting very quickly.

The issue that was most commonly identified by the respondents, however, related to the lack of consistency in library responses. As one manager put it: 'I think there should have been a more unified approach throughout the nation'. While some of the respondents recognised that the lack of consistency could be in part explained by the differing impact of the crisis in different localities and 'the diverse needs of communities', others noted that significant differences in response could be seen within states and between libraries operating in ostensibly similar conditions: 'Every council acted differently, and every library decided for themselves what was best. I'm surprised that there wasn't more consistency/guidelines given to make sure all communities had equal access'. The managers who noted the apparent inconsistency in responses suggested that a centralised decision-making apparatus would have been beneficial, with one respondent suggesting a model for how this might have worked in practice: 'Statewide agreement on following one set of criteria prescribed by our local government association and informed by our expert panel would have been preferable'.

New and expanded services and resources

An important aim of the survey was to identify the services and resources offered by public libraries during the crisis period, and particularly while library buildings were closed. A detailed quantitative breakdown of the results relating to these questions can be found in Garner et al. (2021). As might be expected, the most significant changes to services related to increasing or developing online access to resources and programmes. Many library authorities (40%) were found to have expanded existing online e-book collections, while over two-thirds (67%) developed new virtual programming (e.g. online storytime sessions). The results also show that 75% of library authorities offered 'click and collect' services during the crisis, and 52% either expanded existing delivery services or developed new ones. It is clear, then, that a large proportion of library authorities took steps to support access to library resources and programming while library doors were shut.

While these figures are important, the survey also asked the managers open questions about the services and programmes they provided. As well as requesting

details of innovative services outside those named in the survey, it asked the managers to comment on the effectiveness of the new and expanded services developed during the crisis, and to discuss which, if any, of them they intended to continue once the crisis period was over. The remainder of this section presents the findings from these questions.

Digital content

The respondents noted that the provision of digital resources and services (e.g. e-books, online story-times and digital magazines) proved particularly effective during the crisis. Several managers cited large increases in usage figures for these services (e.g. one noted a 235% increase in the use of digital magazines, while another stated that 'the downloading of our online resources tripled during the closure period'). An important caveat was supplied by one respondent, however, who noted that while their e-book loans doubled, this increase did not come close to matching the number of physical loans that would normally have been seen during the same period.

The increased demand for digital content also led to a range of challenges for libraries. Perhaps the most significant challenge related to supporting users. The managers highlighted that familiarising users with online formats, and associated access and borrowing processes, placed a heavy burden on staff in terms of both time and expertise. As well as the volume of queries relating to online access, typically received over the phone, the respondents suggested that staff had to adapt quickly to delivering guidance on using online resources remotely, having previously typically done so in person. Some of the managers described adapting their website to provide this instruction:

The community uptake of online resources increased during the COVID-19 closure and our staff quickly adapted to learn about e-resources and walk customers through how to use these over the phone. This was a major change from showing customers how to use these in person to doing so via phone and describing how to use these. This prompted us to overhaul our website to include instructions.

The shift to a primarily digital environment required staff to learn new skills – not only the digital skills required for home-based work, but also content-creation skills, such as making videos, and other skills required for virtual programming. The production of videos and hosting of virtual sessions also challenged some staff, who were uncomfortable with being filmed and visible online.

The other significant challenge in delivering online content was financial. To facilitate meeting the increased demand for e-content, some libraries redirected funding away from print resources to e-resources, as this respondent from South Australia noted:

The upswing in demand for e-books and audiobooks in SA [South Australia] (we all share the same platforms) was huge, to the point that most libraries pledged some of our physical-item budgets towards purchasing more content to cope with the demand.

Respondents from other states noted similar changes in expenditure, although these were less likely to be centrally coordinated. It was also noted that, as well as increased use of online resources, the use of online services provided through the library increased, with similar budgetary consequences. For example, one respondent stated that 'usage of Studiosity, the online tutoring service, increased dramatically, with 75% of the year's usage occurring between March and June. We had to purchase extra time to meet the increased demand'. This financial impact, combined with the need for staff upskilling, may explain why the development of new online programmes and services was more likely to happen in urban libraries than regional or remote services.

Home delivery

Another key service described by the managers during the crisis was the delivery of library materials to clients' homes. The respondents described the introduction of home delivery services and noted how well received they were by their communities. One manager remarked how the service had had a positive effect on the well-being of their users: 'home delivery of physical collection items (via Aus Post courier) has had an overwhelming positive response from residents – many, many comments about how it has helped people cope with lockdown'. Another commented that maintaining contact with the library in this way proved very valuable: 'for some, it is one of the few contacts they have outside of their homes'. Interestingly, while delivery services were reported as being extremely popular when the library sites were closed, once branches opened again, demand for the services dropped, indicating that communities valued visiting a physical site more highly than having books delivered to them. This was summed up by the following comment from the manager of a library in a major city in South Australia:

The parcel post service was welcomed by nearly all of our customers, but again all reverted to physical access as soon as it was available, despite assurances that we would enable customers to physically distance through the continuation of the postal service.

While most delivery services related to library collections (usually books), some of the respondents described the delivery of other material. Several managers mentioned that activity or craft kits were delivered to members, often with a particular focus on families with younger children. Some of these responses mentioned that these were created to replace the in-house activities that would have been provided as part of school holiday programmes. Two respondents also described operating a document printing and posting service, where people who had no access to a printer could request that government forms be printed on their behalf and posted to them. Two other libraries offered a service where members could email files to library staff, who would then print the files; the members could later collect them from the library building.

Community welfare activities

Around half of the respondents highlighted activities that their services had undertaken specifically to support the welfare of community members. The delivery services outlined above, for instance, were frequently described as supporting vulnerable or elderly library users. Another important example was the use of well-being telephone calls. While only about 10% of the managers mentioned this activity, those who did so wrote in detail about how important they felt it was. The managers typically described a process where library staff contacted members by telephone to check on their well-being and provide an opportunity for conversation. As one respondent put it: 'This served two purposes: (1) To keep members abreast of developments within the local service; (2) To check on the well-being of members, all of whom live in small rural communities. Many are single-person households'.

The common language used to describe the people who were being called was 'vulnerable' or 'elderly'. Some of the libraries only called older residents, while others called patrons who were known to be self-isolating or living alone. Some libraries made 'regular welfare calls to vulnerable customers who did not want to receive deliveries'. The general practice was that the libraries would be making the telephone calls, but one library encouraged members to call the library themselves when needed, with staff

'instructed to spend as much time as required to chat to people'. One Inner Regional respondent library from New South Wales/Australian Capital Territory reported around 6000 calls with 'targeted members'.

The managers whose services had provided telephone support spoke in extremely positive terms about the effectiveness of this approach. One described it as a 'community lifeline' and another wrote that 'telephone calls to check on clients' well-being were very well received and received positive feedback'. Several managers used the word 'connection' to describe the value of the services, with one manager writing movingly about the role that phone calls played in supporting the community:

What really worked was being there – being there to answer the phone. Our unofficial helpline got some emotional responses because people were scared, and that they could chat to library staff on the phone for 20 minutes or so and get some of their nerves out helped them enormously. It's not like phoning a helpline; we are part of the community and known faces.

This quote is illustrative of the personal relationships that library staff developed with users. It clearly supports the notion that there can be a deep connection between the library and its community, one built on familiarity and reliability.

As well as phone calls, the managers described undertaking welfare activities in partnership with community service providers. These partnerships often took the form of delivering books or activity kits along with food parcels, but there was also mention of Australia Post delivering books to homes, collaborations with council well-being teams, and unnamed outsourced providers partnering with libraries to deliver books and activity kits. One library from a major city in New South Wales/Australian Capital Territory reported that they 'partnered with Headspace to develop mental health videos for youth to assist them to cope during uncertain times'.

The managers described activities and services they had implemented specifically to support vulnerable or disadvantaged groups. For instance, one manager explained how their libraries had left their Wi-Fi on to assist homeless people and others: 'We continued to provide free Wi-Fi, which in some locations is available outside public buildings, so that the homeless (or anyone else) could continue to access information while libraries were closed'.

A few libraries redesigned their environment, shelving and collections to support designated groups. Other libraries also undertook blurred service

delivery, with one manager describing this process in detail:

[The] blurring of services provided by Community Development (CD) and [the] Library as [they] share a workspace and worked as one team. CD would enquire about home Wi-Fi and promote digital library services as part of their welfare calls. The Home Library Service members were asked whether they had family support and added to the 'Care Package' roster and online grocery shopping service by CD. The Library, although closed, became a pickup point for items other than library materials via the Click & Collect service... Known homeless were checked on and encouraged to seek COVID accommodation.

Some libraries clearly put great value on their role in supporting civic and social inclusion, with the managers providing specific examples of occasions when staff had gone to great lengths to support their community:

One family of small children has a mother with no English – staff printed and delivered PDF children's books in mum's language, as well as some edible plants from her home country with Google Translate notes to accompany [them]. We hope they made sense!

Other managers noted that the reliance on online and remote access to material that was a characteristic of the crisis made engagement with disadvantaged groups particularly challenging, because of both the technical infrastructure required of libraries and the skills and literacies required of the users themselves. As one manager put it: 'we have been distressed to find it very difficult to meet the technology/digital literacy needs of our community remotely'. The respondents also highlighted the fact that while they were able to provide some services to support specific groups, there was often no way of properly evaluating their effectiveness: 'we have no mechanisms in place to measure any outcomes'.

Future delivery of library services

The respondents were asked specifically about the future of their services, particularly the aspects of their response to the crisis that might be continued once the crisis period was over. As one respondent noted, "the challenge now is for us to remain relevant. With reduced funding being a distinct possibility as Councils deal with COVID deficits we need to be proactive about regaining our market share." As might be expected, some of the respondents indicated that it was too early to be certain about the long-term implications, and that formal evaluation and review

processes would need to be undertaken. Nonetheless, some of the managers wrote in detail about how their experience of maintaining user access to resources and services during the period of library closures would influence future service provision. As one manager put it: 'the crisis has enabled us to look at the way we deliver services differently'.

In some cases, the crisis period was seen to have pushed libraries into innovative models of service delivery, and the managers indicated that they would be exploring the continuation of these models into the future. Click and collect and home delivery models were both identified by some of the managers as approaches that they would look to maintain or even expand in the future. Centralised collection and materials distribution was also mentioned, while the potential benefits of developing consortia and collaborative arrangements that were initially instigated to cope with the crisis were highlighted, with the benefits most apparent for smaller or more remote authorities. As one participant put it:

I have been very excited by the collaboration and consortia arrangements that have arisen from this crisis to allow a smaller library to participate with the resources from a larger city library – i.e. online author talks in collaboration with [a] city library allow[s] us to participate with our five members who like these things. [Without] a collaboration there is no way we could afford or have the expertise to provide this opportunity to our community.

Around a quarter of the respondents anticipated that they would need to continue to develop and increase their libraries' online presence and the provision of online resources and programmes. An increase in community awareness of online services was commonly cited as a reason for this: 'I definitely think the community are now aware of our online services, so there will be an increase in demand'. The respondents noted that access and borrowing rates for electronic resources had remained higher than before the crisis, even once libraries reopened, which they saw as further evidence for a need to continue to focus on this form of content delivery. Notably, one respondent suggested that, eventually, '100%' of their service delivery would go online, although this was a clear outlier.

As well as access to e-resources, the online delivery of library events and programmes such as story-time was widely seen to have been a success, and the respondents indicated that they intended to maintain this. In most cases, the managers described the potential for a hybrid approach, with events accessible both

face-to-face in the library and online. While there was a clear sense that most library users preferred to be able to attend events in person, the managers described several benefits of the hybrid approach, including increased levels of social media engagement from virtual attendees and boosting participation levels from members of the community who might otherwise have missed an event. As one respondent noted: 'Online presentation provides the mechanism to provide more content in a more cost-effective way, with a much greater reach – potentially bringing library programmes and presentations within e-reach of some people who would not traditionally visit libraries'.

While the positives of online engagement were clearly stated, a significant number of challenges also emerged. From a service delivery perspective, the managers noted that it would be essential to upgrade the underlying technical infrastructure to continue to deliver these new and expanded digital services, with implicit budgetary implications. Others expressed concerns about licensing and copyright issues. More fundamental, perhaps, were concerns about the accessibility of these programmes to community members who either faced technical infrastructure challenges (e.g. poor or no Internet access) or lacked the required digital literacy. The shift to temporary online-only services during periods of library closures highlighted that not all members of society are 'well prepared for reliance on e-resources', and that moves towards a digital-first approach 'leaves a whole segment of the community behind – so many of our customers still relied on accessing physical materials or resources, for example, technology'. The managers described plans to increase digital literacy training programmes to counter this.

While there was clear optimism and excitement about the potential value and impact of these new and expanded services in a post-pandemic world, it is important to note that there were significant caveats. Primarily, these related to funding. Some of the managers noted that the crisis, and the closure of libraries, led to a unique situation where some library costs were greatly reduced, thereby allowing additional spending in other areas. This spending was therefore not always sustainable once libraries reopened. It was frequently noted that the emphasis on increasing libraries' online presence would necessarily require an increase in spending on digital resources and the technical infrastructure required to deliver them. Given the challenging economic conditions, the managers naturally expressed concern about how the required funding could be obtained. Some of the respondents indicated that the delivery of potentially

valuable services was in doubt due to budgetary uncertainty: 'We would like to maintain a better online presence for programming, but we won't receive any more resources for it, so we'll wait and see on that one'. Another manager described a similar situation, this time in relation to e-resources:

E-resource collections were expanded during the early stages of COVID closures with additional funding. Budget funds are now effectively reduced [due] to pressures on local government revenue streams, so it is likely that when annual subscriptions become due, they may be reduced to pre-COVID levels.

Some of the managers described extremely challenging budget conditions for 2021, with the expansion of e-resources sometimes identified as a way of managing cuts to collections budgets: 'Our collections budget for 20/21 has been cut \$70,000 out of \$1.3 million, so we are looking at readjusting our profiles and placing a stronger emphasis on e-books and resources'. Several respondents also noted that relatively expensive services like home delivery were feasible during the crisis in part because expenditure in other areas was reduced. While keen to continue such services, there was an acknowledgement from some of the managers that doing so would require the adoption of some form of user-pays model.

Relationships with parent bodies

As reported in Garner et al. (2021), the quantitative survey results indicated that most library managers viewed their library's relationship with their parent body (typically the council) positively. However, it was also clear from the results that a sizeable minority of library authorities faced significant challenges in this regard. This section reports these challenges, as expressed by the respondents.

A common complaint among the managers reporting negative relationships with their parent bodies was that communication was problematic. This often related to a lack of clear direction from the council about staffing arrangements, particularly work-from-home arrangements, and sometimes contradictory advice from human resources and management. Some libraries felt that they were unable to communicate freely with their own staff as they were required to let all communication come from the council's communications teams. As one manager put it: 'due to restrictions on communication regarding COVID, all information had to go via the council communications team – very slow, cumbersome and often not timely'.

Sometimes, it was a lack of communication from the councils that left library staff unsure of what was

required of them. In other cases, libraries felt excluded from decision-making processes, as described by one manager:

[The] council formed a COVID-19 working party but it did not include any staff who manage delivery of services to the community ([the] working party consisted of managers responsible for internal corporate services only). This was challenging as decisions were being made by staff who did not manage the library, and the communication was slow. Often information was communicated to us by external bodies before we received it internally, which was confusing.

A manager from a major city library noted that each business unit in their council went into 'survival mode' and became very internally focused, hampering efficient communication across the council. In other cases, poor communication from the parent body was often seen to be in stark contrast to the library's internal communication. One respondent noted this, going on to mention the lack of 'empathy' displayed by the council:

Our own library team have maintained excellent communication and have things in place to continue that, but our senior management at [the] council has been appalling at it. In the first closure, they were all over the place, and this time around stony cold silence has occurred, with my director being asked to deliver the messages – total lack of empathy and consideration.

Sometimes, the demands of council executives were a burden. This issue was often linked to working-from-home arrangements. The managers described how their library staff felt that the council was over-scrutinising their work and productivity while working from home, which was interpreted as a lack of trust. Several respondents noted that their councils demanded more proof of productivity and performance from library staff working from home than they had ever done for staff on-site: 'all library staff work every day at their normal jobs out of sight of the executive team without having to provide evidence, and could not understand why suddenly they were not trusted to continue to do so'. This increased scrutiny, in turn, made it apparent that some councils did not understand the work being done by library staff. As one manager put it:

The difficulty was in justifying that there was enough work for staff to do, despite the library being closed – a lack of understanding from the executive level that database management, planning programmes, recording and planning online programmes, stock takes and stock

maintenance, reimagining the library space, etc. are 'meaningful work'.

This lack of knowledge about libraries and how they operate was at the heart of the problems experienced by the managers. Some of the respondents noted that council management failed to respond quickly, showing a 'lack of appreciation of customer service needs'. In other cases, libraries faced significant delays from councils' information technology teams in setting up the technical infrastructure for both working from home and the delivery of online services.

In contrast to the above complaint of over-scrutiny, other respondents described feeling abandoned by or isolated from their council. As one participant wrote: 'Support offered by [the] council has been non-existent'. In some cases, this was perceived as a leadership issue, with the council executives being ill-equipped to deal with the crisis: 'We have seen some fairly wooden responses from local government CEOs [chief executive officers] who were clearly out of their depth and, as a result, some library managers (and their teams) have been badly let down'. For other respondents, the issue appeared to be one of priorities: 'The corporate focus was on the helpline and emergency community services. Libraries [were] much lower in priority and sometimes it felt [we] were genuinely forgotten, despite library staff [being] continually at work and helping customers even whilst closed'.

Another point of conflict between libraries and their parent bodies related to secondment. A number of the respondents explained that library staff had been seconded to other council duties during the crisis period. In most cases, the respondents were vague about these other duties (e.g. 'different roles within the organisation', 'staff were redeployed to support other council activities'), but some of the managers did specify that such duties included 'supporting Meals on Wheels' and 'admin[istrative] assistant'. In a handful of cases, secondment was seen positively, as having provided an opportunity for staff to develop new skills and build relationships ('It has created stronger links between people and between departments'). However, in most cases, secondment seems to have been a challenge for libraries. One of the respondents noted that 'it was a continual battle to stop staff being transferred to other departments' – a point that was echoed by several of the other managers. They highlighted that staff secondments left the library understaffed, thereby limiting how effectively the library could respond to the crisis: 'Three staff (almost half our FTE [Full Time Equivalent]) were redeployed to other work. This was quite a distressing

process as a lack of consultation meant our own library projects were ignored’.

There were also concerns about the suitability of library staff for the work they were assigned, with some managers complaining about a lack of consultation prior to redeployment:

The skills assessment that was completed prior to redeployment did not provide sufficient detail, and supervisors were not asked for input, resulting in some staff being redeployed to areas that they were not suitable for or did not have the skill set to be successful [in].

The role of libraries

The final questions in the survey asked the library managers to reflect on the roles that libraries have played serving the community during the crisis. The respondents’ views of their libraries’ role during the pandemic centred on the importance of their existing roles as ‘accessible, free and inclusive community hubs’ and the way in which these roles have contributed to their communities’ general well-being at this time. One respondent considered their libraries to be playing ‘a vital role in community well-being, cohesion and resilience’, while others alluded to the way in which libraries had helped maintain community morale. Ongoing library services had provided ‘a sense of reassurance for the community’ and played a key role in keeping people connected with the outside world when the need for physical distancing was threatening this most basic of human desires.

The notion of libraries being a source of reliable information in the context of concerns over misinformation about the virus, as well as a source of practical community advice in such COVID-19-related matters as cross-border permits and travel rules, was put forward by several of the managers. However, only a few respondents mentioned the provision specifically of health advice, with the day-to-day aspects of living during the pandemic emergency being things the libraries advised on more. In some cases, this role was part of a broader role the library was given, which involved channelling information from its council or other parent body, as well as other authorities. According to one respondent: ‘The library was the face of [the] council during the closure’; another noted that its work demonstrated ‘that the council cares, is listening and responding to its community’. Sometimes, the information also flowed the other way, with libraries feeding patrons’ issues and concerns back to the council.

Supporting the more vulnerable members of their communities was also seen by the managers as a major

role for public libraries in the crisis. As has been noted above, many of the services and programmes that libraries sought to implement were in large part intended to meet the needs of those groups. In responding to the question about the role of their libraries, the managers again emphasised the importance of facilitating a sense of connection. As one respondent put it: ‘Many of our residents found they had lost important community connections, which, combined with being confined at home without the social contact of library visits and easy access to library collections, severely impacted their quality of life’.

Some of the managers also noted how libraries had been especially helpful for those with limited digital literacy and information technology skills at a time when such skills have become even more important, and for those with limited or no personal access to the Internet when so much of day-to-day life has moved online.

The managers emphasised the importance of continuing to offer existing library services as much as possible, albeit sometimes in a modified form. In the words of one respondent: ‘we have provided a place of stability and normalcy in these very odd times’. Thus, as has been noted above, many libraries strove to retain various popular services that would have otherwise been much missed, especially during this period, and focused on working around site closures and social distancing rules in order to do so. If they were taking on other roles, this was not because there was no longer a demand for library activities; public libraries still had their traditional roles to play. An interesting theme to emerge from the data was the labelling of library services as ‘non-essential’. In the context of the crisis, this term had a specific and important meaning. State and federal directives around building closures excluded those sites providing ‘essential’ services. Libraries, of course, were not designated as such sites. The respondents to the survey frequently noted their disagreement with this decision, with this manager’s response being typical:

I want to let the government know that libraries are an ESSENTIAL service! We have to modify the way that we get those services to the people but there are a lot of people that rely on the services we provide.

A range of arguments were made to support this view, with most relating to the vital role that library services play in the lives of their community, and many linking to notions of social justice:

Overall, the public libraries are a beacon of free access and access to digital technology not available elsewhere.

People were stopping me in the street saying that they need to apply for a job, they needed to do their legal forms and do not have computer access. There is nowhere else in our city that public computers are available . . . We do play a vital role in equity in the community.

The managers suggested that the roles played by libraries during the crisis could, and should, be used to demonstrate the value of libraries to society: 'I believe this pandemic really demonstrated the importance of the public library'. Some of the respondents linked this to earlier discussions of funding, suggesting that libraries might use the effectiveness and value of their response to the crisis to build cases to councils and other parent bodies for maintaining or even increasing budgets. As one manager put it, the crisis produced 'tangible evidence of our importance to the community and a demonstration of their rates [taxes] at work'. Other respondents emphasised that the crisis was far from over and that libraries had a major role to play in the recovery period, which again could be used to support wider advocacy:

Libraries will be needed more than ever to rebuild the community fabric, community connections and early literacy foundations in the recovery phase, and this is a great opportunity for advocacy for public libraries, which are essential in maintaining information and services for all socio-demographics, regardless of what the crisis is.

While most responses emphasised this notion of libraries as an essential service, it is important to note that there were some exceptions. One manager in particular expressed a different and somewhat provocative position. It merits quoting in full (with some details generalised to preserve the respondent's anonymity):

I think libraries . . . need to ensure they have the ability to take a step back and see where they fit. Filled with passionate staff, loyal patrons and resources everyone needs (i.e. Internet and computers), I would say the pressure of the current crisis has highlighted to me (someone with [many] years of library experience) that libraries can be a little too library-centric. Is their service so important you are willing to put the health and well-being of your staff, their families and the patrons at risk to ensure *Paw Patrol* DVDs go out? The value of libraries is enormous – however, in [our state] we are classed as entertainment/leisure venues – this was a rude shock to a lot of passionate staff. This should not have turned into several weeks of 'campaigning' to get the library status changed into something 'Essential'. That was an opportunity (which we took up) to put the community and vulnerable first, to keep our staff safe and

employed, to ensure that empty bellies got food, single parents had help, accommodation was found for those who needed it, phone calls to patrons in isolation – this is how we engaged and acknowledged that this was happening to all of us, and we were in this together. However, this step away from traditional library roles caused so much angst with some staff members that I've accepted how narrow-minded so much of the industry can be.

It should be stressed that this view was very much an outlier. Nonetheless, it does raise some interesting questions about the role of libraries and the extent to which librarians are able to evaluate the importance of their role objectively.

Discussion

The responses of the Australian public library managers to our survey provide a rich source of data through which to understand not only how public libraries responded to the COVID-19 crisis, but also what the public library sector can learn from the experience of delivering services in such challenging circumstances. There is a sense in which the crisis has served as a kind of stress test of the public library network. Stress-testing is usually conducted in a financial context, with computer simulations used to determine how institutions might cope with changes to key risk factors. For public libraries, COVID-19 represented a real-life test of their resilience. It seems clear that, in many respects, libraries passed this test. They have been shown to be innovative, adaptable and agile, and the survey data includes numerous examples of libraries making tangible positive impacts on their communities throughout the crisis. It seems clear from the responses to the survey that many of the innovations developed and implemented during the periods of library closure have been sustained once libraries have reopened, either in full or a modified form. In some cases (e.g. the increased provision of digital resources), these innovations represent significant shifts in focus, with potential impacts on users and library infrastructure, budgets and staff.

Addressing the first research question (How do Australian public library managers perceive their response to the COVID-19 crisis in terms of service and resource delivery, and relationships with parent bodies?), as reported in this article and elsewhere (Garner et al., 2021), the enforced closure of library buildings clearly acted as a catalyst for the development of new and enhanced online services in terms of both resource delivery and programming. Many of the respondents to the survey reported increased usage of these digital services, with these levels of usage

persisting even when library buildings were reopened. This is similar to the study in Finland by Haasio and Kannasto (2020: 14), which also found that a focus 'on digital services was seen as a survival strategy for the libraries during the shutdown', and they 'were predicted to grow in popularity . . . when the operation returns to normal'. It seems likely that this increased usage is linked not only to changing user needs (most notably, the ongoing restrictions around travel and accessing public sites), but also to increased awareness of the online services provided by public libraries. Likewise, Holcer (2020) observes that many Croatian public libraries reported increases in digital service usage during the pandemic, and notes the important need to consider the budgetary implications of this into the future.

Of course, before the pandemic there was clear evidence that communities had been increasingly engaging with public libraries online for some time (Leorke et al., 2018; Palfrey, 2016; Woodward, 2013), and the findings suggest that the enforced conditions of the crisis have further hastened behavioural shifts in this area. At the same time, however, the respondents to the survey noted a whole range of challenges associated with the transition to greater digital engagement, including variable levels of digital literacy within communities, the sometimes insufficient capacity of the available technical infrastructure, staff skills, and issues associated with an urban-rural divide. This was also found in Haasio and Kannasto's (2020) study on public libraries during the pandemic in Finland, so is not a problem for Australia alone. Evidently, none of these are new issues and all have a prominent place in the public library literature. Indeed, public libraries are often positioned as being at the forefront of moves towards addressing issues such as digital literacy and online access (e.g. Fang et al., 2019; Real et al., 2014). Nonetheless, the experience of public libraries and their users during the crisis suggests important issues that need to be considered in the continued shift towards digital delivery. While the crisis has hastened this shift, it has also revealed the extent to which users value physical resources and the barriers that can limit the use of online services.

A complementary finding from the survey relates to the library as a place. While the managers reported the apparent success of online delivery, they also noted the extent to which users welcomed the reopening of library buildings. To some extent, then, the crisis served as a kind of stress test in this regard as well, giving users and service providers an experience of life without physical libraries. While few are suggesting that public libraries should move to online

delivery only, it is important to note experiences in other countries – for example, the UK, where drastic budget cuts have led to the enforced and permanent closure of many library buildings. The findings suggest that the closure of libraries had a significant effect on the communities they serve, and particularly on some groups of users – those who struggle to engage with online services and those for whom the library represents a social space. A library can be present to some degree online, and services and programmes can be delivered or replicated in online environments, but several respondents to the survey noted that users quickly returned to their normal visiting practices, despite the potential health risks associated with the continuing pandemic. In explaining this, the managers typically emphasised the ways that library spaces facilitate connections within communities.

Considering the second research question (What do the experiences of public libraries during the crisis tell us about the role and function of public libraries in Australia, both now and in the future?), the authors note that the notion of the library as a place for connection and community building links closely to Oldenburg's (1999) concept of the 'third place'. The third place is defined in relation to the first place (home) and second place (work), and covers spaces such as cafés, churches and parks – places that act as community 'anchors', facilitating creation and interaction. Oldenburg (1999) himself recognised public libraries as third places, and there is a growing body of literature which seeks to understand how libraries can best perform this role (e.g. Harris, 2007; Lin et al., 2015; Wood, 2021). The respondents to the survey certainly appeared to support this view, emphasising the extent to which they felt their users had missed the social aspects afforded by their physical library space. While the activities and services delivered by libraries during enforced closure periods validate Tripathi and Kumar's (2010) view that information and communications technology tools can enable public libraries to play a role in users' lives even when they are unable to access the libraries themselves, the evidence from our survey suggests that digital approaches were not in themselves sufficient as a means of supporting the full potential of the library's value to users. Here, we can return to Weigand's (2003) articulation of the role of libraries. While online delivery was to some degree sufficient to support information access and reading, and activities such as welfare calls maintained some level of social engagement, the participants were clear that the closure of buildings severely impacted library services' capacity to provide a cultural space for connection and community growth.

The evidence from this study suggests that for all the innovations and developments undertaken by public libraries during the crisis, in the future libraries must balance their increasing online presence with the continued need for meaningful physical space.

This all serves to inform discussion of the future role of public libraries in a broad sense, and how they could, or should, be positioned as public institutions. The COVID-19 crisis explicitly forced a reckoning here – most notably in the way that certain services and institutions were designated as 'essential' and therefore exempt from certain restrictions. Public libraries, of course, were not afforded such status, and the results of the survey suggest that many public library staff strongly disagreed with this decision. Added to this is the evidence that some (but by no means all) parent council bodies did not sufficiently prioritise the delivery of library services and, in some cases, failed to demonstrate an understanding of what public libraries do or their importance to local communities. The lack of a consistent, unified response across the sector, and even within states, was also identified by several participants. These factors all speak to some broad inconsistencies in how public libraries are perceived as institutions – their purpose, role and value. It appears that in countries where public libraries were ordered to shut down – for instance, Finland (Haasio and Kannasto, 2020) – their role beyond being an information repository was not well understood by broader governing authorities. In the Swedish context, there was initially no national shut-down and libraries stayed open. Rundqvist (2021: 250) also points out that the Swedish Library Act provided protection for public libraries' role for 'the common good' during the crisis, as well as justification for ensuring equitable services for all communities.

It is striking that most of the arguments made by the survey respondents to support the notion that public libraries should have been designated essential services were related to welfare. For most library services, user access to resources could be supported to a reasonable extent through online delivery models and the implementation of home delivery and click and collect services. Our findings suggest that this could be done, and in many cases was done, without public libraries needing an 'essential service' designation. What could not be properly realised through the crisis was the social/welfare function of libraries, fundamentally because it requires a physical space. This reflects the transition from libraries being institutions supporting access to information, and with an educational/learning focus, to libraries having an explicitly social function. Members of the public may be using

other sources for learning and education, so libraries are being used for different purposes. While this transition is integral to the working life of library staff, evidence from the COVID-19 crisis suggests that this shift is less well understood outside the library community. This has several important consequences, particularly relating to issues which require libraries to engage productively with parent or supporting bodies, and to the development of public library strategies, especially around the balance between digital and physical services, negotiating funding, and developing effective advocacy and awareness campaigns. Thus, while public libraries should naturally feel proud of their response to the challenges of the pandemic, they may be well served by reflecting on what the crisis period has shown about perceptions of libraries, and the challenges associated with developing a compelling and consistent identity.

Conclusion

The APLA identifies several roles for public libraries, including roles as providers of information literacy and lifelong learning, supporters of digital inclusion, and creators of informed, connected, strong and creative communities (Australian Library and Information Association, 2021b). The COVID-19 closures of Australian public libraries created a 'stress test' for them as they attempted to fulfil these roles without physical contact with their communities or access to their library spaces. Much of what was learned through this time illustrates the value of public libraries during the crisis, but also acts as an indicator of the role of public libraries in the lives of their users during more normal times. This study of the experiences of the COVID-19 closures by public library managers shows that library staff approached their roles during this time with resilience, innovation and an agility that allowed them to continue the roles of their libraries in their communities. These traits underpinned the approach of libraries as they worked towards not only staying connected with their regular users, but also developing means of extending their reach and interaction with their broader communities.

The public libraries' responses to the closures of their physical sites were characterised by a belief that they are an essential service, and the importance of their role in the lives of their users could not be diminished, regardless of the lack of physical access to their services and resources. Despite sometimes difficult relationships and communication issues between the libraries and their parent bodies, and a disparity of opportunities to match the degree of response between city and regional and remote libraries, many

developed new and extended programmes that enabled community members to stay connected with others. Library staff efficiently developed the skills required to create digital resources, which replaced in-person programmes. Innovative thinking led to new partnerships with community service providers and a redirection of library spending to facilitate the purchase of digital rather than print resources. The value of physical spaces in libraries was highlighted as staff endeavoured to maintain community connections and assist users with technology and information seeking, all without the ability to interact in person.

COVID-19 has led to great stress and concern in the lives of both library users and staff. However, the period of library closures has created an opportunity for public libraries to examine their own roles in their communities and confirm their value in the lives of their users and society. At a time when libraries could have chosen to cease operations, they instead redoubled their efforts to play their roles in whatever way they could, thereby confirming their place as vital contributors to the societies in which they exist.

Several limitations of this study should be noted. First, it is important to recognise that different states, territories and regions of Australia were subjected to quite different levels of restrictions and closure periods during the COVID-19 crisis. Second, the data used for this study is self-reported and therefore has the potential for bias and/or exaggeration. The authors believe that the strict anonymity offered to the participants has minimised the risk associated with this. Finally, while the overall response rate to the survey (45%) was high, it is important to recognise that there may be some non-response bias. The authors also acknowledge that responses to the open questions were optional. The results presented in this article are therefore not generalisable, although the findings may be transferable to other related contexts.

Several potential areas for future research emerge from this study. For example, it would undoubtedly be beneficial to investigate in more detail the extent to which locality (i.e. urban, regional or remote location) affected responses to the crisis, including resource provision, staffing and community needs. This would have the potential not only to inform future planning, but also to enrich understanding of existing geographical divides. There is also a need to identify and analyse examples of best practice in terms of managing library closures and the crisis more generally. Perhaps most importantly, in considering the future of public library services, it will be necessary to understand how public library user needs may have changed as we enter a post-COVID world.

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Reimagining public library programming during a pandemic

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Abstract

This article uses survey data to describe, discuss, and examine the ways in which small and rural public libraries adjusted their programming during the COVID-19 pandemic. The restrictions associated with the pandemic forced libraries to close their doors and reimagine how they would deliver programming to their community.

Keywords

Public libraries, outdoor programming, COVID, USA

Introduction

In recent years, libraries have increasingly developed and offered movement-based programming on-site. Many have used community rooms and other flexible space in their buildings for this type of programming. The abrupt closure of public libraries in the early spring of 2020 in the USA due to COVID-19 challenged librarians to rethink not only access to information, but also programming. This came just as many small and rural public libraries were preparing for one of their busiest times of the year in terms of programming at public libraries—summer.

This article presents evidence and discussion of innovative efforts by small and rural public libraries and librarians to continue to offer programming even with their doors closed to the public. Our discussion draws on information from websites and social media, as well as a survey conducted in September 2020.

As small and rural libraries in states across the USA began to be ordered to close due to COVID-19 in the spring of 2020, librarians were quick to reimagine and develop programs that exploited other public spaces in their communities in order to provide some continuity of service and engage their patrons. They developed programming in the community—outdoors—that users could safely access in their own time and on their own terms.

This article examines how small and rural public libraries responded to the COVID-19 crisis by transforming outdoor public space, including spaces owned by libraries as well as other civic and public spaces. This inquiry builds on our previous examination of public libraries that have installed food gardens on their properties (D’Arpa et al., 2020). The more general theoretical lens of this study is placemaking, which is defined by the Project for Public Space (n.d.) as efforts that “inspire people to collectively reimagine and reinvent public spaces.” We understand the concept of placemaking and public libraries with specific reference to and in conversation with the idea of the public library as a third place—that is, a place distinct from home and work that is rooted in community. Lankes (2016) writes: “Almost all types of libraries serve as third spaces. Public libraries, in particular, are one of the few remaining community-wide spaces for all residents.” Dalmer et al. (2020: p. 23), in their study of how public libraries help community members age in place, note that “public library practitioners and researchers have both used [Ray] Oldenburg’s notion of the third place

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as a means to highlight the value of and the many roles public libraries play in their communities.” For the purposes of this study, placemaking adds a degree of nuance that allows us to examine some of the ways in which public libraries expand their services, and particularly their programming, outside the buildings themselves.

The idea of placemaking in outdoor spaces around public libraries is not new, although it is understudied. In 2018, the nonprofit OCLC/WebJunction (n.d.) engaged in an action research project with the Wilton Public & Gregg Free Library in rural New Hampshire, which focused on transforming their “outdoor physical space for active learning and community engagement” using the principles of placemaking. The theory and practice of placemaking has been much more widely applied in the realm of museums, but has great potential for public libraries as well (Institute of Museum and Library Services, 2015).

Placemaking during the COVID-19 pandemic

As indoor public spaces closed and in some cases reopened with many limitations on access, public libraries sought to continue to engage communities through outdoor programs and installations, such as StoryWalk, outdoor scavenger hunts, and sidewalk chalk-and-paint trails—all of which patrons could engage in without being present together at the same time (Grochowski, 2020; Lenstra, 2020c, 2020d). Others focused on distributing and growing food outside or doing other outreach library programs at meal-distribution points (Lenstra, 2020a, 2020b). As numerous news stories have reported, many small and rural libraries boosted their Wi-Fi networks so that community members could, if they had a laptop or smartphone, access the Internet, including the library’s digital resources. They also made their resources available 24 hours a day. These outdoor services enabled patrons to practice social distancing while still engaging with public libraries. This outdoor work also frequently entailed external collaborations and partnerships, such as with parks, downtown development associations, schools, and local groups and organizations.

To better understand how public libraries engaged in outdoor spaces during the COVID-19 pandemic, particularly in small and rural communities, in September 2020 a survey was distributed to the membership listserv of the Association for Rural and Small Libraries, a professional association based in the USA representing small and rural libraries. The survey—

“Public Libraries as Support Agencies for Play Streets Programs”—focused on understanding how public libraries could work with allied organizations to support Play Streets programs. The concept of a play street is not new and has been used by municipalities to expand public space when city parks are under construction or otherwise not sufficient to meet public demand. The Center for Active Design in New York City offers the following description of the Play Streets program:

a low-cost way for neighborhoods and schools to create more space for active recreation. The program helps neighborhood organizations and schools identify streets that can be closed to traffic for certain periods of time, in order to create new outdoor play spaces. (Center for Active Design, n.d.)

The survey also garnered responses specific to outdoor movement-based programming developed in response to the restrictions associated with the COVID-19 pandemic. This article focuses on the response data from the final question on the survey: “Given everything happening right now with COVID-19, could you share with us any efforts you and your community partners may be doing related to promoting physical activity during this pandemic?” The open-ended responses were coded by program type, which fell into three broad categories: StoryWalks, scavenger hunts, and obstacle courses.

Outdoor programming that promotes physical activity: survey results

Between 31 August and 25 September 2020, 130 small and rural libraries completed the survey. Of these, 114 responded to the question on activities during the COVID-19 pandemic and, of these 114 responses, 74 (57% of the total respondents) indicated that they organized outdoor programs during the pandemic (see Figure 1), representing small and rural libraries from 28 states. All but 2 of these 74 libraries specified the population of the town in which the library was located. The populations of the library service areas ranged from 153 to 20,000, with the median being 3000 and the average being 5797.

The most commonly offered outdoor program was, by far, the StoryWalk, with 55 libraries (or 74% of those that reported offering outdoor programs during the pandemic) stating that they developed and offered this program (see Table 1). After StoryWalk, no program was reported by more than 25% of the survey respondents. The other outdoor programs reported in the survey responses were diverse in their focus. This



Figure 1. Small and rural libraries that offered outdoor play programming offered during the coronavirus pandemic, n = 74.

Table 1. Percentage of respondents that offered specific types of outdoor play programming during the coronavirus pandemic, n=74.

Outdoor program	Count	%
StoryWalk	55	74
Scavenger hunt (including geocaches)	16	22
Obstacle course	10	14
Other	11	15

long list of other programs included both traditional and myriad variations on scavenger hunts; geocaching programs; outdoor obstacle courses; grab-and-go kits; science, technology, engineering, and mathematics or making activities and kits; nature-based programs; outdoor fitness; sports and sporting equipment collections; chalk-the-walk events; and walking clubs.

Taking library programs outdoors: a closer look at the survey responses

StoryWalks

Since the StoryWalk program was reported by the survey respondents with such frequency, it is worth introducing this program and how these small and rural libraries have developed and refined it during the COVID-19 pandemic. StoryWalk was the idea of Anne Ferguson, who worked as a chronic disease specialist at the Vermont Department of Health. In

2007, Ferguson partnered with a local public library in Montpelier to refine and implement her idea of an outdoor walking trail with reading stations or stops (Thurston, 2020). For Ferguson and the library, this was a collaboration that would engage readers and encourage reading among individuals and families with children while enjoying the outdoors. The local library created a web page to share their experience and help others start similar programs. The StoryWalk stations each have a laminated page from a children’s storybook and are positioned along walking trails outdoors. The StoryWalk concept is very similar to United Way’s Born Learning Trails, except, unlike Born Learning Trails, the StoryWalk concept is not nationally coordinated (United Way, n.d.). After Ferguson created the idea of the StoryWalk—which she trademarked to ensure that it was used only for noncommercial purposes—it spread across the USA and other countries, typically, but not always, with public libraries as key partners (Kellogg-Hubbard Library, n.d.).

Many public libraries turned to the StoryWalk as the ideal way to transform public spaces and engage their communities during the COVID-19 pandemic. As one library, which serves a US town of 837, responded in the survey: “StoryWalks are the main tool we are using to mitigate exposure and maintain distance.” These programs are also opportunities for community collaboration. A library serving a town of 900 wrote: “We set up 2 StoryWalks at the library and

at trails owned by the rec [recreation] department. The rec department helped with supplies and set-up.” Another library, which serves a town of 2200, wrote that they were “partnering with a Chamber of Commerce to do StoryWalks.” Although typically focused on children and families, some libraries also use StoryWalk programs to share local history stories and facts. One wrote that they were offering both a StoryWalk and a historic trail walk. Another library, which serves a town of 7000, wrote that instead of featuring children’s storybooks in their StoryWalk programs, they were featuring poems written at a higher reading level in a program they called “Poetry Walks.”

As the popularity of StoryWalk programming grew during the ongoing pandemic, some respondents reported trying to make permanent and more durable installations in outdoor public spaces where they could change stories out on a regular basis. A library serving a town of 4000 wrote that they were currently “working on a StoryWalk for Halloween and have applied for funding to create a permanent one as part of the city walking trails.” Similarly, another library reported that their StoryWalk programming during COVID-19 aligned with broader local efforts to promote walking and walkable communities. A library serving a town of 6220 wrote that they “provide picture books for our community StoryWalk on our new walking trail on the north side of town.”

Scavenger hunts: themes and variations

The second most commonly reported program was some sort of scavenger hunt, in which patrons were charged with exploring and finding specific things scattered around the community in windows, in parks, and in other spaces. In addition to more traditional versions of scavenger hunts, libraries reported on variations, which included the following examples from the open-ended survey responses:

A bear hunt around town for kids to look for bears in windows.

Scavenger hunts in our town to encourage outdoor exercise.

Window seek and find.

Local landmarks bingo.

We are working with the Chamber, where members of the community are trying to find pictures at certain businesses.

The library has placed five geocaches around the community and maintains them.

We occasionally hide painted rocks and offer prizes if you bring them to the library.

We are going to promote an Explore program in October for families to earn a medal by exploring our

community (including historical sites, parks, hiking trails).

We had a bookworm that escaped the library, patrons were to photograph it when they found it.

We are active with Pokemon Go.

As in StoryWalk programs, these variations on scavenger hunts can also involve community partnerships. One library wrote: “we’re participating in a city-wide scavenger hunt.”

Obstacle courses: having fun while exercising outdoors

A smaller number of libraries reported organizing obstacle-course programs, in which the sidewalks in front of libraries are transformed to include things like hopscotch. A few libraries wrote that they had done a sidewalk obstacle course and may do another, and many simply wrote that they had offered these courses. Others reported combining sidewalk obstacle courses with other socially distanced library programming, and/or offering that program in collaboration with other local or community groups. One library wrote:

The Recreation Department had a sidewalk chalk challenge, in which families could create their own obstacle courses on sidewalks using chalk & anyone who happened upon them could enjoy them later. We shared this activity, and we have shared some of the Recreation Department’s weekly activity guides on Facebook.

Another wrote: “We are currently doing a drive thru story time where families engage in early learning stations from their car. At the end there is a place to park and take turns (social distancing) running through an obstacle course.”

After these three types of program—StoryWalks, scavenger hunts, and obstacle courses—a wide variety of other program types was reported. This speaks to a spirit of experimentation that emerged during the COVID-19 pandemic, in which small and rural libraries recognized the value of outdoor programming and innovated to serve their patrons and maintain a strong presence as a resource in their communities. These experiments included:

Yoga on the lawn.

Cataloging & processing sports/outdoor play equipment for circulation.

We made our summer family fun remote—families could get a bag of supplies and were encouraged to be active at home or [in] a park.

We are planning seasonal/special occasion come-and-go activity bags . . . and a new landscaping project

that will include a Fairy Door and other surprises around a large tree.

We have devoted a large portion of our Summer Library Program prize budget for sporting and physical activity equipment for families to use at home.

Encouraging making art and celebrating the outdoors.

We offer State Park passes that we check out.

Victory Gardens, passive programming in the garden.

We started a Walking Club twice a week. People can choose a longer walk or shorter walk.

We are having a fall festival with yard games, horse shoes, art show, pumpkin painting, and live music. We are hoping to social distance so we can get everyone out in the community.

Our Summer Library Fun program included a bingo-style sheet which included things like take a walk with your family, go on a bike ride.

Discussion and conclusion

This study of how public libraries innovated to reimagine their programs as outdoor activities in the face of having to close their doors to the public during the COVID-19 pandemic reveals some of the strategies that librarians, particularly in small and rural communities, developed to continue to serve their patrons. In so doing, they extended the footprint of the library itself into outdoor public spaces in their communities in unique ways that allowed patrons to continue to interact with and benefit from library services and programming. These early examples of innovation to sustain library services and programming during a global pandemic may serve to inform and inspire further placemaking practice that asserts the place of the library in its community as more than a building and transforms how we think of and use public space in the process.

Although this study is small, it demonstrates the additional work that is needed to more fully understand how public libraries are transforming during the pandemic. A recent initiative by the Knight Foundation's Public Spaces Fellows is demonstrating the essential and critical nature of public spaces for public health and the need for them to be more equitable. Knight Public Spaces Fellow Eric Klinenberg, who has studied public libraries, points to efforts by libraries to move their services outside the library building during COVID-19: "A number of libraries have effectively unfolded, moving services outdoors, and moving librarians to other spaces, finding new ways for people to access the library even though the building itself was closed" (Gendall, 2020). He suggests that these efforts need to be both responsive to immediate needs and consider the long-term impact on our communities. The present

study has explored one facet of that transformation. Much more additional research is needed to examine other ways in which libraries are moving services outdoors, and the discussions and planning libraries are engaged in to assess and imagine the place of the library for the term of the pandemic and beyond. If libraries are truly third places that are essential to personal and social development and community health, as suggested by Oldenburg, then how they use public spaces other than their buildings for services and programming must ensure the spaces are accessible, welcoming, inclusive, and accommodating—the same values that make the library itself a trusted institution.

This is not unique to the USA or, frankly, specific to the constraints and challenges that come with a pandemic. Libraries and librarians innovate and are resourceful. They are committed to serving their communities in ways that directly speak to unique needs and interests. Additional research is also needed to more fully understand the challenges and opportunities associated with community-based programming in outdoor public spaces by public libraries in urban communities, and by libraries in communities in other countries. Anecdotally, we do know that this is happening outside of the USA. The Kellogg-Hubbard Library (n.d.) in Vermont notes on their StoryWalk web page that "StoryWalks[®] have been installed in 50 states and 13 countries including, Germany, Canada, England, Bermuda, Russia, Malaysia, Pakistan and South Korea!" On 8 September 2020, Jenny Mustey from Campaspe Libraries in Melbourne, Australia, offered the story of her library's StoryWalk program development and implementation in a video recorded and shared on YouTube. She describes it as a success and "a great way for libraries to promote physical health and literacy in their communities" (Public Libraries, 2020). We need to understand how Mustey's library and other public libraries are transforming, adapting, and developing their own experimental placemaking projects.

As is typical of emerging trends in library practice, much additional work is needed. Specifically, additional work is needed regarding the impacts of these placemaking endeavors. One possible impact may be closer partnerships with other organizations, as libraries work with chambers of commerce, local businesses, parks, and other civic and community organizations to transform public space. This study has demonstrated the value and importance of closely attending to how public libraries have innovated and worked with their communities to transform public space during the COVID-19 pandemic.

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Practices and thinking of public libraries in China during COVID-19

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Abstract

As a result of the COVID-19 pandemic, libraries in China closed their doors in early 2020 and moved all their services online. This change has brought unprecedented challenges for the development of library services, while it has also brought opportunities and motivation for the future transformation of libraries. This article uses official WeChat accounts of the National Library of China and more than 30 provincial public libraries as the main information sources to summarize and classify the services provided during the period of closure. It also collates and analyses news items released by these libraries to guide the improvement of the online services of public libraries in the pandemic environment. Finally, it puts forward the author's reflections and suggestions on the key development directions of libraries in the post-pandemic era in six areas: reading promotion, smart libraries, new media operation, information literacy cultivation, open access and collaborative development.

Keywords

COVID-19, public libraries, information providers, reading therapy, new media operation, collaboration, news analysis

Introduction

At the beginning of 2020, the sudden outbreak of COVID-19 disturbed the pace of life and work for everyone; then, various industries became actively engaged in the battle against the pandemic. Although librarians cannot be on the front line, libraries all over China are doing their best to fight against the pandemic in their own way by transferring services online for the first time, actively serving the function of reading therapy, providing readers with high-quality digital resources and reliable information about the pandemic, and supporting scientific researchers with academic literature. To face the challenges, librarians are using their professional services to pioneer and innovate, while the pandemic has also provoked much thinking about the future development of libraries.

Measures and roles of libraries in the pandemic

Reading therapy

During the COVID-19 pandemic, it has been inevitable for the public to feel anxious and panic. However, reading makes people happy and relax, thus improving

immunity. It is a good prescription for patients to defeat the virus, and spiritual nourishment for medical staff to relieve stress.

Reading in makeshift hospitals. Following the establishment of several makeshift hospitals, which are regarded as life vessels, Wuhan Library and other libraries in all of the districts of Wuhan carefully selected books and sent them to the hospitals, and set up mini reading corners to enrich the cultural life of the patients and medical staff. The libraries in Wuhan have participated in the construction of 78 book shelters or book corners in makeshift hospitals, isolation hotels, hotels where medical teams reside, resettlement points, rehabilitation stations and other special pandemic prevention sites, bringing the warmth of the library to patients and medical staff with more than 40,000 books. These books have become spiritual nourishment for patients and medical staff, helping

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patients fight against the pandemic through reading (China Media Group, 2020; Wuhan Library, 2020; Xu, 2020).

Cloud reading activities. Wuhan Library posted Quick Response (QR) codes for its cloud reading service in more than 50 communities to guide residents on how to scan the code to read, and launched a ‘My War against the Pandemic’ reading marathon online with Shanghai Library and the Reading Marathon Organizing Committee (Xu, 2020). Professor Zhang Wenhong teaches you how to prevent and control the COVID-19 virus was read by 15,545 people, demonstrating ordinary people’s determination to fight the pandemic by reading; it promoted an understanding of virus prevention and control among the public, fully highlighting the social value of the library (XinhuaNet, 2020).

In addition, the National Library of China launched a series of online reading activities (Sina News, 2020); Liaoning Provincial Library (2020b) carried out an online activity to read classics; Xinjiang Library offered 24-hour online support for cloud reading services (Axiuxiu, 2020); and Taiyuan Library hosted an online reading club (Youth, 2020b). Librarians used such activities to build the most beautiful cloud reading landscape.

Online book lending services. During the closure, Nanjing Library (2020) and Hunan Library (2020) offered online book lending services to meet the reading needs of their patrons. All of the books for lending were disinfected so that readers could get their favourite books through an online selection and express delivery service without leaving home.

Open access to digital resources

Collection of thematic digital resources on COVID-19. The library community has cooperated with several mainstream database providers for the first time to summarize and sort the digital resources related to the COVID-19 pandemic, and has released them under specific topics on mobile devices for easy access. This has been of great significance for the public in understanding the pandemic and for the scientific community in researching the pandemic.

The National Library of China offers ‘Thematic resources on COVID-19’, which includes domestic and foreign professional literature resources. The National Science and Technology Library has released the ‘Emergency literature information column on COVID-19’, which includes more than 3.5 million foreign scientific and technological documents to assist in the prevention and control of the pandemic (Library

Society of China, 2020a). Jilin Province Library (2020c, 2020e) has summarized overseas coronavirus-related digital resources and patent databases opened during the pandemic, providing convenient and open access, and giving academic support for scientific researchers and medical workers. Chongqing Library (2020) and Wanfang Data jointly launched the ‘Special topic on COVID-19’ digital resource for readers and medical workers, gathering relevant literature and continuously providing the latest and most authoritative academic material on the pandemic.

Integrating online resources and optimizing access. At the beginning of the construction of the makeshift hospitals, Hubei Province Library launched the online ‘Fang Cang Digital Library’, which contains nearly 200,000 e-books, 530,000 audio recordings, 46,143 videos, 1080 anime episodes and more than 100,000 ancient poems (China Media Group [CMG], 2020). The number of users exceeded 300,000 in the first two weeks.

The Library Society of China (2020b), in conjunction with relevant units and digital resource providers, has released various types of learning resources to readers for free through the Reading Union platform, which has a total storage capacity of about 10 TB, and the content is continuously updated. Local libraries actively promoted the platform to local readers since its launch.

The National Library of China and public libraries in various provinces and cities have integrated and summarized multiple types of digital resources, and packaged and promoted self-built databases, commercial databases and open-access repositories, providing readers with diversified and numerous database resources in both Chinese and foreign languages, as well as the repositories of unique local collections (China Publishing and Media Journal, 2020).

Fighting against the pandemic with information literacy

Releasing authoritative information and relevant knowledge about COVID-19. Public libraries are responsible for disseminating knowledge and providing reliable information to the public. Stephen Buss, a librarian at Ursinus College in the USA, wrote in the *Library Journal* that public libraries should guide the public in accessing authoritative official websites, academic journal resources and officially published books (Stephen Buss, 2020).

Jilin Province Library (2020b), jointly with the Development Research Center of the State Council, launched a series of pandemic topics online, including

central policies and local initiatives, while Yunnan Provincial Library (2020b) sorted through and screened daily news related to the pandemic and released 75 issues of News Briefs in total to deliver official authoritative information to the public in a timely manner. The Capital Library of China (2020), Shanghai Library (2020a) and Sun Yat-sen Library of Guangdong Province (2020c) selected popular science books related to pandemic prevention, communicated with publishers for the first time to obtain free e-book licenses, and completed the format conversion into e-books, which were released online through new media platforms – readers could then read the e-books online just by scanning the corresponding QR code. Hebei Provincial Library (2020b) offered an online exhibition of popular science knowledge on the prevention and control of COVID-19, and Guangxi Guilin Library opened real-time rumour-dispelling psychological manuals, and other topics, calling on readers to fight the pandemic scientifically (Library Society of Guangxi, 2020).

Improving the public's information literacy. During the pandemic, information has been mixed, and false information has contributed to the spread of social panic and triggered the public's information anxiety. Therefore, an important task of libraries during the pandemic has been to cultivate users' information literacy and improve the public's ability to identify information (Qian, 2020).

In the early days of the pandemic, a news item claiming that the book *Empirical Basic Theory and Application of Traditional Chinese Medicine* predicted this outbreak a decade ago was widely disseminated, and many readers asked libraries for a copy of this book. Shanghai Library (2020b) was able to establish the truth of this so-called 'magic prediction' by using its own and the National Library of China's collections and various databases to find the actual source of the story and content of the article. It is from the proceedings of an academic seminar, which can be downloaded and viewed in Wanfang Data, and does not involve any content related to an pandemic prediction or reach any relevant prediction conclusions. Shanghai Library thus effectively blocked the further spread of this misinformation. Yunnan Provincial Library (2020a) published 'Public opinion on the fight against the pandemic – rumour catcher', to prevent the spread of rumours, stabilize public sentiment, and fulfil the social responsibilities of the library.

To educate the public in information literacy, Shenzhen Library began a live broadcast of psychology courses to better fight the pandemic (*China Publishing and Media Journal*, 2020); Liaoning Provincial Library (2020a) set up lectures for children

on how to prevent the spread of the virus; and Jilin Province Library (2020d) launched public welfare courses online so that readers could obtain reliable knowledge at home.

Quiz activities on pandemic knowledge. To better enable the public to acquire knowledge about preventing the spread of the virus and increase enthusiasm for learning, Jilin Province Library (2020d), the Library of Guangxi Zhuang Autonomous Region (2020), the Sun Yat-sen Library of Guangdong Province (2020b) and the Inner Mongolia Library (2020) launched a variety of quiz activities through new media platforms such as WeChat, Weibo and TikTok. Readers participate online, through online matches, friend-to-friend competitions, and individual practice, to increase their understanding of COVID-19.

Reference services

During the outbreak, public libraries across China closed without suspension of their services, transferred their traditional reference services online, and have provided decision-making consultation services for government departments through new media platforms so as to help the government understand the trend of the pandemic and the direction of public opinion in a timely manner. They have also delivered literature resources to scientific researchers to ensure the progress of their academic research.

Online reference services. Hubei Province Library (2020) insisted on real-time online consulting services during its closure; Shanghai Library built a national network consultation platform (the 'Online knowledge navigation station'); and Zhejiang Library established a joint provincial reference platform (the 'Knowledge navigation website of Zhejiang') to ensure that information services carried on smoothly and provide free online reference services for readers (Xu, 2020).

Decision-making reference services and public opinion analysis. To assist government departments in organizing and leading the work of pandemic prevention and control, public libraries have collated and compiled pandemic-related materials, and actively provided decision-making reference services for party and government offices.

Because of the impact of COVID-19 on culture and tourism, the Reference Department of the National Library of China completed the compilation of materials on the topic of 'The impact of COVID-19 on the cultural industry and tourism, and corresponding

countermeasures', and assisted the Ministry of Culture and Tourism in conducting a statistical survey of travel agencies during the pandemic.

Sichuan Provincial Library (2020) produced 'Decision-making reference: COVID-19 series', which is an internal thematic material, relying on the library's massive digital resources and integrating authoritative information on the Internet, selected relevant content with a view to providing the government with reference for decision-making on pandemic prevention and control. Hunan Library comprehensively collected and organized social news, expert opinions, advanced domestic and foreign experience, and classic cases in the process of pandemic prevention and control (People.cn, 2020). Henan Provincial Library (Dahe, 2020), Guangxi Guilin Library (2020) and Yunnan Provincial Library (2020a) also actively collected pandemic-related information and monitored public opinion, in order to provide information support for the decision-making work of the Party (the Communist Party of China [CPC]) and government offices.

Document delivery. During the pandemic, Hunan Library relied on the Document Information Resources Cooperation Net of Hunan Province and Hunan Province's Public Libraries Reference Union to provide the public with document delivery and online consultation services for free (People.cn, 2020). Many libraries, including the Sun Yat-sen Library of Guangdong Province (2020a), Heilongjiang Provincial Library (2020), Hainan Library (2020) and Guangxi Guilin Library (2020), have provided efficient, accurate and free document delivery services for readers through the 'United collaborative digital reference service' platform. In the face of the urgent document needs of front-line personnel, the Sun Yat-sen Library organized a dozen reference librarians to work around the clock, providing 24-hour online delivery of professional literature, and thereby contributing the power of librarians to the war against the virus.

Science and technology reference services. Science and technology are the key to defeating COVID-19. During this period, the number of related research topics has increased rapidly. The timely provision of literature and information services to meet the needs of scientific researchers is a mission of reference services.

The Reference Department of the National Library of China responded quickly to the demand by providing information services to users on the front line of fighting the pandemic, assisting the research of the traditional Chinese medicine team, and providing reference literature for doctors to select therapeutic drugs.

The novelty search personnel of Guangxi Guilin Library (2020) took the initiative to work overtime to deliver novelty search reports for medical staff as soon as possible, and provide medical staff with relevant research documents in a timely manner.¹ The patent consulting librarian of Jilin Province Library (2020a) conducted patent searches and analysis on the core material of masks – melt blown cloth – to support enterprises and researchers in their technical research with patent information and help relevant enterprises carry out production research efficiently.

Social memory

Since the outbreak of COVID-19, the whole nation has been engaged in the smokeless battle to prevent and control the pandemic, and this experience will surely become a significant memory in the hearts of people across China. As document collection centres, libraries have a mission to preserve history, inherit civilization and serve society. The National Library of China has started a project entitled 'The repository of the memory of the Chinese anti-pandemic war' (Li, 2020), and more than 30 provincial libraries have also carried out the work of collecting documents related to the pandemic. These libraries have collected representative thematic resources from all walks of life with collection, research, display and commemorative value, including books, articles, audio recordings, videos, multimedia resources, manuscripts, letters, photographs, paintings and other physical documents. Meanwhile, the National Library of China has been conducting interviews with those who have experienced and witnessed the war against the pandemic, so that the documentation on the fight is complete, fresh and permanently preserved.

On 13 March 2020, Zhuzhou Library (2020) began to build a thematic database on the COVID-19 pandemic. It has collected more than 12,000 pieces of data from all over China and will continue to track and collect information on the pandemic, preserve precious material, and meet the access and learning needs of readers. On 25 August 2020, there was an exhibition titled 'United together to compose a new chapter – an exhibition of donated documents on the pandemic in Hebei Province' in the Yunshui Gallery at Hebei Provincial Library (2020a). Then, Hunan Library held a photographic exhibition on the 'National fight against COVID-19' (Morning, 2020). Moreover, Shanghai Library has recently organized a show to display 3139 pieces of precious historical material (including 1557 pieces of digital material) on the pandemic (Red Flag Party, 2020).

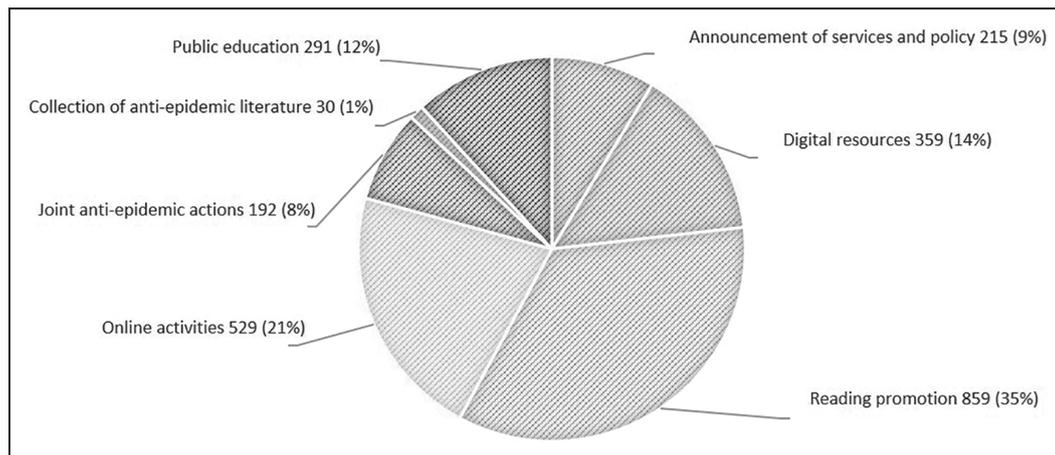


Figure 1. Quantity and percentage of articles by category.

Analysis of news articles from official WeChat accounts of libraries during the closure period

Description of data

The data for this analysis came from the news released by the National Library of China and 32 provincial libraries through their official WeChat accounts during the closure period of the pandemic in 2020. Thirty-three public libraries were closed on 24 January 2020, and most of them had reopened before the end of March 2020.² To ensure consistency, the time interval for data collection was set from 22 January 2020 to 31 March 2020.³ A total of 2475 related news items were screened and classified into seven categories according to their content: announcement of services and policy, digital resources, reading promotion, public education, online activities, joint anti-pandemic actions, and collection of anti-pandemic literature.

A multifaceted data analysis was conducted on the quantity of articles (i.e. the number of articles published during the time interval of the data collection) and the average number of page views per article to explore the focus, participation effect and problems of online services in public libraries during the closure period, and with a view to providing a theoretical basis and data support with reference value for domestic and foreign public libraries to implement online services and improve the capacity and efficiency of emergency services.

Overall analysis

A total of 2475 news articles were collected for this analysis, and divided into seven categories according to their content. The specific quantity and average

number of page views per article for each category are shown in Figures 1 and 2.

In terms of the quantity of articles, reading promotion (35%), online activities (21%) and digital resources (14%) ranked highest during the closure period, where reading promotion was what the public libraries were best at, while online activities and the promotion of digital resources were in line with the need to adjust the focus of library services during the period when the libraries were closed.

The highest average number of page views per article was for announcement of services and policy, with 6509, which indicates that readers were very concerned about the policy adjustments during the closure period, when the library would reopen, and the scope of services that would be offered after reopening. Libraries should therefore take the time to promote and explain their relevant services during closure periods, and should focus on illustrating the scope of their services and rules and regulations when reopening. However, the average numbers of page views per article for reading promotion and online activities were only 1235 and 870, respectively, and were obviously lower than the other categories, indicating that the enthusiasm of readers to participate in activities was lacking, and the libraries still have much room for improvement in the planning and promotion of activities. Online activities will be discussed as an example below.

Trends in quantity of articles and average number of page views per article over time

As shown in Figure 3, the quantity of articles rose rapidly in the two weeks after the closures and remained stable afterwards, indicating that, after a period of preparation, the libraries had shifted their focus, increasing the content of their online services.

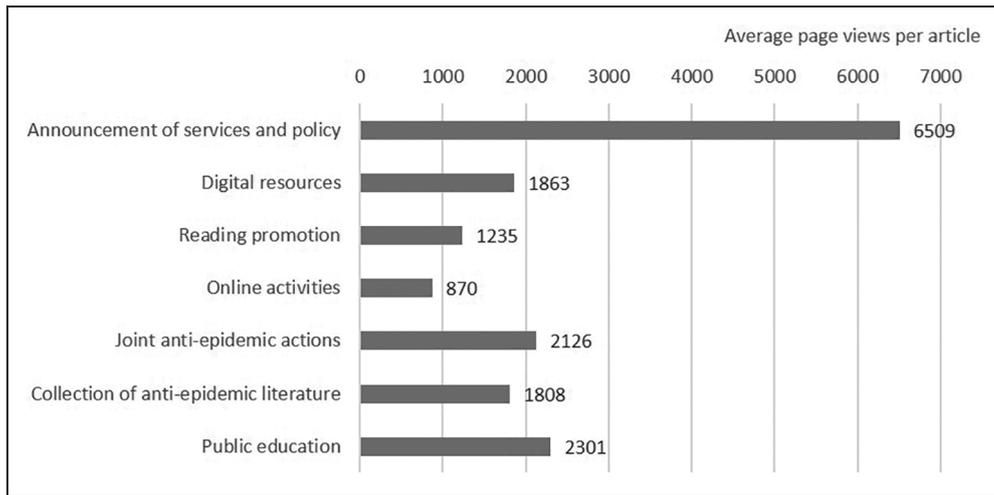


Figure 2. Average number of page views per article by category.

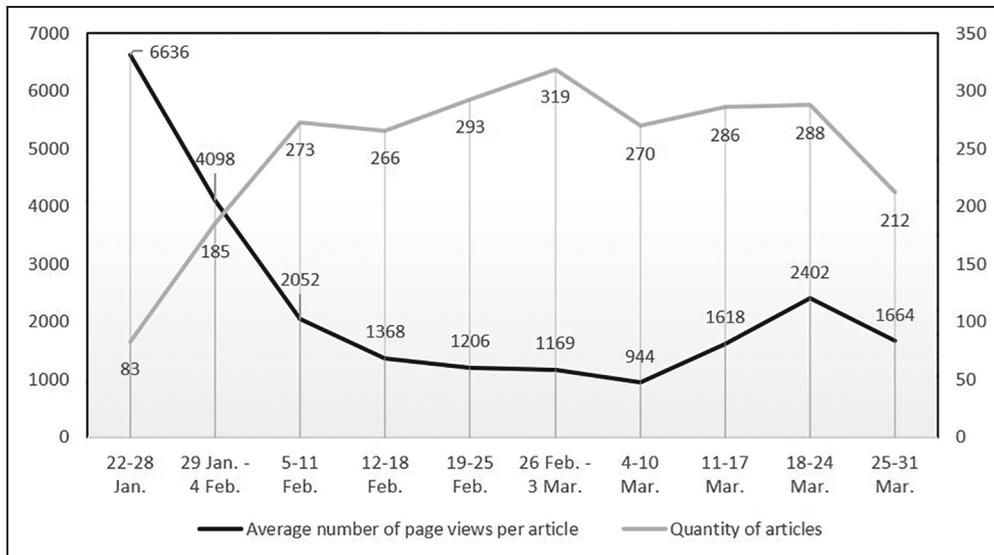


Figure 3. Trends in quantity of articles and average number of page views per article over time.

However, the average number of page views declined rapidly following a high point in the first week, and it was not until most libraries issued reopening announcements that the average number of page views increased slightly. Therefore, when increasing the quantity of online services, public libraries should pay more attention to the attractiveness of the content and consider improving user stickiness as the core work of operating online services. Increasing reader engagement is more important than increasing the number of articles posted.

Specific analysis of online activities

A total of 529 news items were collected for the ‘online activities’ category, which included 163 online lectures (30.8%), with an average number of

page views per article of 869, and 126 online exhibitions (23.8%), with an average number of page views of 964. These two types of online activities had the greatest number of articles and a similar overall average number of page views per article. While online activities directly related to the pandemic totalled 95, with an average number of page views of 1035, the number of page views of online activities not related to the pandemic was only 790. Online activities with prizes totalled 159, with an average number of page views of 1169, while the average number of page views of online activities without prizes was only 742, indicating that, during the COVID-19 period, the number of participants in online activities could be increased to a certain extent by organizing activities related to pandemic prevention and control or activities with prizes.

Table 1. Analysis of online services for children.

Category	Quantity	Average number of page views	Quantity	%	Average number of page views
			Online services for children		
Digital resources	359	1863	35	9.7	718
Reading promotion	859	1235	156	18.2	688
Online activities	529	870	52	9.8	845
Public education	291	2301	12	4.1	460

Problems with online children's services

Children's services are important to public libraries. Many have children's reading rooms and organize various types of activities for children, which often achieve good results and the active participation of children in offline activities.

However, as shown by the data in Table 1, online children's services did not achieve satisfactory results. The average number of page views of 35 articles on digital resources for children (9.7%) was 718, which was much lower than the overall average number of page views (1863) for this category. Reading promotion had 156 articles for children (18.2%), with an average number of page views of 688, which was also below the overall average (1235) for the category. Less than 10% (9.8%) of online activities were for children, and the average number of page views per article did not reach the overall level of the category. The number of public education articles specifically for children was only 12, accounting for 4.1%, and the average number of page views per article was only 460, less than 20% of the average number of page views per article (2301) for this category.

On balance, online services for children were generally poorly received. From the data analysis, the following three points can be improved on to try to enhance participation in online children's services:

- Timing of release: for the news articles related to children, the articles with the top-five average number of page views were released at the weekend, so choosing to publish activities related to children during parents' free time can achieve better results.
- Promoting parents' interest: since most children do not have mobile phones or personal accounts on social applications, parents are the first to access relevant information. More online activities should therefore be designed for parents to participate in with their children, and parents should be guided to actively accompany their children when participating

in activities and learn to use digital resources suitable for children.

- Offering prizes: among all of the content related to children, the average number of page views of news about activities with prizes was 1791, while the average number for those without prizes was only 798, which was a significant difference. Adding prizes can therefore greatly increase enthusiasm for participating in an activity.

Comparison of quantity of articles and average number of page views per article by library

As shown in Table 2, the library with the most articles (240) was Hubei Province Library and the library with the least (14) was Jiangxi Provincial Library. The average quantity of articles of the top 10 in the list was close to 131, while for the bottom 10 it was only 40. In terms of the average number of page views per article, the top three were Hunan Library, the National Library of China and Shanghai Library (all over 7000), while the number of page views for the bottom three was 519, 497 and 420.

The average number of page views for libraries with more than 100 articles (8 libraries) was 1715; for libraries with between 55 and 100 articles (13 libraries), the average number of page views was 1930; and for libraries with less than 55 articles (12 libraries), the average number of page views was 2167. The difference between these three groups was not significant, and libraries with high and low readership existed in all three categories.

From the data in Table 2, there were significant differences in the quantity of articles and average number of page views per article between the libraries; and the differences can reach more than ten times. However, there was no obvious direct correspondence between the quantity of articles and the average number of page views per article. Therefore, libraries should consider their own conditions and experiences, and manage the frequency and quantity of published articles accordingly; focus on the quality of the articles

Table 2. Quantity of articles and average number of page views per article for each library.

Library	Quantity	Average number of page views
1. Hubei Province Library	240	777
2. Heilongjiang Provincial Library	195	420
3. Jilin Province Library	137	497
4. Xinjiang Library	136	1106
5. Shandong Library	123	1984
6. Hunan Library	110	8686
7. Capital Library of China	106	2094
8. Qinghai Library	104	628
9. Yunnan Provincial Library	85	650
10. Shaanxi Library	70	2015
11. National Library of China	65	7040
12. Nanjing Library	62	1859
13. Guizhou Library	62	596
14. Chongqing Library	61	1656
15. Henan Library	61	767
16. Guangxi Guilin Library	61	761
17. Sun Yat-sen Library of Guangdong Province	60	2118
18. Sichuan Provincial Library	57	2319
19. Fujian Provincial Library	57	796
20. Hainan Library	56	674
21. Shanghai Library	55	7576
22. Tibet Autonomous Region Library	54	609
23. Library of Guangxi Zhuang Autonomous Region	53	2048
24. Ningxia Library	53	519
25. Anhui Provincial Library	49	1966
26. Liaoning Provincial Library	48	1481
27. Gansu Provincial Library	48	563
28. Shanxi Library	44	2639
29. Inner Mongolia Library	41	1211
30. Zhejiang Library	40	6348
31. Hebei Library	36	1180
32. Tianjin Library	32	3993
33. Jiangxi Provincial Library	14	2495

and design of activity content; develop high-quality online services; carry out work related to new media operation; attract patrons to read and participate in activities with high-quality content; and expand the influence of their official WeChat accounts.

Development directions of Chinese libraries in the post-pandemic era

The sudden pandemic has brought both new challenges and new opportunities for the development of

libraries. How to cope quickly with dramatic changes, break through the limitations of time and space, bring the public a better reading experience and richer digital resources, promote open access to increase the accessibility of resources, use new media platforms for more efficient service publicity, and disseminate reliable information and knowledge to improve public information literacy in order to deal with the pandemic and the subsequent public health emergency – all this reflects the social value and status of libraries, and will be what the library community needs to focus on in the future.

Reading promotion

During the early stages of the pandemic, libraries were closed but librarians continued to work, which helped people overcome their anxiety and fear through reading and learning, and strengthened their confidence in scoring a victory in the fight against the pandemic. In the post-pandemic era, the promotion of reading will be an important way for libraries to reflect their values; innovative ways of promoting reading will be needed, and an emphasis on the benefits of reading.

Reading and learning are not only the foundations of personal intellectual and knowledge growth, but also the spiritual pillars of a vibrant, virtuous and upwardly mobile society. One of the important responsibilities of public libraries is to guide, promote and aid the reading of classics for all people, and create a harmonious and healthy cultural atmosphere (Youth, 2020a). At the same time, to meet the functional reading needs of users, libraries should provide documentary support for patrons to improve their information literacy, learn new skills and acquire new knowledge. For different periods and different groups of people, combined with different functional reading needs, the work of bibliographic recommendations should be constantly improved.

In the post-pandemic era, coupled with the popularization of the Internet, libraries should make use of various forms of online activities to enhance readers' interest in relevant information and resources, thereby increasing user viscosity to better promote reading. For example, through reading rankings, call for articles with prizes or online storytelling, an online reading community should be built to stimulate readers' enthusiasm through interaction with their friends.⁴ In addition, libraries ought to actively attempt to cooperate with mainstream television programmes that aim to promote reading – such as *The Readers, Letters Alive* and *The Wonderful Read* – and increase

publicity for reading activities by drawing on the influence of these shows.

Transformation from a digital library to a smart library

Digital resource services have demonstrated their irreplaceable advantages during this pandemic. The ease of access of digital resources, being free from space and time constraints, has become the cornerstone of library services. In the post-pandemic era, libraries should accelerate digital construction, actively solve the problem of digital copyright by combining with new technologies such as blockchain, and integrate paper and digital resources. Based on comprehensive digitization, combined with the domain ontology of each discipline, libraries can extract the knowledge units contained in documents and build links, realize document datafication, form knowledge network systems covering all disciplines, and upgrade from revealing document cataloguing to revealing document content. Making full use of new-generation information technology such as the Internet of Things, cloud computing, big data and artificial intelligence, together with the support of intelligent equipment and systems such as automated three-dimensional stacks, intelligent sorting systems and intelligent bookshelves, libraries will gradually achieve accurate user profiles, intelligent literature retrieval and recommendation services, and visualized knowledge consulting services, thereby accelerating the realization of smart libraries (Xu et al., 2020).

New media operation

New media platforms became an important link for libraries to connect with readers during the pandemic. Using new media platforms to develop reader services and operate those services efficiently will be one of the key tasks of libraries in the future.

New media operation is a series of operation methods for the publicity and marketing of products through modern mobile Internet means and emerging media platforms such as TikTok, WeChat and Weibo (Baidu, 2020). ‘The latest official guide is here! The service is not closed, read for free at home’ (National Library of China, 2020) was the first original article with 100,000+ views during the pandemic on the official WeChat account of the National Library of China. The Reading Union integrated high-quality content from multiple resource providers and promoted this content to readers through a mini-programme in WeChat (Lu, 2020). In April 2015, the book search function of Shanghai Library was successfully launched on the WeChat and Alipay

platforms, and it encouraged 112,000 citizens to raise more than 600,000 queries in little over a month (People.cn, 2015). Since February 2021, under the guidance of the Cyberspace Administration of Jiangsu Province, Jinling Library and other units have participated in the ‘Reading Relay, Voice for Love’ reading promotion activity. TikTok has posted nearly 1000 topics on this activity, and they have been played almost 100 million times, showing good results (Qian, 2020). New media operation has the advantages of convenience, real time, an enormous user base and strong interactivity. By planning high-quality content, the efficiency of library services can be greatly improved.

Cultivation of information literacy

Social education is an important function of public libraries. Public libraries are therefore duty-bound to promote information literacy education. During the period of normalized pandemic prevention and the post-pandemic period, the demand from citizens for health information will grow rapidly, and health information services will become a growth area for public library services. Public libraries need to draw on their advantages and continuously improve information services, including recommending high-quality health education books to readers, screening and providing reliable health information, and conducting public welfare lectures and online activities to improve citizens’ ability to judge information (Li and Lu, 2020). All of these initiatives will play a positive role in the prevention of future pandemics.

Open access

In the post-pandemic period, libraries need to incorporate open-access resources into their information resource construction, with data purchase and self-built taking place simultaneously, including the establishment of navigation or integration platforms for open-access resources, the development of institutional knowledge repositories, and the funding of publication of open-access resources (Liu, 2020).

The concept of open access was proposed almost 20 years ago and has developed rapidly in the last few years. With the launch of OA2020 and Plan S, more and more countries and research institutions have joined in, hoping to achieve large-scale open access to academic journals from 2020. On behalf of China, the National Natural Science Foundation of China, the National Science and Technology Library and the National Science Library of the Chinese Academy of Sciences have also explicitly supported OA2020 and Plan S, and supported immediate open access to

research papers in public-funded projects (Classmate Mi, 2020).

In the current COVID-19 pandemic, we need to move towards a world where all research is accessible to everyone – a world that is completely open access. As preprints and open-publishing platforms have matured, and after the first COVID-19-related article was published on the bioRxiv preprint server on 19 January 2020, the European PubMed Central repository had indexed over 13,000 preprints related to COVID-19 as of September 2020. Fast-paced publishing depends on the participation of the scientific community and makes a contribution to the scientific community. At the same time, recognizing that it is not in anyone's interest to restrict access to research results during the global pandemic, more than 50 publishers – including the world's largest, such as Elsevier, Springer-Nature and Wiley – have cancelled all restrictions on access to COVID-19-related content. There is no doubt that COVID-19 will drive great progress in open access (MINAMI11, 2020).

Collaborative development

With the impact of the pandemic, coupled with new technologies, the future development of libraries is full of uncertainties, and, in such an environment, no library can come up with a perfect response plan on its own. We should strengthen collaboration within the sector, build the library community and learn from each other. Through emotional support, the co-construction and sharing of resources, and the interconnection of services, among other means, libraries could make use of the power of alliance to face opportunities and challenges together, and jointly promote their development.

With the theme of 'Connections. Collaboration. Community', the 82nd IFLA General Conference and Assembly (Li and Lu, 2020) proposed that the goal for libraries to build a global library community should be achieved through full exchange and cooperation with all fields. The 'IFLA strategy' (IFLA, 2020) is a document that will help the global library community respond to the changes in the world. The four pillars of the strategy's mission – to inspire, engage, enable and connect – are all about building a stronger and more united global library field that is better able to achieve the vision and more resilient in the face of unexpected circumstances.

In the early stages of the pandemic, libraries in Wuhan were running short of supplies of pandemic-prevention materials. The National Library of China took the lead in donating protective materials to Wuhan Library, and the Library Society of China also

played an active leading role (Xu, 2020). Under the organization of the Library Society of China, 353 libraries donated a total of 501,544 items to the libraries in Wuhan in little over a month, demonstrating the cohesion and mutual support of the library community in overcoming difficulties together (Li and Lu, 2020).

To better respond to the pandemic, the library community should also enhance its cross-sector cooperation by fostering mutual support with publishers and database providers, taking the initiative to negotiate with database providers to relax access restrictions and enhance the convenience of open access to resources, and communicating with publishers to obtain authorization to offer pandemic-prevention-related books online for free. Such practices would be valuable for libraries in strengthening cross-sector cooperation in the future.

Conclusion

At present, the library community is committed to the development of smart transformations, seeking to integrate hi-tech resources and striving to achieve document datafication, intelligent services and ubiquitous spaces. During the pandemic, China's libraries have actively responded to the initiative for change, and adopted various measures to provide readers with high-quality and efficient services. The COVID-19 pandemic is acting like a catalyst, accelerating the pace of the development of libraries into the future.

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Notes

1. A novelty search report is a kind of reference service where various databases are searched as the main means of obtaining literature closely related to the subject of the project, a comprehensive analysis and comparison methods are used to make a literature evaluation of the novelty of the project, and the corresponding report is issued.
2. Twenty-five libraries reopened before the end of March 2020, accounting for more than 75% of the 33 libraries.
3. Several libraries issued closure notices in advance.

4. Reading rankings involve organizing online reading activities, and recording and ranking readers' online reading time. The rankings are updated in real time on the social application to create a competitive atmosphere within an online circle of friends, thereby enhancing enthusiasm for reading, interactivity and the fun of public reading.

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Public libraries' responses to a global pandemic: Bangladesh perspectives

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Abstract

The whole world is experiencing a new reality – the global outbreak of COVID-19, which has forced every institution into lockdown. This study aims to explore the responses of the government public libraries of Bangladesh. An online questionnaire was used to gather primary data from all of the 71 public libraries, which was followed by semi-structured interviews with eight librarians. The analysis suggests that more than 50% of the libraries had a low level of preparedness to face any crisis, and none of the libraries were fully prepared to manage this pandemic. All of the libraries were open for administrative functions without physical access to users. The study found that 52% of the libraries created public awareness through social media, while 46% supported local government organizations and 40% provided counselling services. Considering the existing challenges, the study recommends some measures for the public libraries of Bangladesh to cope with this situation.

Keywords

Bangladesh, public library, pandemic, COVID-19, virtual services

Introduction

In the wake of COVID-19 as a global pandemic, there have been unpredicted impacts on and changes in various sectors, including libraries and information institutions. We are now moving to a new social system by adapting to a 'new normal' situation. The World Health Organization (WHO, 2020) is promoting the term 'new normal' in the fight against the COVID-19 global pandemic, which indicates the change in reality concerning regular movements, lifestyles and health standards. Wearing masks, maintaining social distancing and using hand sanitizers are the common practices that have developed due to the COVID-19 outbreak, and are the 'new normal'. Recognizing this new normal is difficult, even when the situation is worsening. This type of unpredicted situation is hampering the regular activities of many social institutions globally. The current situation is creating complexities

and interrupting institutions in functioning fully, which is causing the breakdown or slowing down of the social system. Bangladesh, a country which is known to the modern world for its demographic and economic progress with its large population, is experiencing a demographic and epidemiological transition due to the COVID-19 global pandemic. A drop in daily income by 80% per capita has been observed among the poor living in urban slums and rural communities due to the terrible economic stagnation during the COVID-19 pandemic (BRAC, 2020). In terms of health, the country's government is being praised for some of its ongoing activities and various initiatives, especially for

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controlling the spread of coronavirus in the densely populated Rohingya camps (*Dhaka Tribune*, 2020). The government of Bangladesh declared a general holiday for all public and private offices on 26 March 2020 to contain the spread of coronavirus in the country. Since then, users have had no physical access to library and information services. The reopening of libraries has now become essential to support the sustainable progress of education and research.

The history of the development of libraries in Bangladesh started with the establishment of four public libraries in four district headquarters by private initiatives during the 1850s (Khan, 1984). Government initiatives were taken to establish public libraries in the mid 1950s. The Central Public Library of Bangladesh, officially known as the Sufia Kamal National Public Library, began its journey in 1958 in Dhaka (Department of Public Libraries, 2020). Currently, the government public library network consists of 71 libraries and has a well-established infrastructure, covering all 64 districts of Bangladesh. The country-wide public library network is governed and managed by the Department of Public Libraries under the Ministry of Cultural Affairs, and has full government support. These public libraries are the districts' cultural hubs and work as information clearing houses. Before the breakout of the pandemic, the regular services provided by these libraries included reading services, reference services, internet services, information services through web portals, book lending services, public engagement services, book cover exhibitions and mobile library services, and, most importantly, all these services were free of charge.

There have been a number of development projects and activities, including the development of model public libraries, the promotion of country-wide mobile library services, the formulation of a national public library policy, the digitization of resources and the promotion of online public library services. The major components of the management and development of public libraries through online projects include the implementation of integrated library management software and databases, building data centres, purchasing books and the use of radio-frequency identification tags (Department of Public Libraries, 2020). The British Council, in full partnership with the Department of Public Libraries and Ministry of Cultural Affairs, is implementing a project called Libraries Unlimited to modernize the public library network, build the capacity of government officers, train library staff, and build public awareness of and access to library and information services. This programme includes digital campaigns for public libraries and coding workshops for children using

micro:bit, a pocket-sized computer to inspire children to get creative with coding, programming and digital technology (British Council, 2015). The role of public libraries in the development of communities is well known, but there is still scope to rethink the infrastructure in an alternative way by taking the global pandemic situation into account. In spite of all these developments, the public libraries are still not capable enough to tackle the critical conditions emerging from situations like the pandemic. This study is an attempt to explore the responses of the government public libraries of Bangladesh during the COVID-19 crisis.

Objectives of the study

Against the backdrop of uncertainty caused by the global pandemic, the role of libraries in providing up-to-date, authentic and reliable information has become more important than ever. Public libraries are trusted social spaces and are responsible for empowering the community through diversified information programmes and services. In this context, the present study was undertaken to explore the responses of the government public libraries of Bangladesh to the COVID-19 global pandemic. The specific objectives of this study were to:

1. Examine the level of pandemic preparedness of the government public libraries of Bangladesh;
2. Explore the changing pattern of the working environment and services of the public libraries during the pandemic;
3. Investigate the public libraries' responses to pandemic crisis management;
4. Find out which library programmes and services need to be redesigned for the post-pandemic world;
5. Trace the major challenges encountered by the public libraries during the pandemic; and
6. Suggest some essential measures for the public libraries of Bangladesh for post-pandemic resilience.

Review of relevant literature

Pandemics are large-scale outbreaks of an infectious disease that can greatly increase morbidity and mortality over a wide geographical area and cause significant economic, social and political disruption (Madhav et al., 2017). To face the challenges emerging from any natural and/or man-made crisis, libraries can provide remote accessibility with an online infrastructure. Libraries can be a key component in emergency response networks, providing

access and services to the local community in reaction to a crisis situation (Brobst et al., 2012). During times of crisis, many libraries face new challenges and fail to act according to the situation. Libraries can empower citizens by building capacity through the dissemination of appropriate information, and thus help citizens to take precautionary measures against any pandemic. Moreover, libraries can be used to maintain active links and provide access to reliable and credible resources in virtual spaces. Libraries can play a significant role through virtual library services, including current awareness services, information and digital literacy training, connecting users to reliable websites, information mediation and consolidation, or information repackaging, and, at the same time, can take initiatives such as sanitizing library collections and spaces of shared freedoms (Chisita, 2020). Most importantly, public libraries can benefit patrons and likely reduce their anxiety about a pandemic by providing timely access to authentic information about the pandemic (Zach, 2011).

Rachman (2020) shows that the majority of libraries in Jakarta, Indonesia, have no preparedness plan for a disaster. Even the majority of the university libraries in India and Pakistan, which share the same geographical location and administrative structure, are ignorant of this important aspect of library disaster planning (Kaur, 2016). Biswas and Choudhuri (2012) present sufficient evidence for incorporating a disaster plan in the day-to-day management of an institution and insist that disaster plans should be considered as living documents. The comprehensive manual of the International Federation of Library Associations and Institutions (IFLA) for disaster preparedness and planning explains each stage, from disaster risk assessment to building resilience (McIlwaine and Varlamoff, 2006). In addition, library associations such as the American Library Association and Australian Library and Information Association have already contributed policies for a quick response to any disaster. The legal framework of the USA is more library-oriented since it has already recognized libraries as essential services and provides federal assistance for temporary relocation facilities in times of disaster through the Cedar Rapids Public Library (2011). During the COVID-19 pandemic, the American Library Association (2020) has contributed by providing information about preparedness, including library-specific policy suggestions and more universal resources on pandemic education, prevention and preparation. Similarly, the Australian Library and Information Association (2019) guides its members through a 'one stop shop' checklist to be prepared before or during a disaster. Being a founding

organization of Blue Shield Australia, the Australian Library and Information Association (2020) is one of the organizations that participates most actively in disaster management to protect the world's cultural heritage, incorporating libraries as an essential support service during disasters and providing collaboration for post-disaster recovery.

The latest addition to the list of global pandemics is the novel coronavirus (COVID-19), which originated in the city of Wuhan in the Hubei province of China in late 2019. COVID-19 has become a global phenomenon, and the WHO declared the outbreak a global pandemic on 11 March 2020 (Cucinotta and Vanelli, 2020). COVID-19 has affected communities, businesses and organizations globally, and countries and organizations have been responding to and managing the crises within their capabilities (Nicola et al., 2020). In such a global context, service industries like libraries and information institutions have a significant role to play. A body of literature reports on the responses of libraries to global pandemics and disasters (Chisita, 2020; Fitzgerald, 2020; Jæger and Blaabæk, 2020; Koscieljew, 2020; Ocholla and Ocholla, 2020; Rachman, 2020; Tammaro, 2020; Zarocostas, 2020).

Ocholla and Ocholla (2020) compare the current lockdown situation as a preparation for the fourth industrial revolution for library 4.0, as this crisis is an opportunity for libraries to embrace digital technology (Matthews, 2020). In such a situation, libraries can assist in exploring distance learning for schools and academics by providing them with access to a wide range of online resources, such as e-books, audiobooks, news sites, magazines and streaming videos (Ladan et al., 2020). Public libraries' massive open online courses (Sanborn, 2015) can be a reliable resource to provide valuable information and instruct users regarding the spread of the virus. The Covid-19 has increased inequality in learning opportunities in Denmark—the children of higher income families are more accessible to library resources and services during the pandemic than the lower income families (Jæger and Blaabæk, 2020). In this regard, libraries are all about the power of networking and partnerships, engaging citizens and stakeholders, which can bring success for all (Hapel, 2020). Additionally, media professionals and medical librarians have roles to play in teaching information literacy and health literacy, explaining appropriate behaviours in times of crisis (Ashrafi-Rizi and Kazempour, 2020). Thus, all academic, medical and public librarians can provide invaluable learning, teaching and research support to enhance the generation of new knowledge and help citizens and policymakers to make informed decisions (Chisita, 2020).

Table 1. Types of public library in the survey.

Serial number	Libraries	Frequency (N = 71)	%
1	Sufia Kamal National Public Library (central)	1	1.41
2	Divisional government public library	7	9.86
3	District government public library	56	78.87
4	Upazila (subdistrict) government public library	2	2.82
5	Branch government public library	4	5.63
6	Bangabandhu Mausoleum government public library (special)	1	1.41

Communities always play the role of the main actors in the decision-making and planning of a library. The COVID-19 emergency has occasioned a substantial push for the transformation of libraries to focus on building relationships with new communities and accepting this 'new normal' (Tammaro, 2020). Libraries will need to be nimbler and more responsive to thrive in this new reality. The survey results of Ithaka S+R, an academic and cultural strategic organization, show a significant shift from in-person to online course delivery (Hinchliffe and Wolff-Eisenberg, 2020). A recent survey of public libraries addresses the increasing use of virtual library cards, digital content and virtual programming as the demand for services has shifted from physical to virtual during the crisis (American Libraries Magazine, 2020). In response to the challenges due to the COVID-19 pandemic, public libraries in New South Wales, Australia, have adapted and innovated new services, including significantly boosting e-book collections, implementing direct communication channels with library users and communities, implementing home delivery and/or click-and-collect access to collections, a swift pivot to online delivery of reference services and public programmes, and extended loan limits and periods (Fitzgerald, 2020). The experience of COVID-19 has inspired public libraries in New South Wales to develop a range of responsive services 'on the fly', many of which will likely become part of the standard suite of library services, at least into the medium term (Fitzgerald, 2020). Libraries around the world should follow the standard guidelines prepared by the IFLA for responding to the coronavirus pandemic. To share global experiences of providing innovative library services, the IFLA has published e-newsletters and organized workshops and webinars. It has also developed a tool kit for spotting fake news and online resources in response to the infodemic (IFLA, 2020).

From Bangladesh's point of view, a number of studies have focused on various aspects of public libraries – for example, the history and development of public libraries (Khan, 1984); the implementation of

information and communications technologies in public libraries (Shuva, 2005); socio-economic and cultural aspects and mass information needs (Uddin et al., 2006); Vision 2021 and public libraries (Nasiruddin, 2011); the status of non-government public libraries (Shuva and Akter, 2011); a library landscape assessment (British Council, 2015); multi-channel cloud-based library systems (Karim et al., 2017); the creation of social capital through public library systems (Roknuzzaman, 2020); and a community engagement model for public libraries (Ferdous, 2020). But no study has been found that addresses public libraries' and even libraries' responses to any pandemic or disaster crisis from Bangladesh's perspective. The present study hopes to close the gap in the research.

Research design and methodology

This study was exploratory in nature and designed to establish a factual picture of what the government public libraries of Bangladesh are doing during the COVID-19 pandemic. It generates some initial insights and understanding of the issue under investigation. The study used a combination of quantitative and qualitative approaches. A survey was conducted of all 71 government public libraries in Bangladesh (Table 1), which are administered and governed by the Department of Public Libraries under the Ministry of Cultural Affairs. A structured questionnaire was prepared using Google Forms to gather the primary data. The questionnaire included 12 closed-ended questions with multiple options and one open-ended question to collect librarians' views on handling the post-pandemic situation. Telephone interviews with eight librarians from the district public libraries were also conducted to gather in-depth data. The interviewees were purposively selected, considering their availability and willingness to participate in the study.

The respondents were the heads of the libraries such as directors, librarians or librarians-in-charge. The email addresses of all the government public libraries were collected from the libraries' websites

Table 2. Profile of the responding libraries.

Attributes	Frequency (n = 50)	%
<i>Nature of the library</i>		
Sufia Kamal National Public Library (central)	1	2
Divisional government public library	4	8
District government public library	43	86
Upazila (subdistrict) government public library	1	2
Branch government public library	1	2
<i>Location (division)</i>		
Dhaka	11	22
Chattogram	7	14
Rajshahi	9	18
Khulna	9	18
Barishal	3	6
Sylhet	2	4
Mymensingh	2	4
Rangpur	7	14

and a Google Form was sent to the concerned heads of the libraries. Descriptive statistics were used to analyse the quantitative data, which was followed by a narrative analysis of the qualitative data. The interview data was coded and the interviewees were identified as PL1 to PL8.

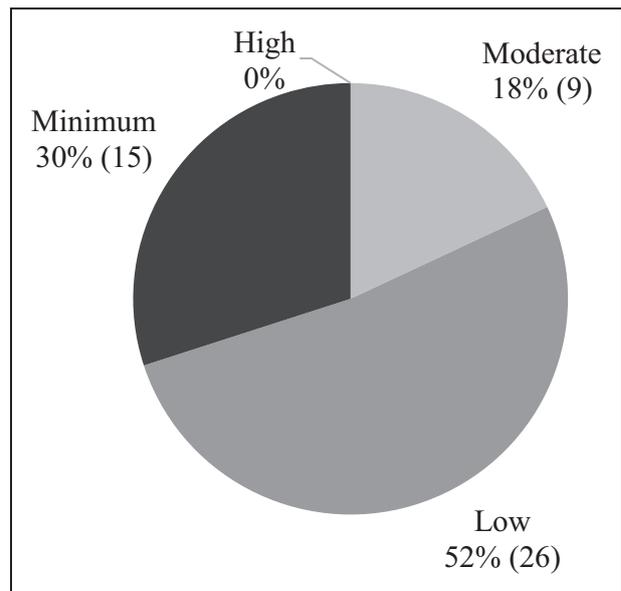
Data analysis and discussion

Survey responses

The survey questionnaire was sent to all 71 government public libraries, out of which 50 valid responses were received, giving a response rate of 70%. Table 2 shows that the highest number of responses (43, 86%) came from the district government public libraries, which is to be expected as this group comprises 78.87% of the total libraries. As for geographical location, 11 libraries (22%) responded from the Dhaka division, followed by nine (18%) each from Rajshahi and Khulna, seven (14%) each from Chattogram and Rangpur, three (6%) from Barishal, and two (4%) each from Sylhet and Mymensingh. All of the libraries are operated and financed with the full support of the government of the People's Republic of Bangladesh.

Pandemic preparedness of the libraries

The librarians were asked to measure their level of preparedness for any pandemic and disaster crisis management. As government organizations, all the libraries follow the rules, policies, strategies, guidelines and orders of the concerned ministry and department to manage a crisis. Considering their existing

**Figure 1.** Level of pandemic preparedness of the libraries.

infrastructure, resources and strengths, all of the libraries reported to have some sort of preparedness for handling a pandemic situation, but no library was prepared to face such a huge global pandemic as COVID-19. As shown in Figure 1, none of the libraries had a 'high' level of preparedness to face crises such as pandemics and disasters. However, nine libraries (18%) indicated their level of preparedness as 'moderate', followed by 26 (52%) with a 'low' and 15 (30%) with a 'minimum' level. Regardless of their level of pandemic preparedness, four libraries (8%) felt that they would be able to respond proactively and adapt quickly to the situation, which supports the findings of the survey of New South Wales public libraries' responses to COVID-19 (Fitzgerald, 2020). Whatever the facts, none of the prior levels of preparedness of the libraries were enough to fight against an unknown enemy such as COVID-19. One interviewee commented:

Truly, we had no preparation for this global crisis. As a service organization, we had some kind of preparation for staff and customer safety and security... our volunteer experience of working during natural calamities was our strength, but nothing was suitable for fighting against the uncertainty of the coronavirus. (PL3)

Changing pattern of the work environment

As the government had declared a lockdown to control the pandemic, the public libraries were fully closed until August 2020. Their activities resumed by opening only for administrative tasks. The analysis (see Table 3) shows that 26 (52%) of the libraries did not make any changes to their working environment and were

Table 3. Changing pattern of the work environment during lockdown.

Changes	Number of respondents	%
No change	26	52
Change in seating arrangements	17	34
Reduced working hours	4	8
Others (working from home, rostering duties, etc.)	3	6
Total	50	100

operating full-time by maintaining the social distancing, hygiene and health regulations imposed by the authorities. Seventeen libraries (34%) changed their seating arrangements to ensure the safety of staff and other officials, while four (8%) reduced their working hours, considering the location of the library and workload of the employees. Only three libraries (6%) mentioned that their staff worked from home and maintained online connectivity, and that they rostered employee duties in some special cases during the pandemic, which is consistent with the findings of Rafiq et al. (2021). In view of this, PL5 reported the following:

We are now working in a completely new environment, wearing masks, using hand sanitizer, maintaining social distancing! The library door is still closed for readers but administrative and other official activities are running smoothly from 10 a.m. to 6 p.m. The training programmes have been shifted online, and we are more active on social media and email than ever before to support our valued users by providing some sort of specialized services, including awareness raising, available government support services and other services on demand.

Status of library services during the pandemic

All the government public libraries were closed according to a government order during the initial stages of COVID-19. As can be seen in Table 4, none of the libraries were fully open to the public but all are now open for administrative functions. Thirty-six libraries (72%) were working on a limited scale, keeping some important sections open. Eleven libraries (22%) provided access to some specified services, including social awareness building, online contemporary discussions by experts, literary adda (conversation), online cultural programmes, online art, poem recitations and essay competitions, while 10 (20%) used online platforms to provide such services, six (12%) provided access to mobile library services, five

Table 4. Status of library services during the pandemic.

Status of library services	Frequency (n = 50)	%
The library is fully open to provide user services	–	–
The library is open for administrative functions	50	100
Some sections are fully closed but some are open	36	72
The library provides only specified services	11	22
Selective services are provided through online platforms	10	20
The library provides access to mobile library services	6	12
The library allows only selective users for services	5	10
Services are offered by prior appointment	1	2

(10%) offered access to borrowing services for registered users, and only one (2%) allowed access by prior appointment.

Figure 2 is an example of a public library using an online platform to conduct a workshop. Regarding the status of library services during COVID-19, PL8 mentioned:

Most of the public libraries of Bangladesh are working to create or enhance public awareness of the COVID-19 situation by sharing government instructions, health tips and various updates through their web portals and social networking sites. Some young librarians are arranging diversified activities like literary adda, study circles, book reviews or book talks, music adda or talk shows through online media to relieve people from loneliness and frustration.

Libraries' responses to pandemic crisis management

Libraries were one of the victims of the pandemic – although academic libraries had the capacity to run their services virtually, public libraries were at a standstill. To prevent mass infection, the government declared a nationwide lockdown – all government institutions and services were closed. In most cases, library activities were limited to updating web portals, conducting zoom meetings, preparing annual reports, raising awareness, and supporting government programmes on the COVID-19 crisis. As shown in Figure 3, more than 50% of the public libraries took part in creating public awareness through social media campaigns, while 46% of the libraries supported other government bodies to mitigate the pandemic, 40%



Figure 2. A public library virtual workshop.

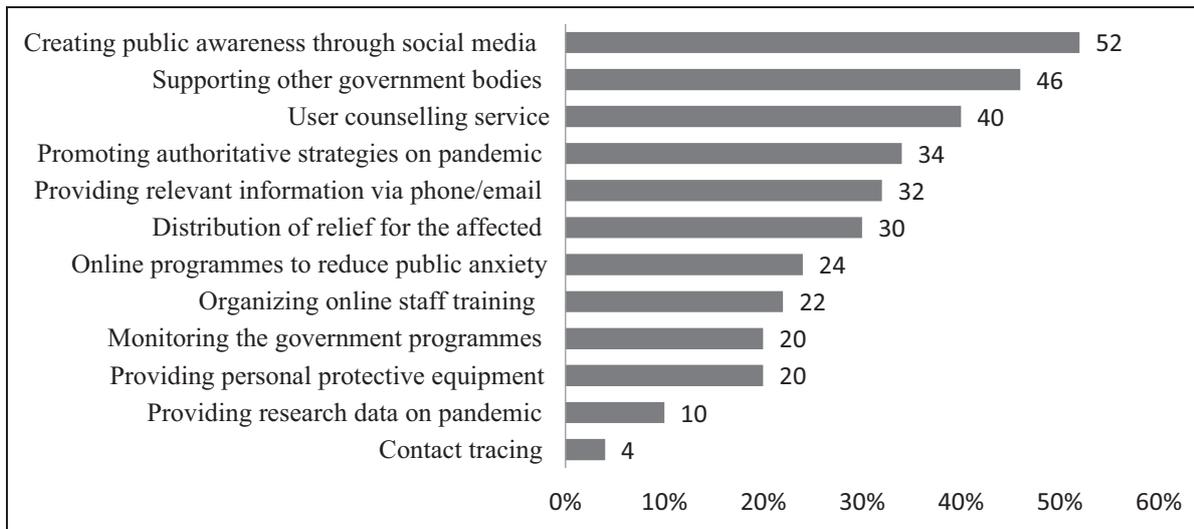


Figure 3. Libraries' responses to pandemic crisis management.

provided counselling services for particular users, 34% promoted authoritative and authentic national and global strategies on the pandemic for the public, 32% provided pandemic-related information via phone or email on demand, and 30% distributed relief to affected people. Other activities included organizing online social and cultural programmes to reduce public anxiety with special reference to vulnerable groups (24%), online staff training (22%), monitoring and supervising government programmes (20%),

providing personal protective equipment and hand sanitizer for library staff (20%), providing research data on the pandemic (10%) and contact tracing/contact number enquiries (4%).

Moreover, some of the librarians are still engaged in various social responsibility programmes to support their local communities during COVID-19. PL5 stated:

During any crisis, local people need reliable information about what is exactly going on. It's our responsibility to

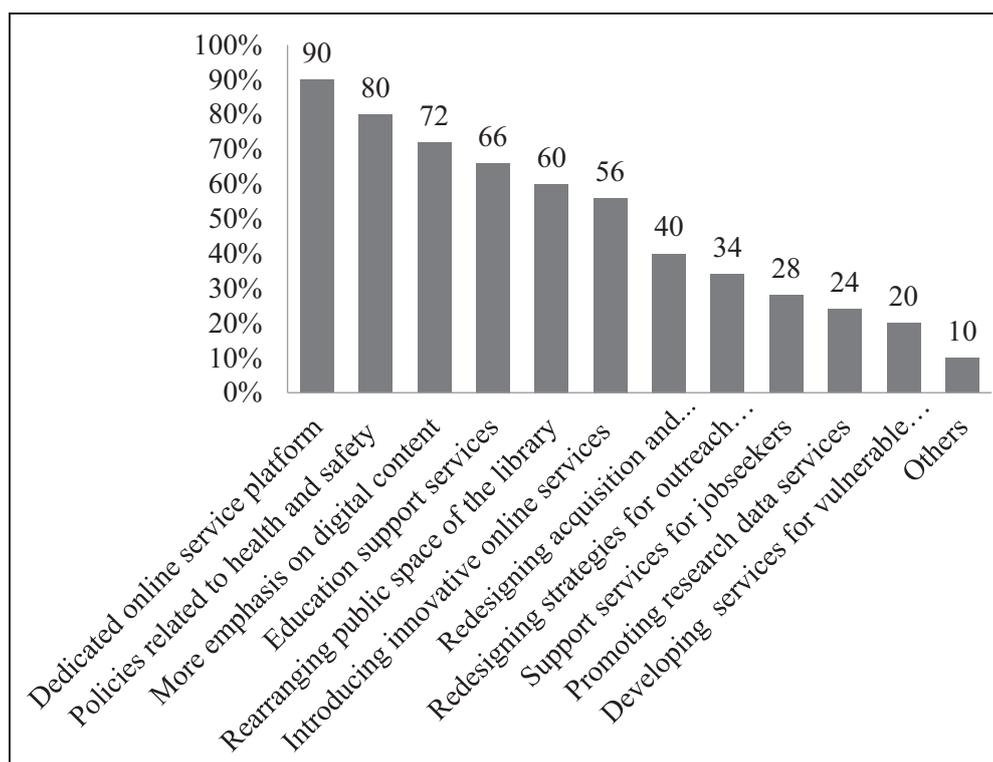


Figure 4. Redesigning library programmes and services for the post-pandemic world.

make them aware of the pandemic and its consequences. We are dedicated to supporting people by promoting government programmes, like monitoring relief distribution and open market sales (OMS), mass awareness campaigns on health issues, etc.

Similarly, Ladan et al. (2020) suggest that libraries can ensure public engagement through the dissemination of authentic and reliable information in the community. Libraries can be a vital tool in controlling the credibility of information and keeping their users abreast of travel information, government announcements and accurate, up-to-date information, which can eventually change the scenario during a pandemic.

Redesigning library programmes and services for the post-pandemic world

Most of the librarians thought that the regular library services will be equally popular in the post-pandemic world. However, some special services and arrangements need to be redesigned. The study found that services like book lending, access to physical materials and/or special collections, newspaper services, remote access, access to online pandemic databases and mobile library services, for example, need to be promoted. After the reopening of libraries to full capacity in the post-pandemic era, libraries

should redesign their services and programmes (see Figure 4).

Ninety percent of the librarians strongly believed that libraries must develop online platforms for library services, while 80% thought that they needed to address the issues related to the health and safety of staff and patrons, which was followed by an emphasis on digital content (72%) and educational support through access to study materials (66%). There is nothing new in offering digital content, but the current circumstances have propelled libraries to offer programmes that are more vigorous in terms of their content and online activities (García-Bullé, 2020). It is a fact that COVID-19 adversely affects the use of public spaces, hence 60% of the libraries reported that they had rearranged their public spaces in response to the pandemic. To meet community demands in a changing environment, 56% of the libraries planned to introduce innovative online services, including online information literacy programmes, instant messaging services, technological device support services, digital interfaces for printed books and library bookmark apps. Twenty libraries (40%) mentioned that they would redesign their online library management system, while 17 (34%) were considering changing their strategies for library outreach programmes and advocacy, and 14 (28%) planned to offer proactive support services

for jobseekers, 12 (24%) to promote research data services on drug trials, vaccines, non-drug measures and other pandemic health issues, and provide open access to such data, and 10 (20%) to develop online services for vulnerable groups, such as senior citizens and others with varying levels of ability. Few libraries (10%) indicated that they would provide other types of services such as online tutorials, self-publishing platforms or an online community of practice. In line with this, PL1 remarked:

Facing the post-pandemic situation will be a big challenge for the public libraries. Libraries must be dedicated to library services along with health and safety concerns of the staff and users. Libraries also need to develop online platforms to control physical access to libraries. Employer layoffs and salary cut-offs are the most common practices during any social crisis. A shrunken job market requires a multi-skilled labour force. Academic institutions are still closed. In such a situation, libraries must introduce innovative services to support community rebuilding.

According to PL3, public libraries' experiences of community engagement can support the government's preparedness and COVID-19 response plan. Strong community engagement can enhance the understanding of people's perceptions, concerns, beliefs and practices. It also helps to deal with rumours, misinformation, social stigma, discrimination and psychosocial issues, for example (Ministry of Health and Family Welfare, 2020). Some of the librarians emphasized organizing sociocultural and awareness-building programmes in collaboration with the concerned departments and ministries of the government, local government organizations, non-governmental organizations and health-related libraries. Such programmes could certainly help in reducing the long-term anxiety of library users caused by the pandemic and lockdown situation (PL3, PL4 and PL7).

Anticipated time required to reopen public library services for the community

To relieve the loneliness and social isolation of their users, libraries around the world are considering reopening by maintaining social distancing and looking at other health issues (Wallace and Dollery, 2021). This survey also recorded very positive results from the respondents regarding the reopening of libraries. Most of the librarians believed that the libraries would recover quickly after the lockdown and long period of tension. Table 5 indicates that more than 50% of the

Table 5. Anticipated time required to reopen public library services for the community.

Time required to reopen libraries	Number of respondents	%
Library is ready to reopen	26	52
Less than two weeks	7	14
Between two weeks and one month	3	6
More than one month but less than two months	5	10
Two months or more	2	4
Unknown	7	14
Total	50	100

libraries were fully prepared to reopen services for their patrons. Fourteen percent of the libraries would require less than two weeks to be ready for reopening, while the same proportion did not know how long they would need to reopen.

Challenges encountered by the public libraries during COVID-19

Crises due to global pandemics are totally different from other crises. How public libraries will change, adapt and evolve beyond the pandemic has become a major issue of consideration (Fitzgerald, 2020). This study agrees that libraries face challenges, such as transitioning to virtual services, breaking long-established service models, funding for digital resources and its impacts on library operations in the future, enforcing social distancing measures, creating social awareness, and the lack of formal pandemic plans and policies – all of which have been identified in previous studies (Corillo, 2020; Fitzgerald, 2020; Tunga, 2021).

Table 6 shows that 90% of the librarians agreed that the lack of virtual and dedicated infrastructures was the biggest challenge for the libraries. An inadequate budget was the second most important challenge for the libraries (80%), followed by inadequate safety equipment (46%), lack of public awareness (40%), the damage of resources (36%), inadequate staff (28%) and the outbreak of fake news (14%). Due to the explosion of fake news during the COVID-19 pandemic, the librarians were struggling with the challenges of identifying, evaluating and using credible sources of information.

However, some of the librarians expressed their loneliness in the libraries during this period (PL2 and PL7) and some mentioned interruptions in their relationships with readers who were regular users of their libraries (PL5 and PL8)

Reliable sources for providing information about COVID-19

During the COVID-19 pandemic, libraries have used various external sources for reliable information on the coronavirus. The public libraries promote all of the government’s initiatives for public engagement and awareness. Currently, the public libraries are promoting a dedicated web portal that has been launched by the government of Bangladesh under the national web portal; the portal provides all the necessary information regarding the pandemic (Corona Info, 2020). Corona Info (see Figure 5) is a dynamic, multipurpose information web portal which contains audiovisual materials, awareness content, an online coronavirus detection tool kit, and a tutorial on good practices during the COVID-19 pandemic; it also incorporates

a chatbot for instant messaging services and several hands-on materials.

As shown in Figure 6, Corona Info was considered the most popular source of information, as identified by 74% of the libraries. The next most reliable source of information was the WHO (58%), followed by the Institute of Epidemiology, Disease Control and Research (IEDCR, 54%), International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B, 20%) and IFLA (12%). Other sources, such as the Centers for Disease Control and Prevention (CDC), Library Association of Bangladesh (LAB) and Bangladesh Association of Librarians, Information Scientists and Documentalists (BALID), were used by only a few libraries.

Table 6. Challenges encountered by the public libraries during COVID-19.

Challenges	Number of respondents (n = 50) ^a	%
Infrastructural problem	45	90
Inadequate budget	40	80
Inadequate safety equipment	23	46
Lack of awareness	20	40
Damage of resources	18	36
Inadequate staff	14	28
Outbreak of fake news	7	14
Other	3	6

^aMultiple responses were allowed.

Recommendations

Based on the interview data and literature review, the following suggestions are made for the public libraries of Bangladesh to cope with the consequences of COVID-19.

Guidelines for the development of library infrastructure

Development of online platforms. Public libraries in Bangladesh are still mostly providing services in a traditional manner. Dedicated online platforms integrating modern information and communications technologies, including high-bandwidth Internet connectivity, must be developed for library management as well as customer services.



Figure 5. Corona info app of Bangladesh government.

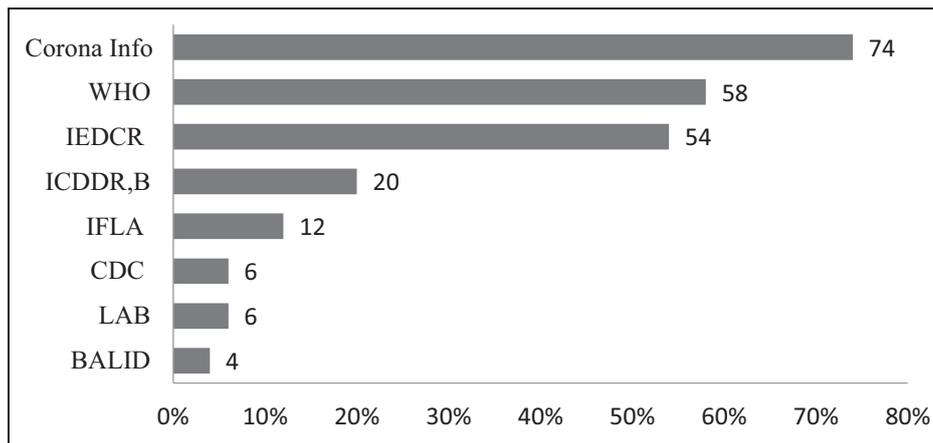


Figure 6. Reliable sources for providing information about COVID-19.

Integrated system. Public libraries in Bangladesh are currently working on their central data following the installation of an integrated library automation system. It has become imperative to introduce a secure cloud-based library automation system (PL3) to provide a high-quality web-based information gateway.

Web portal. The Department of Public Libraries has recently launched a web portal, which has a limited capacity to serve its patrons online. This web platform requires further development through an integrated library system, social media/blogs, internal search system and remote access to e-resources, for example.

Rearrangement of physical spaces. Public libraries should rethink the utilization of their spaces. As a preparation for reopening libraries, it is necessary to redesign public spaces, maintaining safe distances and proper health precautions.

Development of digital resources

Digitization of library resources. All of the public libraries have their own collections in traditional print media, which must be digitized by using standardized software. Creating in-house digital resources is an important step for the libraries to go online.

Open access to online resources. During the COVID-19 crisis, most of the government and non-government research and learning platforms have already opened up much of their content online. There are also plenty of freely accessible databases and resources related to pandemics. Public libraries can make these resources accessible to the community by providing a list or links to the databases (PL4). Moreover, they can aggregate all the COVID-19-related resources in a database for anyone to access at any time.

Access to subscription databases. In addition to open access to online resources, public libraries should take effective steps to provide subscription-based resources from leading publishers.

Introducing innovative services

Digitalized content delivery. Public libraries can make photocopies or scans of relevant printed documents following copyright law and deliver them to patrons online.

Remote access to online resources. Remote access to digital content has become a major issue today (PL1). Public libraries can play a significant role in mitigating the pandemic by introducing remote access to library services and electronic resources.

Online information services. There is no alternative for public libraries but to go online in the 'new normal' situation (PL6). Public libraries should offer various online information services, including app-based instant referencing services, online community alert services, online newspaper services, current awareness services, online public access catalogues and online job applications.

Online programmes. During and after the pandemic, various programmes should be organized online, such as quizzes and cultural competitions, celebrating national and international days, in-house training, counselling, skills development and public engagement.

Dedicated services. To reduce the long-term stagnation, social depression and mental stigma of underprivileged citizens and vulnerable groups, public libraries

should develop specialized, dedicated services and programmes.

Book home delivery service. Library visits are restricted but books are not. Many libraries around the world are now offering alternative services for borrowing physical library materials – for example, ‘drive-through’ library services, ‘takeaway’ services, ‘book bags’ and home delivery by various means (Price, 2020). The public libraries in Bangladesh could deliver books by courier or other home delivery services, where there would be no restrictions for patrons in accessing libraries.

Online membership. The COVID 19 pandemic has restricted in-person visit of library patrons, and at the same time it has accelerated libraries to go online. In such a context, public libraries of Bangladesh should switch their membership services online.

Book quarantining. Although the coronavirus is highly contagious and books may be a medium of transmitting the virus, books should not be kept stored libraries; rather, they should be circulated by maintaining proper quarantine measures.

Capability-building

Strategic policy development. Formal strategic disaster plans and policies should be created by the Department of Public Libraries to manage the crises of disasters and pandemics (PL2 and PL3). Clear guidelines for librarians in the use of various tools and authoritative sources of disaster information, and resource mobilization and use, for example, should be developed (Chisita, 2020).

Online information literacy programmes. Information literacy sessions are important for introducing patrons to the resources of a library. During the pandemic, East West University Library in Dhaka has introduced an online information literacy programme for the betterment of its users (Begum et al., 2020). It is suggested that the public libraries of Bangladesh should also take this kind of initiative to create awareness of online access to library resources and services.

Career counselling and leadership. Career collapse or joblessness is a very common problem after any social crisis. Public libraries have their role to play in contributing to society.

Online training, workshops and seminars. Libraries should introduce better online infrastructures to

conduct in-house training programmes and build the capacity of their staff and users. Public libraries could also reach their audience through webinars using social media and online platforms during and after the pandemic.

Adequate funding. To face this global crisis, public libraries must allocate adequate budgets for virtual infrastructures, online resources and services, health safety, capacity-building and other innovative programmes.

Conclusion

The COVID-19 global pandemic continues to unfold, and it has led to the creation and promotion of information viruses such as fake news, misinformation and disinformation. This pandemic has brought enormous challenges, as well as opportunities, for service industries, including the library and information sector. The aim of this study was to explore the responses of the government public libraries of Bangladesh to the pandemic. As community-based organizations, public libraries have a huge potential to make contributions during any natural or man-made crisis. The closure of public libraries during the lockdown has made an impact on the community. However, librarians have tried to engage specific groups by offering limited services by alternative means. Libraries can be authentic sources of reliable information to ensure the free flow of communication in a society.

These findings are consistent with those of Hapel (2020) and Tammaro (2020), who emphasize that libraries should adopt unique practices, considering the diversity of their societies, cultures and local communities by focusing on new relationships to create new opportunities for the future. Social media has become one of the most powerful interactive communication platforms of the 21st century. Libraries can be proactive risk communicators, utilizing social media for effective information services (Liu et al., 2017). Libraries can promote credible information and sources through their web portals and social media sites. During a disaster or crisis, communication to the public and to media outlets is imperative to prevent rumours and misinformation (Soehner et al., 2017). Thus, COVID-19 has created opportunities for libraries to redesign effective means of communicating important information to raise awareness of the risks and preventive measures, and to provide convenient and reliable sources of information to counter the information disorder caused by the proliferation of fake news on the Internet and social media platforms (Chisita, 2020).

The virtual infrastructure and financial concerns are two of the most pressing issues for the public libraries during the pandemic. To be active actors in this crisis, libraries have no alternative but to develop online platforms, digitize their resources, integrate freely available and subscription-based online resources, promote service innovation for resilience, and provide online access to library programmes and services. To adapt to the 'new normal' situation, both staff and patrons must be skilled in and capable of dealing with technologies, as well as the pandemic crisis. The post-COVID-19 'new normal' is still unclear. However, libraries should rethink their position to prepare for future services. The librarians suggested reducing funding for regular services and print materials, and spending on developing online and digital collections.

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Prevalence and source analysis of COVID-19 misinformation in 138 countries

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Abstract

This study analysed 9657 pieces of misinformation that originated in 138 countries and were fact-checked by 94 organizations to understand the prevalence and sources of misinformation in different countries. The results show that India (15.94%), the USA (9.74%), Brazil (8.57%) and Spain (8.03%) are the four most misinformation-affected countries. Based on the results, it is presumed that the prevalence of COVID-19 misinformation can have a positive association with the COVID-19 situation. Social media (84.94%) produces the largest amount of misinformation, and the Internet (90.5%) as a whole is responsible for most of the COVID-19 misinformation. Moreover, Facebook alone produces 66.87% of the misinformation among all social media platforms. Of all the countries, India (18.07%) produced the largest amount of social media misinformation, perhaps thanks to the country's higher Internet penetration rate, increasing social media consumption and users' lack of Internet literacy.

Keywords

COVID-19 misinformation, social media, Facebook, Twitter, infectious disease

Introduction

This study endeavoured to understand the prevalence and sources of coronavirus (COVID-19) misinformation around the world. From 1 January 2020 to 30 April 2021, a search in scholarly databases (e.g. Scopus and Web of Science) showed that more than 500 research studies have investigated COVID-19 misinformation in different disciplines, such as communication studies, psychology, politics and the medical sciences (Al-Zaman, 2021b; Erku et al., 2020; Islam et al., 2020; Laato et al., 2020; Lu, 2020; Pennycook et al., 2020; Roozenbeek et al., 2020; Siddiqui et al., 2020; Singh et al., 2020). In addition to disciplinary and thematic analyses, many of these studies have investigated the sources of misinformation and misinformation scenarios in different countries (Al-Zaman, 2021b; Brennen et al., 2020; Gupta et al., 2020; Roozenbeek et al., 2020). However, these studies are limited in one or more of the following ways: (a) they select only one or a few countries for their analysis of misinformation; (b) their samples of misinformation

cases are small compared to its high prevalence; (c) insights into misinformation in different countries according to different sources are unavailable; and (d) comparative source analysis of misinformation is limited. Therefore, considering these limitations, in the present study 9657 pieces of misinformation originating in 138 countries and debunked by 94 fact-checking organizations were analysed to understand the frequency of misinformation in different countries, the sources of misinformation and the country-wise distribution of the sources of misinformation. The results suggest that the prevalence of misinformation does not follow any geographical pattern; rather, it might be

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consistent with the pandemic's casualty-led tension and information vacuum. Also, social media poses a big challenge to public health and health communication by producing most of the COVID-19 misinformation. The following discussion is divided into three main sections. In the first section, the details of the data collection and analysis are described.

Materials and methods

This exploratory study sought to understand the prevalence and sources of COVID-19 misinformation around the world. The three specific research questions were:

1. Which countries are most affected by COVID-19 misinformation?
2. Which sources produce most of the COVID-19 misinformation?
3. Which sources of misinformation are dominant in which countries?

The data for this study was collected from the official website of the Poynter Institute for Media Studies.¹ It is a Florida-based non-profit organization that was established in 1975 and is actively working to reduce the prevalence of misinformation around the world. The organization has two specialized branches dedicated to fact-checking: PolitiFact and the International Fact-Checking Network. Since the beginning of the COVID-19 pandemic, the Poynter Institute has been combating COVID-19 misinformation and collecting prevalent and popular misinformation cases from different countries, and including them on its website. The data for the present study was collected using Web Scraper, an automated scraping extension for web browsers.² In this automated web scraping, claims of misinformation, fact-checkers, sources, dates, countries, different types of claims and explanations of misinformation were extracted. The study period was limited to 1 January 2020 to 1 March 2021, although March 2021 only included a single day – namely, 1 March 2021. During this period, the website included 9657 pieces of COVID-19 misinformation from 94 fact-checkers certified by the International Fact-Checking Network. It is important to note that the data that was collected was publicly available. Such public data is not subject to copyright and can be utilized for research purposes (Zhao, 2017). Also, unlike semi-public and private data, this data did not require informed consent (Franzke et al., 2020). Moreover, in recent academic scholarship, ethical scraping for research purposes has been permissible (Mancosu and Vegetti, 2020). Previous studies have used similar web scrapers to collect research data (e.g. Hautea et al.,

2021). Therefore, the data that was collected and used in this study was free from ethical obligations.

After collecting the data, it was first cleaned by eliminating unnecessary and fragmented parts. This phase also included language and style corrections. Finally, two variables were chosen for the analysis that were relevant to the research questions: country name and misinformation source. The data set mainly included 9518 pieces of misinformation from 138 countries, and the country names for 139 more pieces of misinformation were missing. For the first research question, the percentages of each country were calculated to understand their contributions to the total share of misinformation. Both the aggregate and country-wise monthly misinformation distributions were also calculated to show the changes in misinformation counts throughout the period. For the second research question, the misinformation sources were coded as follows: social media, mainstream media, popular bodies, other Internet sources and miscellaneous. Previous studies have identified online media and mainstream media as the two major media sources of COVID-19 misinformation (Al-Zaman, 2021b). In this study, however, online media was divided into two types: social media and other Internet sources. Social media and mainstream media were further categorized according to their media type (e.g. Facebook, Twitter, television, newspaper). In this process, it was found that some social media and mainstream media were not specified, and they were coded accordingly. Regarding the category 'popular bodies', it was observed that, in many cases, political figures and organizations, and celebrities, have been playing roles in producing and circulating misinformation. Therefore, this was introduced as a new category. This category specifically included four main sources: political parties, groups and figures (e.g. presidents); non-political organizations (e.g. religious organizations); celebrities, influencers and popular non-political figures (e.g. film actors); and relevant specialists and responsible persons (e.g. doctors). It was also observed that, in addition to social media, COVID-19 misinformation had other Internet sources, and they were categorized as 'online portal' and 'blog'. Online portals included online news portals and other websites. Finally, the countries and their sources of misinformation were analysed using cross-tabulation. Consistent with the research questions, instead of inferential statistics, this study adopted descriptive statistical analyses, including frequency and percentage analyses and cross-tabulations, to analyse and interpret the data. For the data preparation and analysis, Microsoft Excel 2019 and IBM SPSS Statistics 25 were used. For data visualization,

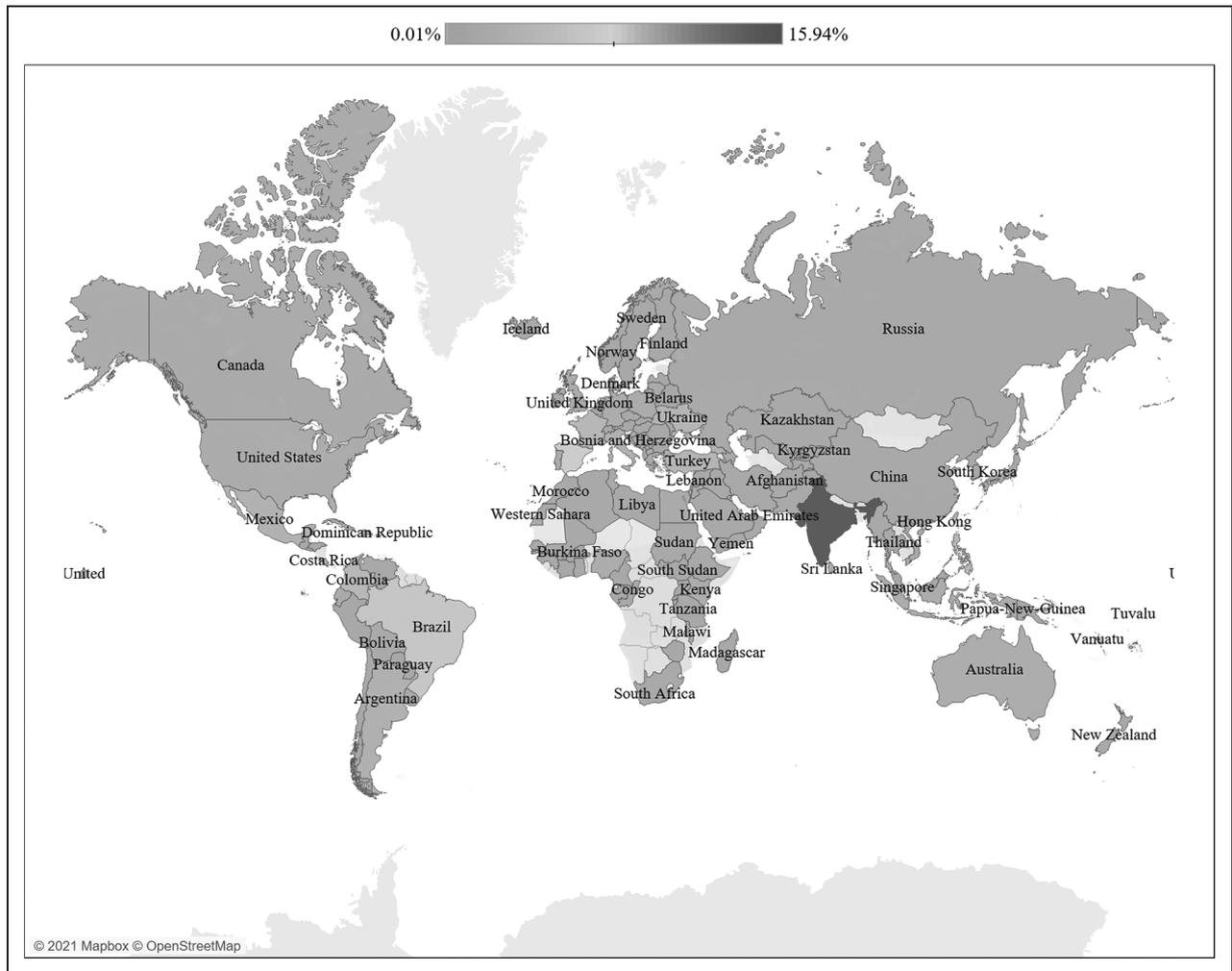


Figure 1. Percentage map of COVID-19 misinformation.

Tableau 2020.4 was used, which is artificial-intelligence-powered professional data visualization and analysis software.

Results and discussion

The present study aimed to answer three questions on COVID-19 misinformation: the most affected countries, the most popular sources, and the popularity of sources according to the countries. A content analysis along with descriptive statistics was used to analyse 9657 pieces of misinformation from 138 countries to answer the research questions. To the best of the author's knowledge, this study has dealt with the largest amount of COVID-19 misinformation from the highest number of countries and sources to date.

The map in Figure 1 shows that a few countries in the world suffer from a higher pervasiveness of misinformation. Most of the Asian and African countries have a lower amount of misinformation, while South Asia and North and South America show a higher

amount of misinformation. India has the highest amount of misinformation during the period ($n = 1691$; 15.94%), followed by the USA ($n = 1032$; 9.74%) and Brazil ($n = 909$; 8.57%) (see Table 1). The top four countries also include a European country – that is, Spain ($n = 852$; 8.03%). These four countries have comparatively higher amounts of COVID-19 misinformation than the other countries. For example, Colombia is in fifth position with 400 (3.77%) pieces of misinformation, which is less than half of Spain's frequency. This result shows that COVID-19 misinformation is not concentrated in specific geographical areas; rather, it is decentralized all over the world. Also, a few countries experience more misinformation than most countries. It seems that misinformation in the top countries is somewhat consistent with the number of casualties they have experienced during the pandemic. This means that the prevalence of misinformation may have a positive association with pandemic-led casualties. For example, in both the lists of COVID-19 misinformation and COVID-19

Table 1. Countries and their counts of COVID-19 misinformation.

Rank	Country	Frequency	n %	Rank	Country	Frequency	n %
1	India	1691	15.94	71	Algeria	10	0.09
2	USA	1032	9.74	72	Kyrgyzstan	10	0.09
3	Brazil	909	8.57	73	Mali	10	0.09
4	Spain	852	8.03	74	Singapore	10	0.09
5	Colombia	400	3.77	75	Burundi	9	0.08
6	France	356	3.36	76	Madagascar	9	0.08
7	Philippines	339	3.20	77	Saudi Arabia	9	0.08
8	Ukraine	300	2.83	78	Syria	9	0.08
9	Turkey	288	2.72	79	Chile	8	0.08
10	Mexico	250	2.36	80	Ethiopia	8	0.08
11	Argentina	235	2.22	81	Ivory Coast	8	0.08
12	Italy	231	2.18	82	Sweden	8	0.08
13	Taiwan	223	2.10	83	Belarus	7	0.07
14	Georgia	212	2.00	84	Cameroon	7	0.07
15	North Macedonia	167	1.57	85	Europe	7	0.07
16	Missing	139	1.31	86	Iraq	7	0.07
17	Australia	131	1.24	87	Senegal	7	0.07
18	Germany	129	1.22	88	Austria	5	0.05
19	Sri Lanka	119	1.12	89	Cuba	5	0.05
20	Middle East	116	1.09	90	United Arab Emirates	5	0.05
21	Indonesia	115	1.08	91	Lebanon	4	0.04
22	Kenya	115	1.08	92	South Sudan	4	0.04
23	Nigeria	106	1.00	93	Southern Africa	4	0.04
24	North Africa	101	0.95	94	Bulgaria	3	0.03
25	Ecuador	95	0.90	95	El Salvador	3	0.03
26	Canada	92	0.87	96	Gabon	3	0.03
27	Portugal	89	0.84	97	Libya	3	0.03
28	Poland	84	0.79	98	Montenegro	3	0.03
29	Ireland	83	0.78	99	Romania	3	0.03
30	Croatia	78	0.74	100	Uruguay	3	0.03
31	Bolivia	71	0.67	101	Zimbabwe	3	0.03
32	UK	70	0.66	102	Afghanistan	2	0.02
33	Myanmar	65	0.61	103	Asia	2	0.02
34	Greece	64	0.60	104	Azerbaijan	2	0.02
35	Venezuela	64	0.60	105	Czech Republic	2	0.02
36	Japan	58	0.55	106	Finland	2	0.02
37	Lithuania	56	0.53	107	Guinea	2	0.02
38	Ghana	45	0.42	108	Iceland	2	0.02
39	Russia	43	0.41	109	Kuwait	2	0.02
40	South Africa	43	0.41	110	North America	2	0.02
41	Egypt	42	0.40	111	Norway	2	0.02
42	Thailand	40	0.38	112	South America	2	0.02
43	Costa Rica	39	0.37	113	Switzerland	2	0.02
44	Bosnia and Herzegovina	37	0.35	114	Yemen	2	0.02
45	Belgium	35	0.33	115	Albania	1	0.01
46	Hong Kong	35	0.33	116	Bahrain	1	0.01
47	Serbia	35	0.33	117	Burkina Faso	1	0.01
48	China	33	0.31	118	Central America	1	0.01
49	Kazakhstan	31	0.29	119	Dominican Republic	1	0.01
50	Peru	31	0.29	120	Fiji	1	0.01
51	Netherlands	27	0.25	121	Gambia	1	0.01
52	South Korea	25	0.24	122	Honduras	1	0.01
53	Latvia	23	0.22	123	Hungary	1	0.01

(continued)

Table 1. (continued)

Rank	Country	Frequency	n %	Rank	Country	Frequency	n %
54	Pakistan	22	0.21	124	Kosovo	1	0.01
55	Paraguay	21	0.20	125	Malawi	1	0.01
56	Tunisia	21	0.20	126	Moldova	1	0.01
57	Western Sahara	19	0.18	127	North Korea	1	0.01
58	Jordan	17	0.16	128	Oman	1	0.01
59	Uganda	17	0.16	129	Papua New Guinea	1	0.01
60	Denmark	16	0.15	130	Qatar	1	0.01
61	East Africa	16	0.15	131	Rwanda	1	0.01
62	New Zealand	16	0.15	132	Slovakia	1	0.01
63	Tanzania	16	0.15	133	Sudan	1	0.01
64	Africa	15	0.14	134	Tajikistan	1	0.01
65	Israel	15	0.14	135	Timor Leste	1	0.01
66	Guatemala	14	0.13	136	Tuvalu	1	0.01
67	Malaysia	13	0.12	137	Uzbekistan	1	0.01
68	Congo	11	0.10	138	Vanuatu	1	0.01
69	Iran	11	0.10	139	Vietnam	1	0.01
70	Morocco	11	0.10				

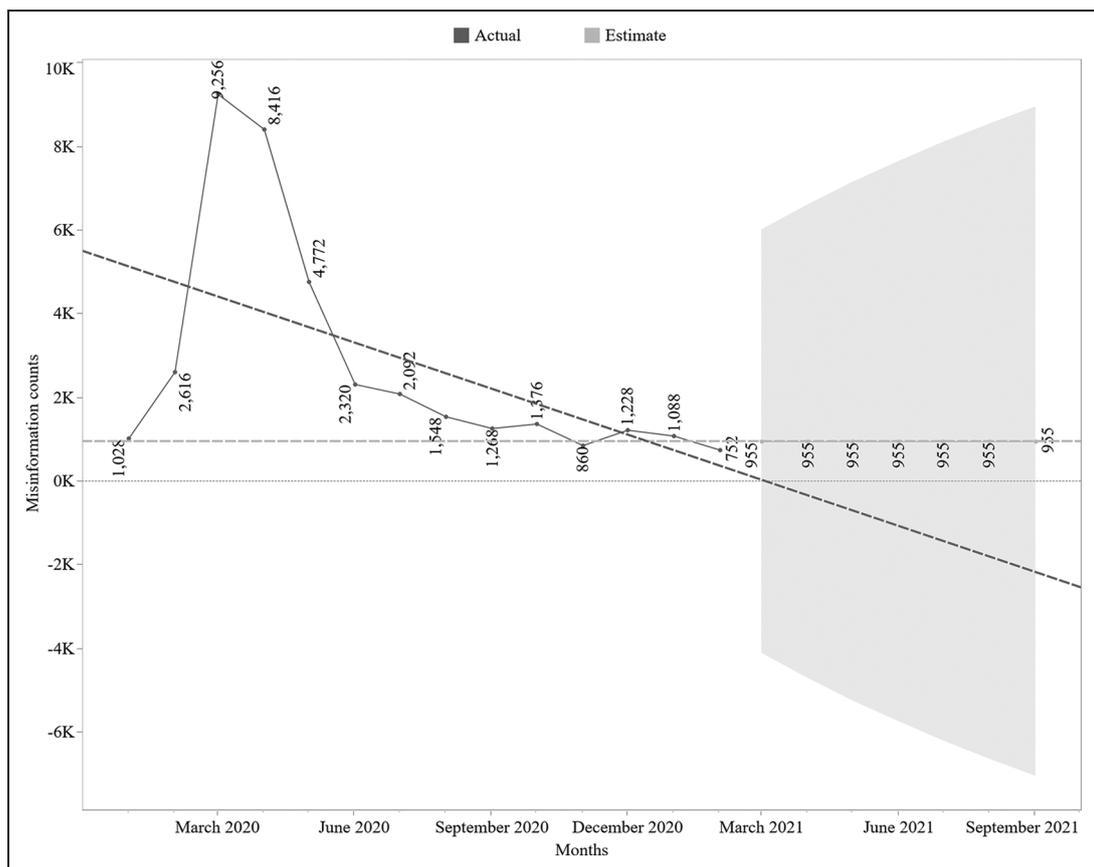


Figure 2. Misinformation trends during the period and a trend-based forecast.

casualties, the following 10 countries are common among the top 15: India, the USA, Brazil, Spain, France, Turkey, Colombia, Argentina, Italy and

Mexico (Worldometer, 2021b). Since the present study was unable to establish this correlation, more empirical research is needed to explain this presumption.

The aggregate amount of misinformation shows a gradual decline after May 2020, with some infrequent and small surges (Figure 2). Misinformation reached its peak in March 2020 ($n = 9256$) and started dropping in the subsequent months: 8416, 4772 and 2320 in April, May and June, respectively. The number reached 752 in February 2021. The trend also shows a downward tendency. However, a forecast shows that the number may likely increase and remain at 955 pieces of misinformation on average in March–September 2021. Most of the countries, including India, the USA, Brazil and Spain, experienced a surge in misinformation in March and July 2020 (Table 2). However, a few countries, such as Georgia, experienced a surge from September to December 2020. Both the aggregated and country-wise misinformation counts hint that the prevalence of misinformation could be consistent with the number of casualties. Put another way, misinformation surged before or amid infection and death rate surges. For example, from March 2020, India, the USA, Brazil and Spain were experiencing a gradual rise in COVID-19 cases along with COVID-19 misinformation (Worldometer, 2021b). On the other hand, before September 2020, Georgia had almost no or limited COVID-19 cases, along with limited COVID-19 misinformation (Worldometer, 2021a). This result is consistent with the hypothesis of Difonzo and Bordia (2006), who claim that misinformation has a positive correlation with tension, damage and information scarcity. However, as stated earlier, since this study could not perform a correlation coefficient analysis between the amount of misinformation and the number of COVID-19 casualties, the hypothesis remains subject to further analysis. Previous studies have not analysed this relationship either. A few studies have only investigated users' engagement with COVID-19 content. For instance, one study analysed Twitter conversations on COVID-19 from January to March 2020 and observed the gradual increase in misinformation with time (Singh et al., 2020). Another study also established that misinformation increased with time, like general conversations, and reached a peak in March 2020 (Brennen et al., 2020). Users' engagement with COVID-19 content may increase or decrease based on factors such as negative news on COVID-19, misinformation and vaccine news (Al-Zaman, 2021a).

Of the four main sources, social media (84.94%) produced the highest amount of misinformation, followed by other Internet sources (5.56%) (Figure 3). Interestingly, Internet-based sources alone produced 90.50% of all misinformation. This suggests that the Internet is the ultimate producer of COVID-19 misinformation, which requires further attention from both scholars and policymakers in those countries

where Internet-based misinformation is more prevalent. Conversely, the share of mainstream media (3.29%) in misinformation production was relatively lower than the other sources. Misinformation from all sources was consistent from January to December 2020, with a few smaller surges. For example, social media started at 82.61% in January 2020 and reached 88.93% in December 2020, experiencing at least four minor decreases in February, May, July and November. All sources except for other Internet sources reached their highest level in March 2020: social media reached 23.82%, mainstream media 28.62% and popular bodies 21.16%. Only other Internet sources reached a peak (22.16%) in April. A survey by Gupta et al. (2020) shows that 63.3% of the respondents encountered most COVID-19 misinformation on social media rather than other sources. Previous studies focusing on different regions also reveal that despite benefiting the public by providing useful information, social media is producing a profuse amount of COVID-19 misinformation (Ahmed, 2020; Farooq and Rathore, 2021; Gupta et al., 2020; Islam et al., 2020; Siddiqui et al., 2020). For this reason, social media is addressed as a 'double-edged sword' and social media misinformation as a '[misinformation] epidemic within the COVID-19 pandemic' (Ahmed, 2020; Siddiqui et al., 2020).

With regard to social media, Facebook was the most prominent source of misinformation, which alone produced 66.87% ($n = 5485$) of the total social media misinformation. WhatsApp, a popular instant messaging application, is in second position, with only 10.22% ($n = 838$). Twitter is in third position on the list with 8.22% ($n = 674$). Previous studies have also established that these three social media platforms are the most responsible for the propagation of COVID-19 misinformation (Al-Zaman, 2021b; Brennen et al., 2020; Cinelli et al., 2020; Islam et al., 2020). Approximately 831 (10.13%) pieces of social media misinformation and 157 (49.37%) pieces of mainstream media misinformation had no specific platform mentioned. In mainstream media, newspapers ($n = 88$; 27.67%) produced a higher amount of misinformation than television channels ($n = 66$; 20.75%), meaning that print media produces more misinformation than broadcast media. Online portals are also an important source of misinformation ($n = 453$), and produced a higher amount of misinformation than mainstream media ($n = 318$) and a few popular social media platforms such as YouTube ($n = 184$), Line ($n = 82$) and Instagram ($n = 80$). Of the online portals, most were news portals, containing unreliable information regarding COVID-19. For example, Asembi News, one of Ghana's biggest

Table 2. Monthly frequency distributions of misinformation by country.

Country	Jan 20	Feb 20	Mar 20	Apr 20	May 20	June 20	July 20	Aug 20	Sept 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
Afghanistan	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Africa	0	0	4	6	3	2	0	0	0	0	0	0	0	0	0
Albania	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Algeria	1	0	4	3	1	0	0	1	0	0	0	0	0	0	0
Argentina	1	4	24	35	30	26	22	21	24	17	7	5	10	9	0
Asia	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Australia	4	7	32	18	5	9	13	9	10	8	2	10	1	3	0
Austria	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0
Azerbaijan	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Bahrain	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0	1	0	3	1	1	0	0	1	0	0	0	0	0
Belgium	1	0	6	4	4	1	6	2	5	2	1	2	1	0	0
Bolivia	0	0	8	21	3	10	13	10	4	1	0	0	1	0	0
Bosnia and Herzegovina	6	4	9	6	11	1	0	0	0	0	0	0	0	0	0
Brazil	19	8	105	150	101	83	101	69	45	48	25	57	62	36	0
Bulgaria	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0
Burkina Faso	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Burundi	0	0	0	0	8	1	0	0	0	0	0	0	0	0	0
Cameroon	0	1	3	1	2	0	0	0	0	0	0	0	0	0	0
Canada	6	4	28	17	7	6	5	3	4	5	3	0	1	3	0
Central America	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Chile	0	0	1	2	1	0	0	0	3	1	0	0	0	0	0
China	1	3	11	11	3	2	0	0	0	1	0	0	0	1	0
Colombia	5	10	65	51	49	50	55	37	17	9	11	3	21	17	0
Congo	0	0	5	2	1	2	0	0	1	0	0	0	0	0	0
Costa Rica	0	0	8	21	1	0	9	0	0	0	0	0	0	0	0
Croatia	3	3	37	30	3	1	0	0	0	1	0	0	0	0	0
Cuba	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
Czech Republic	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Denmark	2	0	8	2	4	0	0	0	0	0	0	0	0	0	0
Dominican Republic	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
East Africa	0	0	13	2	1	0	0	0	0	0	0	0	0	0	0
Ecuador	4	7	71	5	3	1	3	0	1	0	0	0	0	0	0
Egypt	0	2	3	11	13	9	1	3	0	0	0	0	0	0	0
El Salvador	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0

(continued)

Table 2. (continued)

Country	Jan 20	Feb 20	Mar 20	Apr 20	May 20	June 20	July 20	Aug 20	Sept 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
Ethiopia	0	1	2	0	3	0	0	0	0	1	0	0	1	0	0
Europe	0	1	2	1	3	0	0	0	0	0	0	0	0	0	0
Fiji	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
France	12	18	106	76	35	18	14	10	22	19	5	13	5	3	0
Gabon	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0
Gambia	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Georgia	2	1	4	6	8	4	7	11	26	39	32	34	26	12	0
Germany	1	3	11	14	6	10	16	17	6	15	14	8	8	0	0
Ghana	1	0	13	14	15	0	2	0	0	0	0	0	0	0	0
Greece	4	3	20	18	9	4	5	1	0	0	0	0	0	0	0
Guatemala	0	0	6	2	4	0	0	0	1	0	0	0	1	0	0
Guinea	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Honduras	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Hong Kong	0	9	16	8	1	0	0	0	0	0	0	0	0	1	0
Hungary	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Iceland	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
India	25	92	425	592	299	97	59	35	15	14	7	12	17	2	0
Indonesia	8	20	39	16	17	9	0	1	1	0	0	0	4	0	0
Iran	0	5	5	1	0	0	0	0	0	0	0	0	0	0	0
Iraq	0	0	0	2	2	3	0	0	0	0	0	0	0	0	0
Ireland	0	0	26	17	14	7	3	8	8	0	0	0	0	0	0
Israel	0	0	3	2	3	0	3	1	0	1	0	1	1	0	0
Italy	6	33	46	45	45	20	11	8	1	4	1	1	1	8	1
Ivory Coast	0	0	5	2	0	0	0	0	1	0	0	0	0	0	0
Japan	6	11	7	12	7	2	3	3	0	2	0	3	1	1	0
Jordan	0	2	1	3	8	2	0	1	0	0	0	0	0	0	0
Kazakhstan	2	2	7	13	7	0	0	0	0	0	0	0	0	0	0
Kenya	2	5	40	43	21	1	0	1	1	0	0	0	1	0	0
Kosovo	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Kuwait	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Kyrgyzstan	0	1	3	3	3	0	0	0	0	0	0	0	0	0	0
Latvia	0	0	5	5	7	2	0	0	0	0	1	1	0	2	0
Lebanon	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0
Libya	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0

(continued)

Table 2. (continued)

Country	Jan 20	Feb 20	Mar 20	Apr 20	May 20	June 20	July 20	Aug 20	Sept 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
Lithuania	1	11	18	14	12	0	0	0	0	0	0	0	0	0	0
Madagascar	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0
Malawi	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Malaysia	1	0	4	4	1	0	0	0	0	0	0	1	1	1	0
Mali	0	0	0	7	2	1	0	0	0	0	0	0	0	0	0
Mexico	4	15	46	56	25	22	22	11	4	8	13	9	8	7	0
Middle East	3	16	61	31	0	2	1	1	0	0	0	0	0	1	0
Missing	1	7	36	23	15	10	23	9	5	4	2	0	3	1	0
Moldova	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Montenegro	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morocco	0	2	4	2	1	0	1	1	0	0	0	0	0	0	0
Myanmar	0	0	19	19	24	2	0	0	0	1	0	0	0	0	0
Netherlands	0	0	6	7	8	0	1	0	0	2	0	1	1	1	0
New Zealand	0	0	0	2	1	1	2	4	1	2	1	1	1	0	0
Nigeria	1	7	38	40	9	7	0	0	1	0	1	0	1	1	0
North Africa	3	16	59	22	0	0	0	0	0	0	0	0	0	1	0
North America	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
North Macedonia	2	6	34	11	5	5	5	4	13	27	14	17	12	12	0
Norway	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Oman	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Pakistan	1	4	7	2	3	1	0	0	0	0	2	1	1	0	0
Papua New Guinea	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Paraguay	0	0	8	4	7	2	0	0	0	0	0	0	0	0	0
Peru	0	0	16	4	5	2	0	2	0	0	0	0	1	1	0
Philippines	16	35	57	66	38	25	29	21	17	11	5	10	6	3	0
Poland	2	3	20	10	13	2	3	6	13	2	1	0	5	4	0
Portugal	0	5	33	21	16	5	8	0	0	1	0	0	0	0	0
Qatar	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Romania	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Russia	2	2	14	10	6	1	1	2	0	3	1	0	0	1	0
Rwanda	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	0	0	1	4	2	1	0	0	0	0	0	0	1	0	0
Senegal	0	1	2	3	0	0	0	0	0	0	0	1	0	0	0
Serbia	3	2	11	9	4	1	0	0	4	0	0	0	0	1	0

(continued)

Table 2. (continued)

Country	Jan 20	Feb 20	Mar 20	Apr 20	May 20	June 20	July 20	Aug 20	Sept 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
Singapore	1	0	3	2	2	0	1	0	1	0	0	0	0	0	0
Slovakia	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
South Africa	0	1	16	16	3	1	1	0	1	1	1	0	1	1	0
South America	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
South Korea	2	10	4	1	0	0	0	1	2	0	0	1	1	3	0
South Sudan	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
Southern Africa	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0
Spain	25	64	227	141	63	49	42	24	20	60	27	44	32	33	1
Sri Lanka	3	3	36	38	27	5	2	0	0	2	1	1	0	1	0
Sudan	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Sweden	1	0	3	0	2	0	0	0	0	2	0	0	0	0	0
Switzerland	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Syria	0	0	0	7	0	0	2	0	0	0	0	0	0	0	0
Taiwan	18	81	64	31	8	3	3	2	1	3	1	3	3	2	0
Tajikistan	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Tanzania	0	2	2	4	5	2	0	1	0	0	0	0	0	0	0
Thailand	0	7	18	7	2	0	0	0	2	0	0	1	3	0	0
Timor Leste	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Tunisia	0	0	1	4	6	6	0	3	0	0	0	0	1	0	0
Turkey	19	27	83	39	12	9	5	16	14	7	12	24	19	2	0
Tuvalu	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Uganda	0	0	8	7	0	2	0	0	0	0	0	0	0	0	0
UK	3	2	14	25	8	2	2	3	1	1	0	6	2	1	0
Ukraine	1	4	41	39	33	30	20	28	27	29	20	23	5	0	0
United Arab Emirates	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0
Uruguay	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
USA	33	79	278	271	130	44	37	26	19	22	14	39	17	24	0
Uzbekistan	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Vanuatu	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Venezuela	1	8	18	11	7	5	5	3	0	0	1	2	3	0	0
Vietnam	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Western Sahara	0	0	3	13	3	0	0	0	0	0	0	0	0	0	0
Yemen	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Zimbabwe	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0

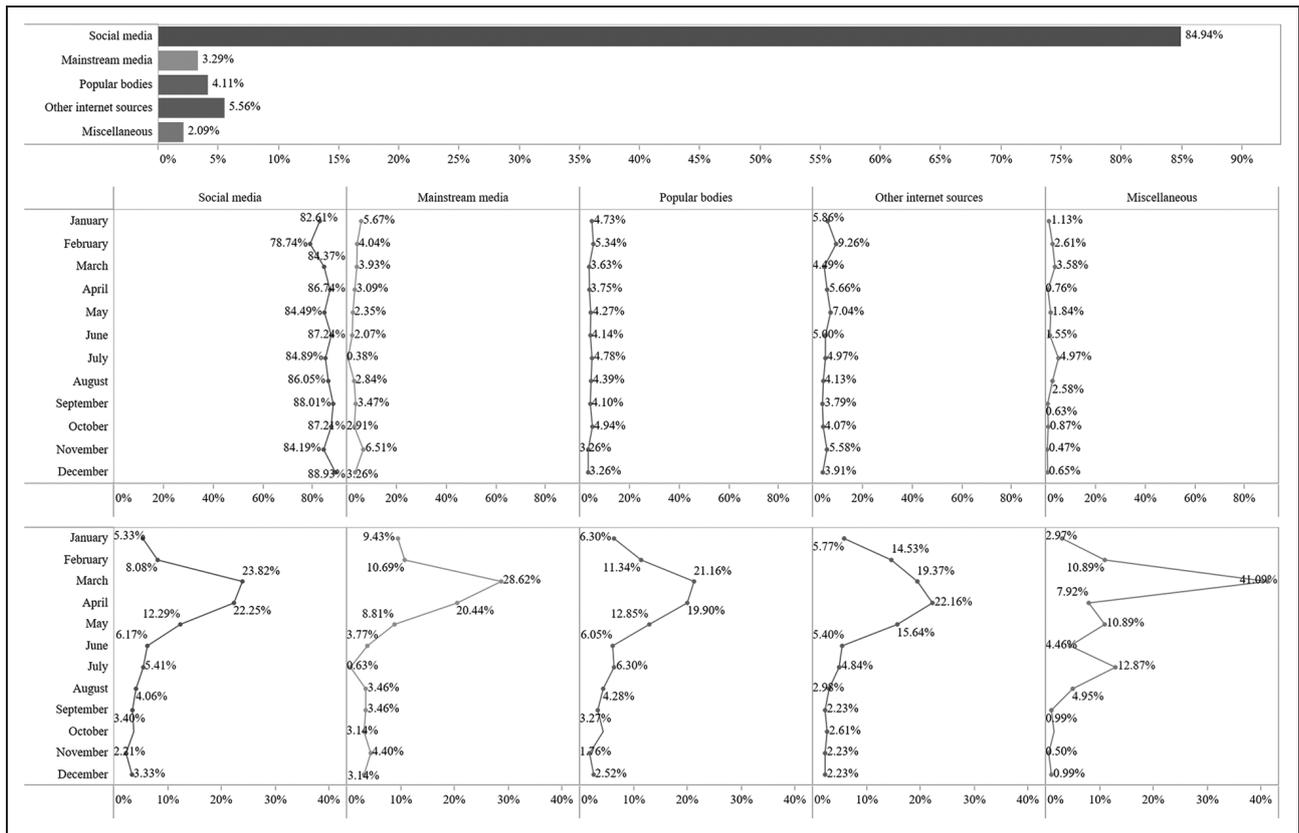


Figure 3. Details of the COVID-19 misinformation sources.

Table 3. Various social media, mainstream media and Internet sources of misinformation.

Source	Frequency	n %
Social media		
Facebook	5485	66.87
WhatsApp	838	10.22
Social media (unspecified)	831	10.13
Twitter	674	8.22
YouTube	184	2.24
Line	82	1.00
Instagram	80	0.98
Telegram	15	0.18
TikTok	11	0.13
Weibo	3	0.04
Total	8203	100
Mainstream media		
Mainstream media (unspecified)	157	49.37
Newspapers	88	27.67
Television	66	20.75
Radio	7	2.20
Total	318	100
Other Internet sources		
Online portals	453	84.33
Blogs	84	15.67
Total	536	100

news websites, published the following false claim: ‘Family of three died within days of each other before testing positive for coronavirus’ (see Table 3).

Of all the countries, India produced the highest amount of social media misinformation (18.07%), followed by Brazil (9.17%) and the USA (8.61%). The reasons for India’s social media misinformation epidemic could be (a) higher social media penetration rates over the last few years, which may increase further in the next few years (Keelery, 2020a, 2020c; Statcounter, 2021; Statista, 2020); (b) the increased consumption of social media content during the pandemic (Keelery, 2020b); and (c) social media users’ lack of digital literacy, which makes them victims of misinformation (Raj and Goswami, 2020). On the other hand, Turkey produced the highest amount of mainstream media misinformation (12.32%), followed by the USA (11.20%) and Georgia (8.40%). The lack of press freedom, authoritarian control over mainstream media and a government-endorsed disinformation campaign using the media might be responsible for Turkey’s higher mainstream media misinformation (DW, 2019; Erbey, 2020). Interestingly, the USA alone produced 31.16% of the misinformation from popular bodies, mostly from political figures, groups and celebrities, which is

unprecedented. Brazil (9.77%) and the Philippines (8.60%) followed the USA in this respect. Political and sociocultural factors might be responsible for such results. For example, conservative politicians and the political environment were found to be conducive to COVID-19 misinformation in the USA, and public trust in politicians' approach to tackling COVID-19 was much higher in the country (Calvillo

et al., 2020; Roozenbeek et al., 2020). Also, in the contemporary popular culture of the USA, celebrities have significant influence over social and political events and audiences, which could be another reason for this result. In Brazil, on the other hand, President Bolsonaro is a champion of COVID-19 denial, and the government itself produces COVID-19 disinformation (Ricard and Medeiros, 2020). Studies have also found that political

Table 4. Sources of misinformation by country.

Country	Source of misinformation (%)				
	Social media	Mainstream media	Popular bodies	Other Internet sources	Miscellaneous
Afghanistan	0.02	0.00	0.00	0.00	0.00
Africa	0.17	0.00	0.00	0.00	0.00
Albania	0.01	0.00	0.00	0.00	0.00
Algeria	0.09	0.00	0.00	0.16	0.47
Argentina	2.30	2.24	2.56	0.81	1.89
Asia	0.01	0.00	0.23	0.00	0.00
Australia	1.42	0.00	0.23	0.32	0.00
Austria	0.04	0.00	0.00	0.16	0.00
Azerbaijan	0.01	0.00	0.00	0.16	0.00
Bahrain	0.01	0.00	0.00	0.00	0.00
Belarus	0.07	0.00	0.00	0.16	0.00
Belgium	0.31	0.28	0.47	0.49	0.47
Bolivia	0.47	0.56	1.63	0.16	8.96
Bosnia and Herzegovina	0.09	3.08	0.23	2.59	0.47
Brazil	9.17	1.40	9.77	5.83	0.94
Bulgaria	0.01	0.28	0.23	0.00	0.00
Burkina Faso	0.01	0.00	0.00	0.00	0.00
Burundi	0.10	0.00	0.00	0.00	0.00
Cameroon	0.07	0.00	0.00	0.16	0.00
Canada	0.79	0.84	1.40	0.97	2.83
Central America	0.01	0.00	0.00	0.00	0.00
Chile	0.09	0.00	0.00	0.00	0.00
China	0.36	0.00	0.00	0.16	0.00
Colombia	3.83	2.80	3.02	4.85	1.42
Congo	0.12	0.00	0.00	0.00	0.00
Costa Rica	0.42	0.00	0.23	0.00	0.00
Croatia	0.55	4.76	0.00	1.78	0.47
Cuba	0.03	0.28	0.00	0.16	0.00
Czech Republic	0.02	0.00	0.00	0.00	0.00
Denmark	0.16	0.00	0.00	0.16	0.47
Dominican Republic	0.01	0.00	0.00	0.00	0.00
East Africa	0.13	0.84	0.23	0.00	0.00
Ecuador	1.05	0.00	0.00	0.16	0.00
Egypt	0.47	0.00	0.00	0.00	0.00
El Salvador	0.01	0.00	0.23	0.00	0.47
Ethiopia	0.07	0.00	0.00	0.32	0.00
Europe	0.06	0.28	0.00	0.16	0.00
Fiji	0.01	0.00	0.00	0.00	0.00
Finland	0.02	0.00	0.00	0.00	0.00
France	3.18	1.96	6.28	4.69	3.30
Gabon	0.02	0.00	0.00	0.16	0.00
Gambia	0.01	0.00	0.00	0.00	0.00

(continued)

Table 4. (continued)

Country	Source of misinformation (%)				
	Social media	Mainstream media	Popular bodies	Other Internet sources	Miscellaneous
Georgia	1.87	8.40	0.47	1.94	0.00
Germany	1.16	0.28	0.47	3.56	0.00
Ghana	0.39	0.00	0.00	1.62	0.00
Greece	0.17	7.84	0.23	2.91	0.94
Guatemala	0.12	0.00	0.47	0.16	0.00
Guinea	0.02	0.00	0.00	0.00	0.00
Honduras	0.01	0.00	0.00	0.00	0.00
Hong Kong	0.37	0.00	0.23	0.00	0.47
Hungary	0.01	0.00	0.00	0.00	0.00
Iceland	0.02	0.00	0.00	0.00	0.00
India	18.07	8.12	3.95	2.75	1.89
Indonesia	1.07	0.28	1.40	1.94	0.00
Iran	0.08	0.28	0.47	0.00	0.47
Iraq	0.08	0.00	0.00	0.00	0.00
Ireland	0.90	0.28	0.00	0.16	0.00
Israel	0.13	0.84	0.00	0.00	0.00
Italy	2.11	3.36	1.40	3.72	0.00
Ivory Coast	0.09	0.00	0.00	0.00	0.00
Japan	0.50	0.28	0.47	1.13	1.42
Jordan	0.19	0.00	0.00	0.00	0.00
Kazakhstan	0.17	0.28	0.47	1.94	0.47
Kenya	0.98	2.24	0.47	2.59	0.47
Kosovo	0.01	0.00	0.00	0.00	0.00
Kuwait	0.01	0.00	0.00	0.16	0.00
Kyrgyzstan	0.04	0.28	0.23	0.65	0.00
Latvia	0.18	0.00	1.40	0.16	0.00
Lebanon	0.04	0.00	0.00	0.00	0.00
Libya	0.03	0.00	0.00	0.00	0.00
Lithuania	0.50	0.56	0.70	0.16	2.36
Madagascar	0.09	0.00	0.23	0.00	0.00
Malawi	0.01	0.00	0.00	0.00	0.00
Malaysia	0.14	0.00	0.00	0.00	0.00
Mali	0.11	0.00	0.00	0.00	0.00
Mexico	2.66	1.12	0.23	0.65	0.94
Middle East	1.29	0.00	0.00	0.00	0.00
Missing	0.77	1.12	1.16	0.00	28.77
Moldova	0.01	0.00	0.00	0.00	0.00
Montenegro	0.01	0.56	0.00	0.00	0.00
Morocco	0.10	0.00	0.00	0.32	0.00
Myanmar	0.71	0.00	0.00	0.16	0.00
Netherlands	0.18	0.56	0.70	0.81	0.47
New Zealand	0.18	0.00	0.00	0.00	0.00
Nigeria	1.00	0.56	0.23	1.78	0.94
North Africa	1.12	0.00	0.00	0.00	0.00
North America	0.02	0.00	0.00	0.00	0.00
North Korea	0.00	0.00	0.00	0.16	0.00
North Macedonia	1.20	2.52	0.70	7.12	1.42
Norway	0.02	0.00	0.00	0.00	0.00
Oman	0.01	0.00	0.00	0.00	0.00
Pakistan	0.22	0.00	0.00	0.00	0.94
Papua New Guinea	0.01	0.00	0.00	0.00	0.00
Paraguay	0.17	0.56	0.93	0.00	0.00

(continued)

Table 4. (continued)

Country	Source of misinformation (%)				
	Social media	Mainstream media	Popular bodies	Other Internet sources	Miscellaneous
Peru	0.29	0.00	1.16	0.00	0.00
Philippines	2.98	0.56	8.60	4.69	1.42
Poland	0.69	0.56	0.23	3.07	0.00
Portugal	0.87	0.00	0.23	0.97	1.89
Qatar	0.01	0.00	0.00	0.00	0.00
Romania	0.02	0.00	0.23	0.00	0.00
Russia	0.31	0.28	0.47	1.94	0.00
Rwanda	0.01	0.00	0.00	0.00	0.00
Saudi Arabia	0.10	0.00	0.00	0.00	0.00
Senegal	0.08	0.00	0.00	0.00	0.00
Serbia	0.11	2.24	1.63	1.62	0.00
Singapore	0.11	0.00	0.00	0.00	0.00
Slovakia	0.01	0.00	0.00	0.00	0.00
South Africa	0.46	0.00	0.23	0.16	0.00
South America	0.02	0.00	0.00	0.00	0.00
South Korea	0.24	0.56	0.23	0.00	0.00
South Sudan	0.03	0.00	0.00	0.00	0.47
Southern Africa	0.04	0.00	0.00	0.00	0.00
Spain	7.83	6.72	6.98	6.63	25.00
Sri Lanka	1.29	0.00	0.00	0.49	0.00
Sudan	0.01	0.00	0.00	0.00	0.00
Sweden	0.06	0.28	0.23	0.16	0.00
Switzerland	0.02	0.00	0.00	0.00	0.00
Syria	0.10	0.00	0.00	0.00	0.00
Taiwan	2.38	0.56	0.00	0.49	1.89
Tajikistan	0.01	0.00	0.00	0.00	0.00
Tanzania	0.11	0.00	0.00	0.97	0.00
Thailand	0.42	0.00	0.00	0.00	0.94
Timor Leste	0.01	0.00	0.00	0.00	0.00
Tunisia	0.22	0.00	0.00	0.16	0.00
Turkey	2.48	12.32	0.70	2.91	0.00
Tuvalu	0.01	0.00	0.00	0.00	0.00
Uganda	0.14	0.00	0.23	0.49	0.00
UK	0.69	1.12	0.23	0.49	0.00
Ukraine	3.15	2.80	0.47	0.65	0.47
United Arab Emirates	0.06	0.00	0.00	0.00	0.00
Uruguay	0.03	0.00	0.00	0.00	0.00
USA	8.61	11.20	31.16	12.94	2.36
Uzbekistan	0.01	0.00	0.00	0.00	0.00
Vanuatu	0.01	0.00	0.00	0.00	0.00
Venezuela	0.50	0.56	3.26	0.00	1.42
Vietnam	0.00	0.28	0.00	0.00	0.00
Western Sahara	0.21	0.00	0.00	0.00	0.00
Yemen	0.02	0.00	0.00	0.00	0.00
Zimbabwe	0.03	0.00	0.00	0.00	0.00

conservatism, like in these countries, is associated with a higher susceptibility to misinformation (Roozenbeek et al., 2020). Like the ‘popular bodies’ category, the USA produced the highest amount of misinformation from different Internet sources as well (12.94%),

followed by North Macedonia (7.12%) and Spain (6.63%). For India, the highest misinformation-producing country, the amount of misinformation from popular bodies (3.95%) and various Internet sources (2.75%) was moderate (see Table 4).

The higher prevalence of misinformation could complicate public health responses and health communication in many countries. Meanwhile, COVID-19 misinformation has claimed many lives around the world (Coleman, 2020; Islam et al., 2020). In countries like India and Bangladesh, religious and political COVID-19 misinformation is propelling interreligious discontent and encouraging superstitions and unscientific health practices (Al-Zaman, 2021b; Menon, 2020; Sarkar, 2020; Sutaria, 2020). Therefore, proper measures should be sanctioned to control the prevalence of misinformation and thereby reduce health hazards.

Conclusion

In summary, this study has produced a few novel insights regarding COVID-19 misinformation, which will help with a better understanding of the COVID-19 misinformation climate around the world. Also, because this study has utilized the largest amount of COVID-19 misinformation data to date, the results can be more generalizable. Lastly, scholars may find the results and methodological aspects useful for future studies. Beyond its contributions and usefulness, however, this study is limited in a few ways. It relied on data collected by independent fact-checkers, which often have limited resources to collect, research and debunk all the available claims (Brennen et al., 2020). Also, the data included misinformation from only 94 fact-checkers around the world that are approved by the International Fact-Checking Network, which seems insufficient. As a result, many countries were not on the list and popular misinformation from these countries was not included. For example, BD Fact Check, a Bangladeshi fact-checking organization, debunked 300 pieces of misinformation in March–December 2020, 150 of which were related to the pandemic (Khan, 2020; Somoynews, 2020), which is missing in the current data set. This reveals that the amount of COVID-19 misinformation is much higher than the amount that was included in the current data set. Another limitation of the study is that it used only descriptive statistics to observe the variables' frequencies, percentages and cross-tabulations, and the inclusion of the results from inferential statistics (e.g. association analysis between the variables) would better explain their relationships. Although it was not a requirement for the present study, future studies may consider this and find it useful.

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Notes

1. See the CoronaVirusFacts/DatosCoronaVirus Alliance database at: <https://www.poynter.org/ifcn-covid-19-misinformation>
2. See the Web Scraper website at: <http://webscraper.io>

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How older adults in the USA and India seek information during the COVID-19 pandemic: A comparative study of information behavior

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Abstract

The 2020 COVID-19 pandemic introduced significant information challenges for older adults worldwide. Given the widespread disparities in information infrastructure and access between developing and developed countries, the challenges presented during this period may be even more grave in the developing world. This interview study examines how older adults (age 65+) in two countries—the USA and India—experienced information needs, sources, and barriers. The results indicate distinct experiences among the two populations, with individuals in the USA expressing more diverse needs, while Indian respondents focused on the impact of COVID-19. The American respondents also indicated much greater use of Internet resources compared to the Indian respondents, who used television and print resources more frequently. Far more Indian respondents reported significant challenges finding information to satisfy their information needs. The findings of this study have important ramifications for the design of intervention, education, and support for the information-related needs of older adults worldwide.

Keywords

Information behavior, information needs, information sources, developing countries, older adults, comparative

The coronavirus pandemic has created tremendous distress in the lives of much of the world's population. As a result of this crisis, large-scale behavioral changes have occurred, including in the seeking of information by individuals impacted by the pandemic condition. Information related to the threat of this pandemic is vital for people to protect themselves and combat the spread of this contagious and deadly virus. As such, the strategic initiatives taken by governments and various non-governmental organizations and health agencies to stop the spread of the virus in communities—like awareness campaigns on COVID-19, quarantine protocols, the mandating of lockdown measures, and supplies of essential commodities—are vital to ensuring that citizens remain healthy and informed. Depending on the existing information infrastructure—which may be drastically

different among developing and developed nations—the quality of information and capacity to address information needs may differ greatly.

Older adults are at a higher risk of severe illness from COVID-19, as aging is one of several factors that correspond with advanced symptomology. According to a report from the Centers for Disease Control and Prevention (2020), 8 out of 10 COVID-19 deaths reported in U.S. have been senior adults of age 65 or more. Various independent studies have also shown that coronavirus produces worse outcomes and a high

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mortality rate among older adults who contract the disease (Liu et al., 2020; Shahid et al., 2020). In such crisis conditions, the information-seeking behavior of older adults, particularly those who generally suffer from ageing-related diseases like frailty, disability, chronic disease, physiological changes, psychological distress, and cognitive decline, can be limited by a lack of physical interaction with other human beings and greater reliance on information and communications technology. Factors including traditional literacy, information literacy, computer literacy, mobility, and dexterity play an important role in the ability to seek trustworthy and reliable information.

The purpose of this study is to investigate how older adults in the USA and India have made sense of their changing information environment during the COVID-19 pandemic, focusing particularly on information needs that have emerged and the sources utilized in addressing them. Due to the significant socio-economic differences between the USA and India, as well as similarities in terms of the high number of cases and mixed quality of the pandemic response, a comparative analysis of information needs and sources utilized during the time of the pandemic may offer insight into the inequities present between developing and developed nations.

Literature review

Following the outbreak of the coronavirus pandemic, awareness efforts related to this contagious disease were initiated by the World Health Organization. Many countries initiated their own local efforts as well, utilizing a variety of authoritative information sources to convey important updates, such as political leaders, doctors, researchers, and celebrities (McCloskey et al., 2020). Many regions of the world—including both the USA and India—announced lockdowns, which led to a break in the global supply chains, transportation, and industry, and thus affected the global economy and access to traditional sources of information (Ebrahim et al., 2020).

Global health crises are also information crises. Attention must be paid to this by information science professionals, who can play a lead role in their study field through education, research, and practice (Xie et al., 2020). The COVID-19 pandemic disproportionately affected poor and vulnerable populations (older adults), and caused substantial harm to those suffering from mental illness. These individuals were doubly susceptible to harm, both from the physical impacts of the virus and from the digital divide and lack of quality information (Xie et al., 2020). The “digital divide” is defined as a gap between those who

have access to information and communications technologies and those who do not (Bernhardt, 2000). In present times, the concept of the digital divide has changed from “have” and “do not have” Internet access to disparities in searching and finding information from myriad sources on the Web and the amount of time spent in finding this information (Hargittai, 2002). Hargittai and Dobransky (2017) discovered that people’s socio-economic status (i.e. higher education and higher income group) correlates with the level of Web-using skills among individuals. Berkowsky et al. (2017) found that factors such as the ability to self-assess one’s efforts, computer/Internet skills, and technology ratings have a strong association with the extent of technology adoption among older adults.

COVID-19 has introduced fundamental changes to the information worlds of older adults, many of whom relied on interpersonal information sources that are no longer feasible to access during the pandemic. However, the population of older adults is also quite diverse, with individuals having differing levels of comfort and skill in using a variety of information sources, particularly the Internet (Hunsaker and Hargittai, 2018; Van Boekel et al., 2017). The digital divide is even more pronounced among such a population, often depending on comfort with using the Internet, educational attainment, and socio-economic status (Friemel, 2016; Hall et al., 2014; Hargittai et al., 2018). Older adults who were more comfortable with using the Internet before the pandemic are likely to have experienced less of an impact when it hit.

Van Boekel et al. (2017) identified diversity among older adult groups in their use of the Internet and observed that, among those who did use the Internet, they mainly used it for searching for general information, banking, comparing products, and social and leisure-related activities. Levy et al. (2014) observed the direct relationship between health literacy and the use of the Internet among older American adults. Chu et al. (2009) found that older adults residing in low socio-economic communities are often deprived from accessing Internet health-care information; efficacy in using the Internet will reduce anxiety and increase confidence and interest in retrieving health-related information. Chu (2010) further addressed the importance of family support (tangible and emotional) and Internet self-efficacy (general and communication influences) related to perceived effectiveness of e-learning. Low socio-economic status (such as living in a developing nation), lack of interpersonal support, and lack of Internet access could all constrain the information-seeking ability of older adults.

Because of the information gaps presented by the COVID-19 pandemic, people affected by serious mental illness are at significant risk when left without up-to-date and accurate information about strategies for mitigating risks and knowing when to seek medical treatment for COVID-19 (Druss, 2020). Overwhelming news stories and limited knowledge about coronavirus may lead to experiences of loneliness, denial, anxiety, depression, insomnia, fear, irritation, and boredom among those with severe mental illness (Li et al., 2020). Newman and Zainal (2020) advocate for the value of maintaining social connections for mental well-being among older adults in order to prevent depression, anxiety, loneliness, and the need for friendship, and promote a sense of belonging, though the virus itself makes these connections difficult to maintain. Cotten et al. (2012) highlight the importance of Internet use in reducing depression and having an impact on the mental well-being of older adults.

Dervin's sense-making approach

This study's design is informed by Dervin's (1998) sense-making approach. The advantages of sense-making theory, as noted by Savolainen (1993), include that it easily and closely reflects our daily experiences; it is universally applicable to multiple disciplines, such as communication studies, cognitive science, sociology, and information studies; it can include any type of entity, such as individuals, groups, organizations, and societies; and it can be used to analyze information-seeking in virtually any kind of context. This approach and its associated model can be used to inform what types of questions are important to ask when conducting information behavior research.

Dervin's (1998) sense-making explores individuals' experiences based on the gaps in understanding in which they interact, with situational factors (an individual's background and habits), contexts (power dynamics, culture), information sources (internal and external), communicative exchanges, and activity shaping the bridges between these gaps. To understand how individuals in the USA and India differ in their information behavior during the time of the COVID-19 pandemic, it is important to consider the role that the information infrastructure, access (Internet reliability and affordability, developing versus developed economy), and cultural practices (collectivism versus individualism) play in the information needs that develop, the information sources that are consulted, and the ways in which individuals respond to a lack of information.

The questions used for the interview protocol in this study are informed by the sense-making methodology. The questions were designed such that the participants were asked to consider situations in which they faced an information need (or a "gap"), about bridging that gap (sources and behaviors), what factors led to their use of these particular bridges, and how they used that information once they had received it. Both positive experiences, where gaps in knowledge were successfully bridged, and negative experiences, where the individual was not successful, were explored. Using Dervin's model to inform the interview protocol enabled the researchers to better understand the process behind information behavior, rather than only listing information needs and sources. This provides additional dimensions whereby the behaviors of older adults in the USA and India can be compared, and the environmental factors that influence those behaviors evaluated (e.g. access to technology sources, Internet reliability, cultural practices).

Research questions

Based on significant gaps in information access observed among developed and developing countries, and a lack of existing research pertaining to how the COVID-19 pandemic has impacted information behavior, the following research questions were developed to guide this study:

1. What differences exist among the information needs and sources used by older adults in the USA and India during the time of the COVID-19 pandemic?
2. How has the experience of increased difficulty in finding information impacted the attitudes and behavior of older adults in these countries?

Methods

This study consisted of interviews with 60 older adults (age 65+) in two countries: the USA and India. Both of these countries have large populations (the second and third largest worldwide), are constitutional democracies, invest heavily in higher education, and have a large segment of the population that speaks English (as one of the nation's official languages). However, there are also many distinctions between the countries, perhaps chiefly among them being their economic standing. While the USA is a highly developed country with a per capita gross domestic product of US\$67,000 (10th worldwide), India has a per capita gross domestic product of US \$9000 (116th worldwide and nearly seven times smaller than the USA) and is labeled a developing

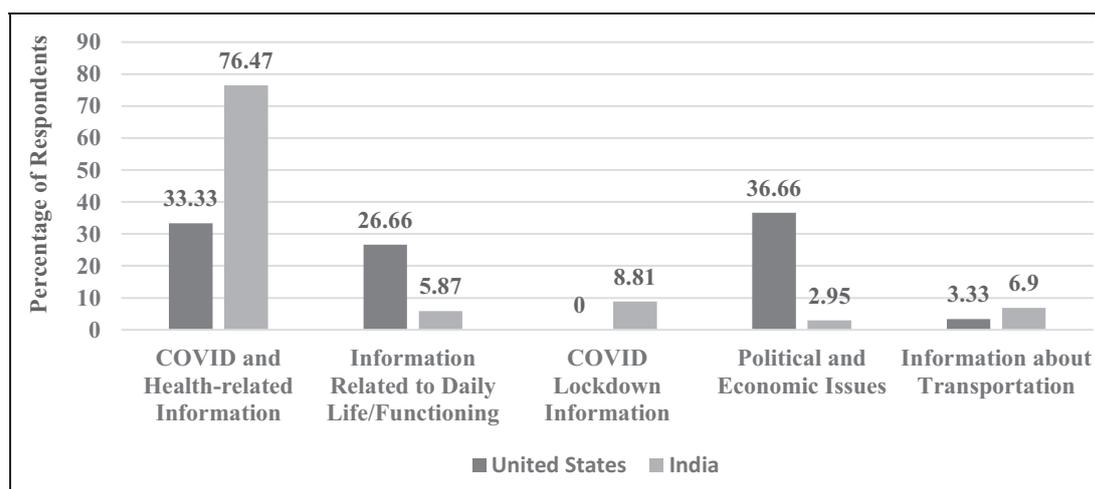


Figure 1. Types of information sought.

country. Additionally, while English is an official language of both countries, it is spoken by virtually all Americans and as the primary language of nearly 80%, whereas in India only about 10% of the population speaks English, while there are dozens of primary languages scattered regionally across the country.

Considering that a larger percentage of the population speaks Hindi (about 60%) than speaks English, the interview questions for this study were translated into Hindi before being administered. In the copy of the interview protocol provided in Appendix 1, both the English and Hindi versions of the questions are included.

The interviews were conducted in July and August 2020 in a variety of formats offered with the participants' safety in mind: Zoom (video), telephone, and email interviews. The participants were recruited from the towns in which the researchers' institutions are located—one in eastern India and one in the Midwest of the USA, and both with moderately large populations (about 300,000). The participants were identified through a variety of means, including online advertisements in Facebook groups, local (print) advertisements/flyers, and word-of-mouth recruiting among community members. A total of 30 participants were recruited: 35 in the India cohort and 25 in the USA cohort.

Following each interview, the responses were transcribed in a secure Microsoft Excel spreadsheet, with access restricted to the researchers. The resulting data was analyzed using qualitative content analysis. A seven-step integrated analytic-inductive approach was adapted from the work of Marshall and Rossman (2006): (1) both researchers read all the survey responses to get a sense of the responses; (2) the researchers reread the data; (3) all direct responses

to the questions were marked; (4) looking for patterns in the data, the direct responses were organized into categories that emerged; (5) each response was sorted into the appropriate category using the respondents' actual words; (6) the results were reviewed, looking for overlap and redundancy, and to refine and revise the category titles; (7) from the survey, instances of verbatim narrative were selected to illustrate the categories.

Results

Figure 1 displays the results for the types of information for which the participants expressed a need during the pandemic. There are several notable distinctions between the USA and India responses. By a margin of over two-to-one, the Indian respondents indicated a pressing information need relating to COVID-19 and associated health concerns. An additional 9% indicated that their most pressing information need related to lockdown restrictions in their city. The American respondents, conversely, indicated that political and economic issues were the most pressing area of information need, while one-third indicated that COVID-19 information was needed most, and 27% expressed a general need not related to recent world events (e.g. "I'd like to know when the new grocery store is opening").

Shown in Figure 2 are the reasons the respondents gave for needing the information indicated in Question 1. For both country cohorts, a general desire to know was the most significant reason. However, the American respondents indicated a concern related to personal health much more frequently, while the Indian respondents reported a larger variety of reasons.

In Figure 3, the information sources consulted by the respondents in an attempt to satisfy their

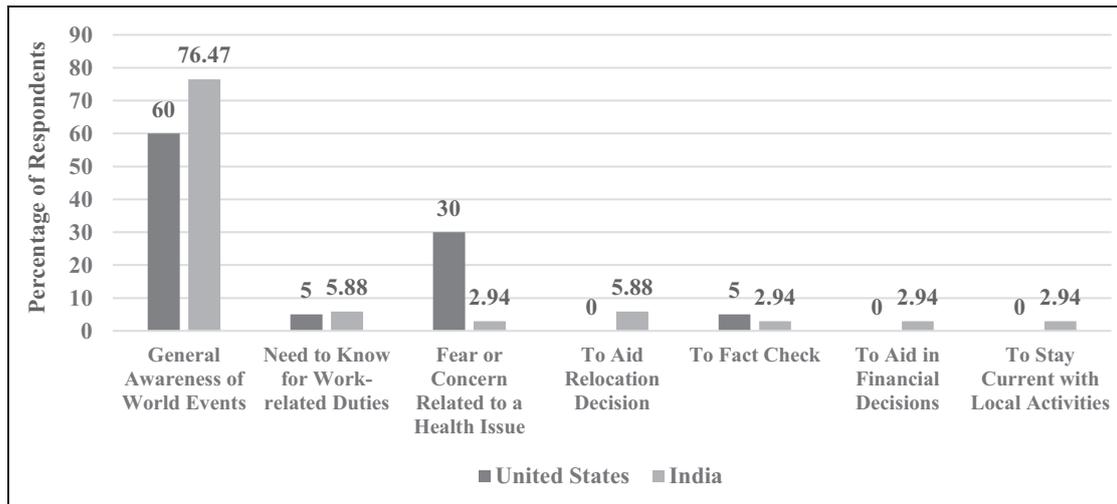


Figure 2. Purpose of information sought.

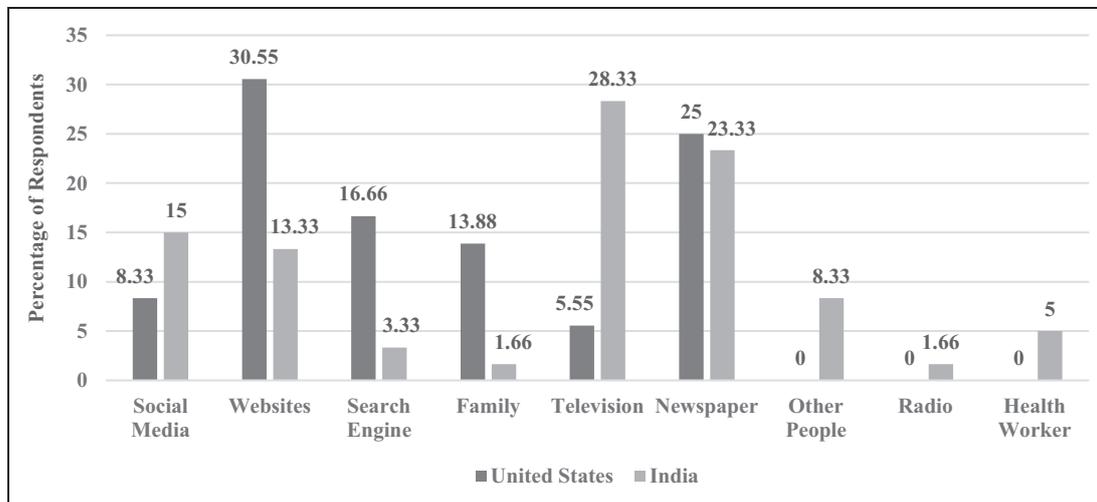


Figure 3. Sources used to find information.

information needs are listed. These results illustrate significant differences between the two cohorts. Web-related resources (social media, websites, search engines) comprise 65.5% of the responses for the American respondents, compared to only 31.7% of the responses of the Indian respondents. Television is overwhelmingly more popular as an information source among the Indian respondents. Newspapers are moderately popular information sources among both cohorts.

Figure 4 shows the reasons why the respondents selected the information sources they did in order to satisfy their needs. Again, the responses are quite distinct among the two cohorts. While the American respondents emphasized the level of ease or comfort in using a particular information source, the Indian respondents valued availability and reliability more highly. The American respondents indicated a higher level of confidence in being able to access the

information they needed, particularly those individuals with a college degree. The Indian respondents indicated a greater reliance on whatever sources were available—with there not always being a wide range of options from which to choose.

The responses to what changes COVID-19 caused for the respondents in their information-seeking behavior are shown in Figure 5. The majority of the American respondents said that they made no changes. Approximately 19% indicated that they had to become more self-aware about their information needs and how to find answers; this compares to 24% of the Indian respondents who said the same. Both cohorts had a sizable number of respondents who indicated that they used the Internet more frequently. The Indian respondents—but not the American respondents—indicated greater contact with experts and professionals, such as doctors, or family, friends, and community members.

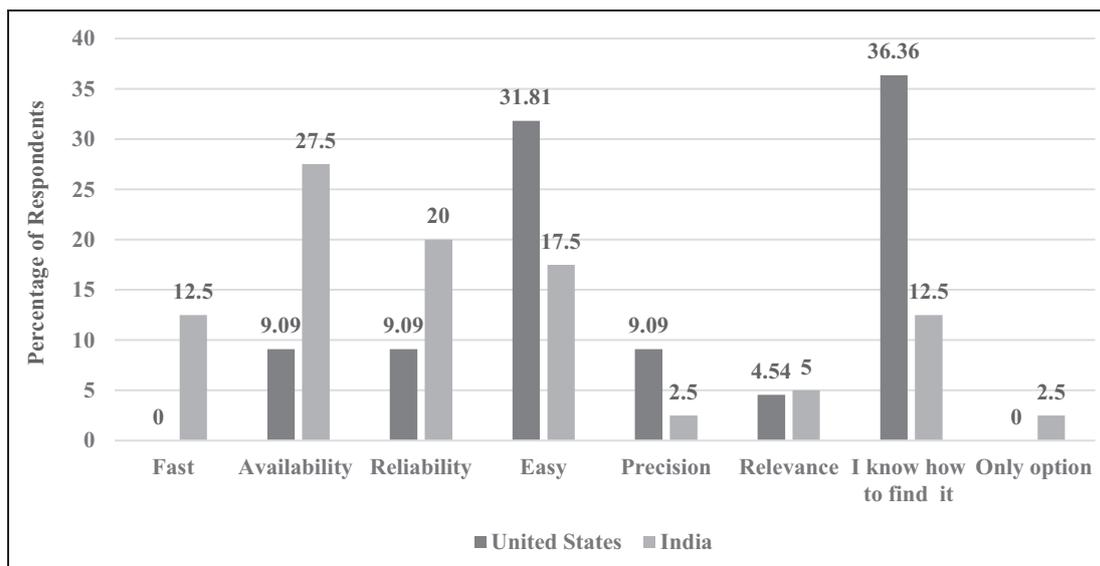


Figure 4. Reasons for using an information source.

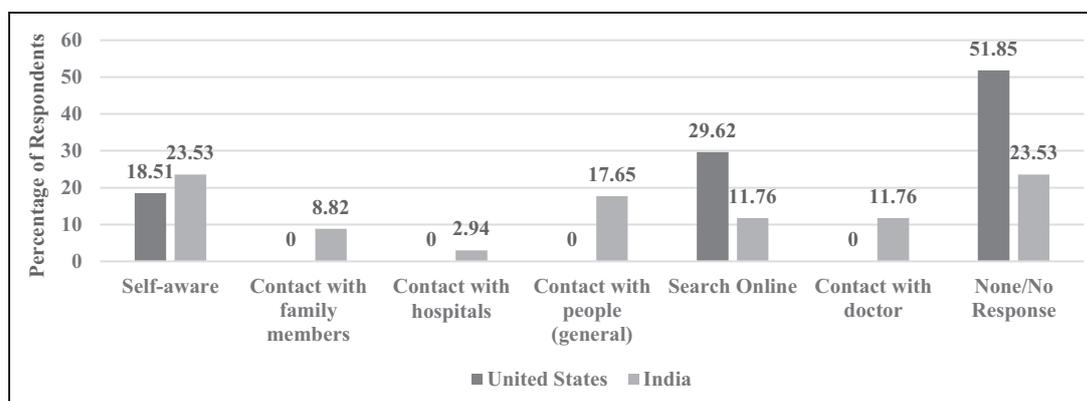


Figure 5. Adjustments made in seeking information during the pandemic.

Figure 6 displays the findings for the information needs the participants had that they were not able to satisfy through any available sources. The most significant difference is regarding whether the participants had any such experiences, with 43% of the American participants stating that they had no information needs that were not met, compared to just 3% of the Indian respondents. Both populations indicated unsatisfied information needs regarding the existence of any treatment or vaccine for COVID-19. The Indian participants also expressed greater concern about the lack of information about the spread of COVID-19 in their community.

Figure 7 shows how the participants responded to an unsatisfied information need. While the largest percentage of the American participants remarked that they kept searching, the largest percentage in India said that they stopped looking. A significantly larger proportion of the American respondents said that they

felt indifferent and/or had no response to their unmet information needs compared to the Indian participants. Conversely, the Indian respondents noted feeling regret or anxiety due to their failed searches at a higher rate than the American participants.

In response to a question about their interest in attending a class on how to find information, 97% of the Indian participants expressed interest compared to only 32% of the American participants. Overall, the American participants indicated much greater confidence in their ability to find information (whether this confidence is justified is another matter and is not examined in this study). Figure 8 shows the reasons why the participants were concerned about the possibility of such a class. All of the Indian participants either expressed no concern or did not provide a response for this question. Among the American participants, the greatest concern expressed was that the class was not necessary,

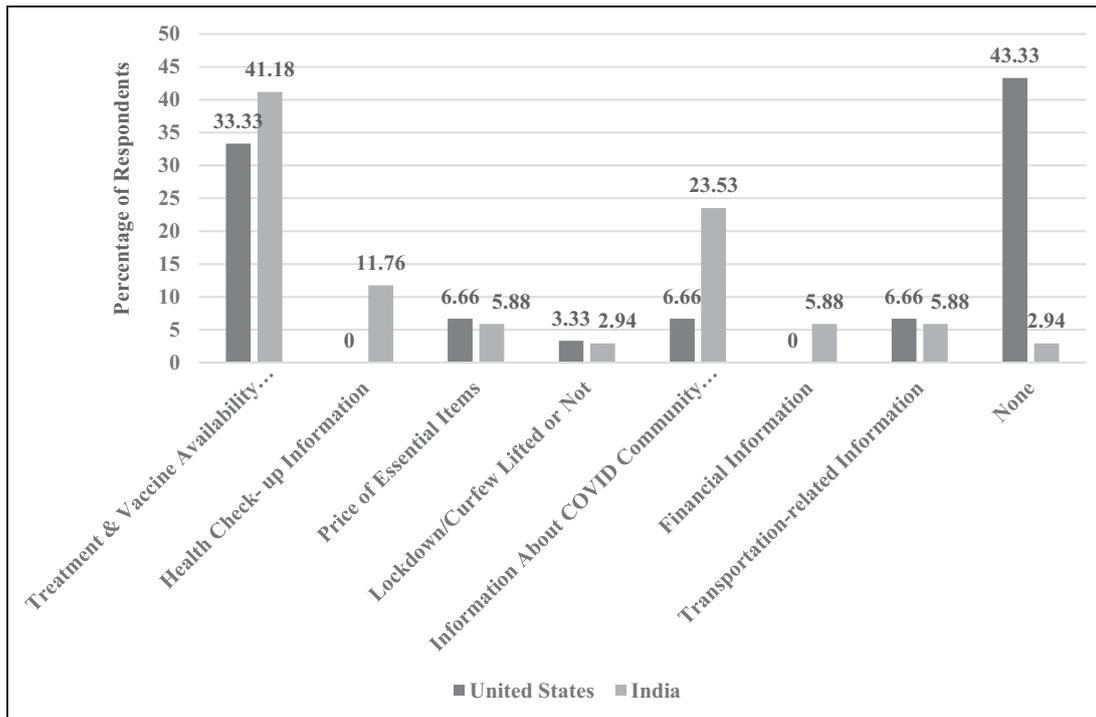


Figure 6. Types of unsatisfied information needs.

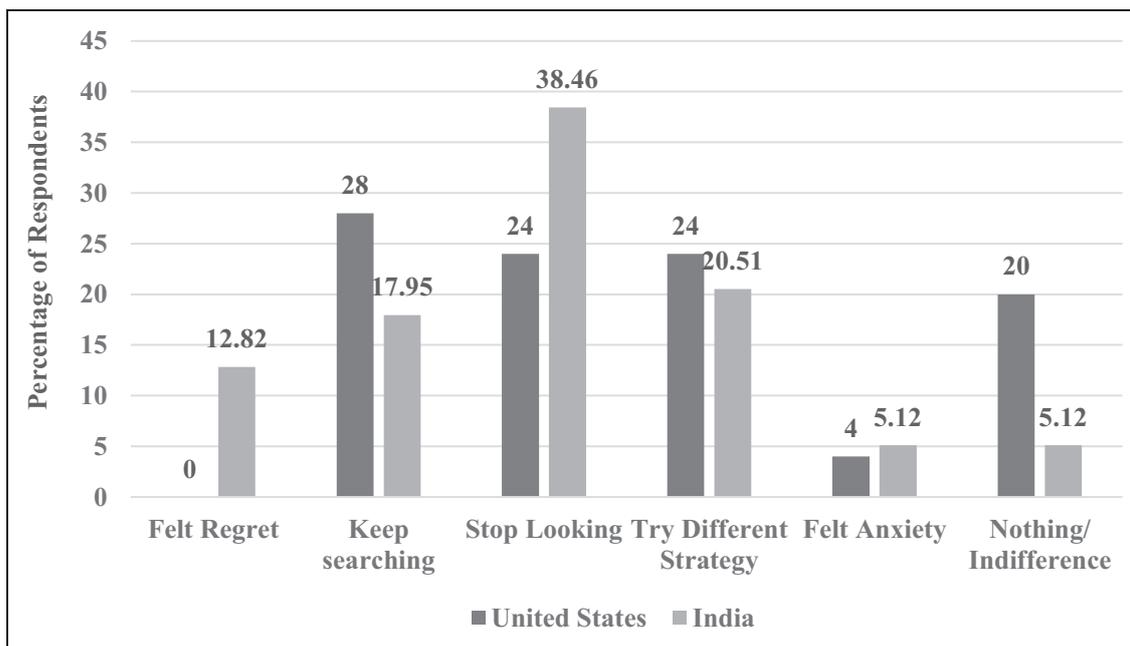


Figure 7. Responses towards unsatisfied information needs.

followed by the amount of time required and the possibility of a cost to attend.

Lastly, relative to cases where information was not successfully found, Figure 9 asks what made successful cases different. Both cohorts indicated that they knew where to look for the information they successfully found, compared to less clarity about where to search for information in unsuccessful searches. The Indian

participants indicated that they felt less frustrated when seeking information successfully, while this was not a major concern among the American participants.

Discussion

The responses to each of these questions demonstrate significant differences among the participants from

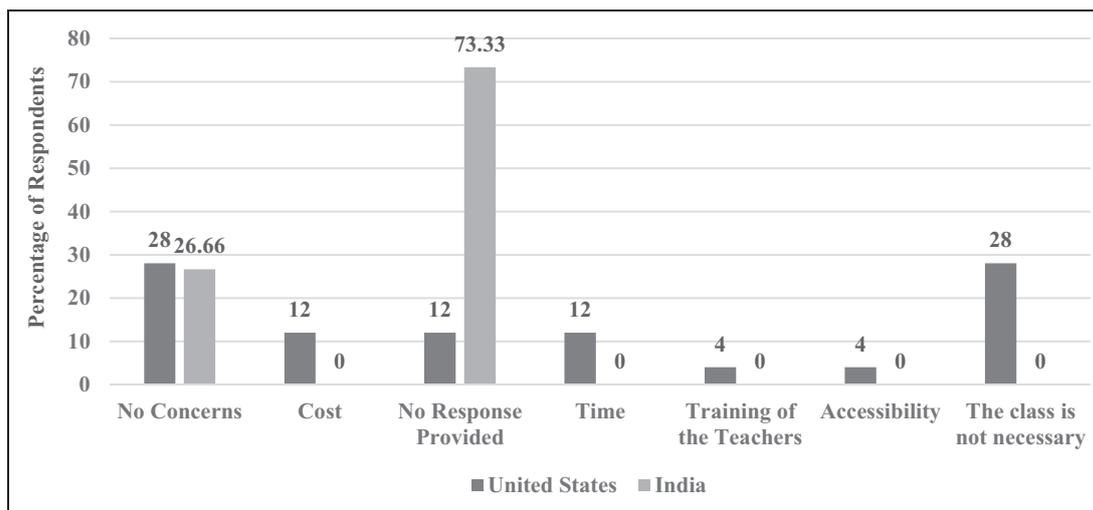


Figure 8. Concerns about attending an educational class on how to find information.

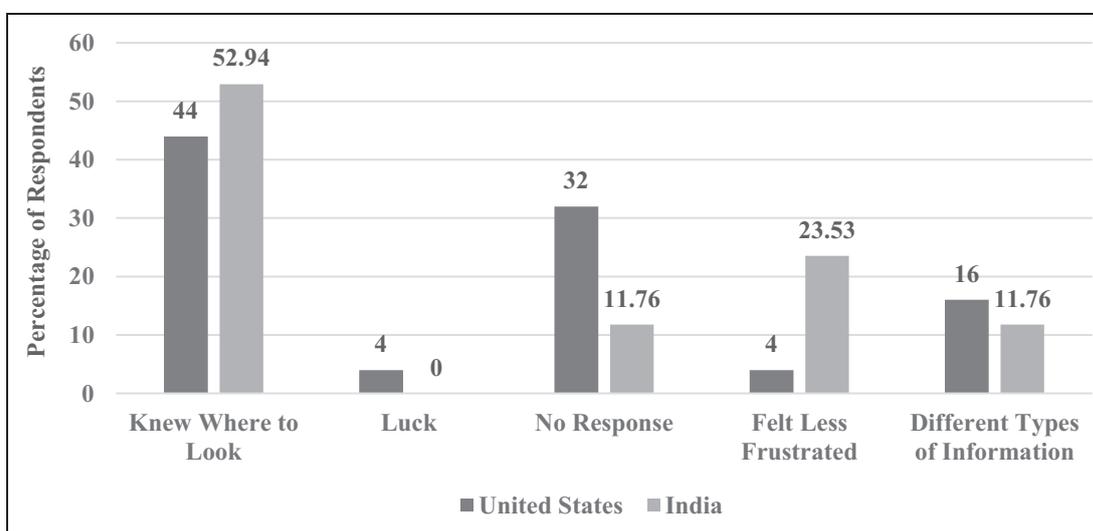


Figure 9. Factors that made successful searches different.

developing (India) and developed (USA) nations. The types of information needed, the sources from which it was sought, and the challenges faced are all unique in frequency, though the basic categories in which these results may be sorted are similar among the two cohorts.

The Indian participants indicated greater concern about COVID-19 compared to the American participants, who appeared more concerned with everyday-life information and information related to an economic downturn and politics during this period than the virus itself. The American respondents shared concerns about the November 2020 presidential election in particular, while often downplaying the role that COVID-19 had played in their lives. As one interviewee stated: “I already spent most of my time at home and used my computer to look up news. The

only major change was that I see less of my friends and go out to eat less often.” One frequent everyday-life information need related to hobbies—for example, bird watching, fishing, and literature. Comparatively, the Indian respondents expressed information needs to this effect hardly at all, as they emphasized the need to curb the spread of the virus. At the time when this study was conducted, the USA and India ranked first and second in the world in terms of the number of cases, each with 50,000+ new cases per day on average.

The variance in where information was sought may reflect the infrastructure differences between the two nations. Only about half of the population of India has regular access to the Internet and, even then, it can be inconsistent. Access to certain websites may also vary due to intermittent censorship as well as language

differences among the population. These challenges were not nearly as pronounced among the American participants. The American participants were often very specific about the sources they used, naming the websites they frequently used (most commonly, Google). Educational attainment predicted the number and variety of sites consulted among both cohorts (individuals with a higher level of education among both cohorts used more sites expressing a variety of conflicting perspectives on issues).

The American participants demonstrated a greater preference for easy-to-find information, whereas the Indian participants expressed limitations related to access and the quality of information. The American respondents also demonstrated more confidence in their information-searching ability, as nearly half suggested that there was no information that they struggled to find. There was also more persistence demonstrated when confronted with an unsatisfied information need among the American participants, but also more indifference about this situation.

Although the COVID-19 pandemic presents unique challenges to libraries in offering services to the older adult population, findings like those of this study provide insight for library services, as well as demonstrating the divides in library service needs among countries. In the USA, many older adults choose not to seek help when they face challenges, owing, in part, to the strong individualism that characterizes American culture (Tata and Leong, 1994; Westerhof et al., 2000), while this may not be the case in other countries. This highlights that it is necessary to develop different approaches to outreach and instruction in different countries during the COVID-19 pandemic. Library administrators must understand their service population and how cultural and infrastructure constraints may alter service needs.

There are several limitations and avenues for future research to note with respect to this study. One limitation relates to the study sample. While 60 participants (35 for the USA cohort and 25 for the India cohort) are sufficient for an interview study, a broad-based quantitative survey based on the findings of this study may offer statistical strength to the differences observed. These interviews offer a snapshot in time, during one of the peak periods of the COVID-19 pandemic, but the results may look different during other periods of time early in the pandemic or longitudinally across the entirety of the pandemic.

Conclusion

This study indicates significant distinctions in the information behavior of older adults in the USA and

India during the COVID-19 pandemic. From the types of information sought to the sources used and the challenges faced, older adults in developing and developed countries described disparate experiences. This distinction may have implications for the design of information interventions (e.g. information literacy instruction) in these countries. Furthermore, it highlights the systemic inequities in access to information and information technologies that exist between countries of vastly different economic standing, and has identified key areas for improvement.

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Appendix I

Interview questions for the study participants

Background Information (पृष्ठभूमि की जानकारी)

1. What is your age?
आपकी उम्र क्या है?
2. Are you retired/how long?
क्या आप सेवानिवृत्त हैं/कब तक?
3. What was your highest level of educational attainment?
आपकी उच्चतम स्तर की शैक्षणिक प्राप्ति क्या थी?
4. What is your current living situation like?
आपकी वर्तमान जीवन स्थिति क्या है?
5. Has the COVID-19 pandemic caused any major difficulties in your life?
क्या COVID-19 महामारी ने आपके जीवन में कोई बड़ी मुश्किल पैदा की है?
6. Is there anything special about yourself that you would like to share?
क्या आपके बारे में कुछ विशेष है जसि आप साझा करना चाहते हैं?
7. Think about situations during the COVID-19 pandemic where you needed information to answer a question or solve a problem, such as finding information about a new restaurant or store that is moving into your town, looking for information about health or medical conditions, and looking for information about political candidates:
COVID-19 महामारी के दौरान स्थितियों के बारे में सोचें जहाँ आपको किसी प्रश्न का उत्तर देने या किसी समस्या को हल करने के लिए जानकारी की आवश्यकता थी, जैसे कि एक नए रेस्तरां या स्टोर के बारे में जानकारी प्राप्त करना जो आपके शहर में घूम रहा है, स्वास्थ्य या चिकित्सा स्थितियों के बारे में

में जानकारी की तलाश में, और राजनीतिक उम्मीदवारों के बारे में जानकारी की तलाश में है:

a. What types of information have you sought (e.g. “Information about the local cases of coronavirus”)?

आपने किस प्रकार की जानकारी मांगी है (जैसे, “कोरोनावायरस के स्थानीय मामलों के बारे में जानकारी”)?

b. What led you to seek these types of information (e.g. “I was concerned about how many cases there were locally”)?

ऐसी जानकारी लेने की आवश्यकता क्यों थी (जैसे, “मुझे इस बारे में जानना था कि स्थानीय स्तर पर कितने वायरस के मामले थे”)?

c. What sources did you use to find this information (e.g. Center for Disease Control’s website)?

इस जानकारी को खोजने के लिए आपने कनि स्रोतों का उपयोग किया (जैसे, “रोग नियंत्रण केंद्र के लिए केंद्र”)?

d. What led you to use these sources as opposed to others (e.g. “I knew how to find them and wasn’t sure about other sources”)?

अन्य संसाधनों के विपरीत इन स्रोतों का उपयोग करने के लिए आपको कनि कारकों ने प्रेरित किया (जैसे, “मुझे पता था कि उन्हें कैसे खोजना है और अन्य स्रोतों के बारे में नश्विचि नहीं है”)?

e. What adjustments did you have to make when seeking out this information (e.g. “I would normally ask my doctor for medical information help, but he wasn’t easy to get hold of”)?

इस जानकारी को प्राप्त करने के लिए आपको क्या adjustments करना पड़ा (जैसे, “मैं सामान्य रूप से अपने डॉक्टर से चिकित्सा की जानकारी के लिए मदद माँगता हूँ, लेकिन उन्हें यह देखना आसान नहीं था”)?

8. Think about a time recently during the COVID-19 pandemic where you looked for information to answer a question or solve a problem but were not able to find the information you wanted:

हाल ही में COVID-19 महामारी के दौरान एक समय के बारे में सोचें जहाँ आपने किसी प्रश्न का उत्तर देने या किसी समस्या को हल करने के लिए जानकारी की तलाश की थी, लेकिन आप जो जानकारी चाहते थे, उसे खोजने में सक्षम नहीं थे:

a. What was your response to this lack of information that you needed (e.g. “I stopped looking and tried to forget about it”)?

आपकी इस जानकारी के अभाव में आपकी क्या प्रतिक्रिया थी जो आपको चाहिए थी (जैसे, “मैंने सोचना बंद कर दिया और इसके बारे में भूलने की कोशिश की”)?

9. What would you think about a class where an expert teaches you how to find and use

information about this problem/question (e.g. “Yes, I think that could be helpful”)?

आप उस वर्ग के बारे में क्या सोचेंगे जहाँ एक विशेषज्ञ आपको सिखाता है कि इस समस्या/प्रश्न के बारे में जानकारी कैसे प्राप्त करें और उसका उपयोग कैसे करें (जैसे, “हाँ, मुझे लगता है कि मददगार हो सकता है”)?

a. What would concern you about this class (e.g. “I’m not very good at finding information, so I don’t know that I would be a good student”)?

आप इस वर्ग के बारे में क्या चिंता करेंगे (जैसे, “मैं जानकारी प्राप्त करने में बहुत अच्छा नहीं हूँ, इसलिए यह मेरे लिए पहचानना कठिन होगा क्योंकि मैं अनजान हूँ”)?

Section 3 (Subquestion 3)

10. Think about recent times during the ongoing COVID-19 pandemic where you looked for information to answer a question or solve a problem and were able to successfully find and use the information you wanted:

चल रहे COVID-19 महामारी के दौरान हाल के समय के बारे में सोचें जहाँ आपने किसी प्रश्न का उत्तर देने या किसी समस्या को हल करने के लिए जानकारी की तलाश की थी और आप जो जानकारी चाहते थे उसे सफलतापूर्वक खोजने और उपयोग करने में सक्षम थे:

a. What made these experiences different from those where you were not able to find the information you needed (e.g. “I knew where to find this type of information”)?

इन अनुभवों ने विभिन्न सूचना स्रोतों से अलग क्या किया जहाँ आप आवश्यक जानकारी नहीं पा रहे थे (जैसे, “मुझे पता था कि इस प्रकार की जानकारी कहाँ मिलेगी”)?

Additional comments (अतिरिक्त टिप्पणियाँ)

- Do you have any additional comments about how recent world events have impacted the information you seek and use and from where you seek it?

क्या आपके पास हाल ही की दुनिया की घटनाओं के बारे में कोई अतिरिक्त टिप्पणी है जो आपके द्वारा चाहने और उपयोग की जाने वाली जानकारी को प्रभावित करती है और आप इसे कहाँ से चाहते हैं?

- Do you have any additional comments about the overall design of this study or interview questions?

क्या आपके पास इस अध्ययन या साक्षात्कार के सवालियों के समग्र डिजाइन के बारे में कोई अतिरिक्त टिप्पणी है?



COVID-19 information seeking and utilization among library and information science professionals in Nigeria

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Abstract

Like many countries, Nigeria's library services were affected by COVID-19. This study (conducted in 2020) examined the priorities and barriers for information seeking and use by library and information science professionals in Nigeria, including what type of information was sought, the sources used and how these were evaluated. An online survey, with questions informed by a literature survey, was sent to library and information science professionals in Nigeria with WhatsApp accounts (individual and library and information science group accounts). The responses were automatically collected and saved into Google Sheets for further analysis using descriptive statistics. There were 167 responses (61% response rate). The main information needs were causes of the virus, COVID-19 symptoms, providing library services during physical library closure, the timing of reopening, and staff and user safety measures required for library reopening. The respondents were also concerned about COVID-19 test procedures and transmission mechanisms, treatment (including herbal medicines), vaccines, government policy and restrictions on movement. The main information sources used were the Internet (including government and World Health Organization websites), social media, television and radio. The authority, reliability, currency and relevance of the information were considered when evaluating COVID-19 information consulted, and were using the information primarily to 'keep safe' in accordance with government regulations, to provide library services on time and to plan for safe reopening. The barriers to information seeking and use were technical (poor telecommunications), financial (lack of funds to purchase resources) and physical (library closures). One barrier was the volume of information (both reliable and unreliable). Verification was viewed as important but seemingly difficult to do. The respondents were concerned about the safe and effective operation of library services. Library and information science professionals in Nigeria may need advice from health professionals on the most reliable sources of information on COVID-19 and how to use them for themselves and their users.

Keywords

COVID-19, information seeking, information utilization, library and information science, LIS professionals, Nigeria

Introduction

The issue of COVID-19 has shocked many nations. Nigeria has experienced many economic issues due to the recent lockdown and, even since the lockdown has been lifted, living conditions have not been easy for

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its citizens. The COVID-19 pandemic has spread rapidly around the globe (Lipton and Steinhauer, 2020). It poses unprecedented challenges for governments and societies around the world (Anderson et al., 2020). Wang et al. (2020) assert that COVID-19 first emerged in Wuhan, China, in November 2019, and its emergence has been linked to the Huanan Seafood Market. Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (2020), officially declared the COVID-19 outbreak a pandemic at a media briefing on 11 March 2020. Efforts have been made by the World Health Organization to ensure appropriate levels of preparedness and response to combat the disease effectively and efficiently, and manage the ramifications associated with the outbreak (Ebrahim et al., 2020). Tian et al. (2020) assert that non-pharmaceutical interventions have proven to be critical in delaying and containing the COVID-19 pandemic. Concerns around containing the COVID-19 pandemic have led to individuals seeking information on how to live healthily and stay safe during this period.

Igwe (2012) describes that information seeking is an individual way of gathering and sourcing information for personal use, updating knowledge and development. Since every individual in society is trying to stay safe and healthy to ensure that the pandemic does not claim more lives, they are endeavouring to get the necessary information about the pandemic and utilize it well. Library and information science (LIS) professionals are equally looking for reliable information about the pandemic to enable them to disseminate useful information to their users. Ali and Gatiti (2020) argue that libraries, as social institutions, are responsible for ensuring public health awareness and the provision of up-to-date information to their users. This can only be achieved when LIS professionals have access to reliable information on COVID-19.

Nigeria is a country that is located in the south east of West Africa, having a coast at the Bight of Benin and the Gulf of Guinea. The country is bordered by Benin, Cameroon, Chad, and Niger and shares maritime borders with Equatorial Guinea, Ghana, Sao Tome and Principe. Nigeria has a landmass of 923,768 km. The country's main rivers are the Niger, from which it derives its name, and the Benue, the main tributary to river Niger. The country has a population of 192 million people, which makes it to be the seventh most populous country in the world. Abuja is the capital city, while Lagos is the country's main port, economic hub and most populous city. The official language of Nigeria is English with about 230 ethno-linguistic groups. The major religions in the country are Christianity and Islam (The Nations

Online, 2014). The federal government of Nigeria has embarked on measures to control and combat the spread of the pandemic by creating awareness of the disease and its prevention via print media, television, and electronic and social media – for example, wearing face masks; ensuring that buckets of water, liquid soap and hand sanitizer are placed at the entrance to each organization; and maintaining social distancing. In light of the foregoing, this study focuses on COVID-19 information seeking and utilization among LIS professionals in Nigeria. There have been several studies that have focused on LIS professionals. However, none have been carried out on COVID-19 information seeking and utilization among LIS professionals in Nigeria. This study is intended to fill this research gap.

Objectives of the study

The core objective of the study is to ascertain COVID-19 information seeking and utilization among LIS professionals in Nigeria. The precise objectives are to:

1. Identify the COVID-19 information needs of LIS professionals;
2. Determine the sources of COVID-19 information used by LIS professionals;
3. Determine the criteria/factors used to evaluate the COVID-19 information accessed/used by LIS professionals;
4. Identify the purposes for which COVID-19 information is used by LIS professionals;
5. Determine what constitutes barriers to COVID-19 information access by LIS professionals.

Literature review

The information needs of LIS professionals vary – they range from the causes of the COVID-19 virus to information on COVID-19 symptoms and test procedures, how COVID-19 is transmitted, COVID-19 preventive measures and cures or treatments, the age groups that are most vulnerable to COVID-19 infection, patients' isolation procedures, drugs or vaccines for COVID-19 treatment, movement restrictions and curfews, palliatives, government policies, measures or pronouncements, alternative herbal/traditional treatment, library COVID-19 intervention measures or initiatives, how to provide library services to users and when libraries will open physically to users. According to Ali and Gatiti (2020), there are various topics which need to be embedded in the COVID-19 information needs of librarians, ranging from

preventing transmission to general instructions on using masks, hand washing and the use of sanitizers, avoiding handshakes and various other ways to control the spread of the virus. They further assert that all librarians (public, special, academic, school and national) have a responsibility to share evidence-based information about the epidemic. So, an investigation of the COVID-19 information needs of LIS professionals is not out of place. Heymann and Shindo (2020) argue that, for successful public health strategies in this pandemic period, the populace needs information on the following: measures for school reopening, remote working, home isolation and monitoring the health of symptomatic individuals by telephone or online health consultations. In the same vein, Iyanda (2020) claims that, in a crisis like the COVID-19 outbreak, people are more curious and eager to have specific information about the disease, and that such information should include possible strategies and measures for containment, treatment and vaccines or drugs.

Globally, teachers, students and librarians have been forced to transition to an online-only environment, as numerous schools, universities and libraries have been compelled to close their campuses in response to COVID-19 mandates. Through this transition, various groups of people within the educational system are being challenged to adapt quickly to the new environment, with librarians making frantic efforts to ensure that all library resources and services are available to patrons from a remote location (IGI Global, 2020).

There are several sources of COVID-19 information used by LIS professionals, such as friends, colleagues, family members, neighbours, government health workers, magazines, journals, professional association meetings, the Internet, social media and the Nigeria Centre for Disease Control's website. Ali and Gatiti (2020) claim that the World Health Organization's WhatsApp group is one of the most reliable sources of information in the current crisis. They further argue that librarians are sharing the WhatsApp links with library users in an effort to counter rumours and fake news. Featherstone et al. (2012) examined the provision of pandemic disease information by health sciences librarians in Canada. Their findings reveal that librarian-initiated information projects delivered virus subtype H1N1 information via social media to a potentially large community. Similarly, Bedford (2020) states that, in the UK, the government has created a web page on COVID-19, compiling a list of all the government publications on the topic, as well as a page of information for the public.

Temiz and Salelkar (2020) conducted a study to explore and map the digital services of academic libraries and their response to COVID-19 in Sweden. Using a qualitative research approach, they collected data through a web search from all 39 universities in Sweden via two means: visiting the university and their respective library websites, and the examination of other documents provided by the universities such as press releases and announcements. By thematic coding, an evaluation of the content and digital services, and libraries' response to COVID-19, was conducted. They discovered that, in response to the spread of COVID-19, the general trends observed among the libraries were limited working hours, the closing of physical libraries to the general public, unmanned operations and all 39 universities moving their offerings toward using online tools. The study identified the following main themes: availability of information, accessibility of resources, collaboration with other actors, increased use of existing services, and motivation and support to practise social distancing.

LIS professionals evaluate the sources of COVID-19 information based on the following: the authority, accuracy and reliability of the sources, the scope/coverage of the information sources, the usefulness of the information, whether the information can be verified, whether the information is current, and whether the information is factual/true. Ebrahim et al. (2020) examined COVID-19 information-seeking behaviour and anxiety among parents in Bahrain. Their findings reveal that the most reliable source for COVID-19 information was the social media account of the official health organization, followed by health-care professionals, while the least was print newspapers. According to Lima et al. (2020), governments and health-care authorities use social media to provide updates, news and information on scientific discoveries about COVID-19. Similarly, Gough et al. (2017) assert that governments are doing their best to efficiently share factual and up-to-date information through their social media websites.

Harris (2021) surveyed the impact of the COVID-19 pandemic on people, places, products and services in Jamaican academic libraries, and also compared Jamaican academic libraries' COVID-19 experiences with US academic libraries' preliminary COVID-19 experiences. He discovered that government mandates, university mandates and the absence of a vaccine influenced academic libraries' response; the measures implemented, although unplanned and developed on the hoof, constituted a behavioural change model; and COVID-19 has had both a positive and negative impact on library people, places,

products and services, which has created a new normal for Jamaican academic libraries.

Chisita and Chizoma (2021) carried out a review of the responses of academic libraries in South Africa during the COVID-19 pandemic. They used an analysis of secondary sources, the activities that took place and personal experiences to answer the research questions. It is revealed that academic libraries and publishers have risen to the occasion by offering more free content and curating personalized collections to enable citizens to have uninterrupted access to content and learning; the digital libraries in South Africa are considered vital access points to high-quality e-books, journals and educational content, including open educational resources; and digital library services have enabled academic libraries in South Africa to excel in providing online services, therefore ensuring that learning, research and teaching have continued during the pandemic.

Fasae et al. (2020) conducted a survey of academic libraries' responses to the COVID-19 pandemic in Nigeria and found that almost all students were not on campus as they had been directed to vacate campus as a result of the lockdown; the safety measures put in place by libraries included the total closure of libraries, the provision of hand sanitizer and the wearing of face masks by library users; social-distancing measures were communicated via social media, as well as the cancellation of in-person classes, lectures, training workshops, conferences and paper presentations; and the majority of the academic libraries only provided online materials to their users, while a small number provided access to both print and online materials.

Chan et al. (2020) argue that up-to-date and reliable COVID-19 information is used to decrease transmission of the highly infectious virus not only by health-care workers but also by the general population. Annune et al. (2020) assert that libraries in Nigeria can create awareness among library users on the preventive measures that need to be taken in order to curb the spread of COVID-19, such as adopting restrictive measures based on physical distancing. According to the Scottish Government (2021), for the safety of staff and library users, enhanced health and safety measures should be in place before staff are asked to return to work, including physical-distancing guidance and hygiene measures, and books and library resources should be quarantined for 72 hours on being returned to the library. Further measures include wearing face masks, adequately stocked hand-washing facilities and alcohol-based hand rubs (sanitizers) at key areas such as entry and exit points, the reception desk and staff break areas. In addition, the library

environment should be cleaned regularly at least twice a day – that is, cleaning and disinfecting objects and surfaces (e.g. telephones, keyboards, handles, desks) that are touched. Moreover, the American Library Association (2020) recommends removing chairs so that people are not sitting close to each other, limiting the number of people who can come in at any one time, taking out coat racks and similar measures to keep people and their belongings separate from each other.

There are several barriers to COVID-19 information access and use by LIS professionals, including poor telecommunications networks and Internet speed, lack of funds to subscribe to data, a large amount of unreliable COVID-19 information on social media and a poor power supply. Lima et al. (2020) claim that, nowadays, people are overwhelmed by the information they receive on their smartphones through channels such as Facebook, Twitter, WhatsApp, YouTube and Instagram, but the biggest dilemma is in determining what news to trust. Shimizu (2019) states that fake news has led desperate Japanese people to besiege pharmacies to buy surgical masks. He further comments that fake news has led to racism and xenophobia towards the Chinese.

Research methodology

The study used an online survey designed by the researchers including the five research objectives of the study. It was intended to explore COVID-19 information seeking and utilization among LIS professionals. The population of the study consisted of all LIS professionals in Nigeria with WhatsApp accounts. The authors adopted this convenience sampling technique for the study because it would facilitate the easy and speedy collection of data, as the study was conducted during the period of lockdown occasioned by the outbreak of COVID-19 in 2020 and it was not possible to physically administer the research data collection instrument in the respondents' libraries. Also called 'accidental sampling' or 'grab sampling', convenience sampling involves using people who are easy to reach (Glen, n.d.).

The self-constructed questionnaire was entitled: 'COVID-19 information seeking and utilization among LIS professionals'. The questionnaire consisted of two sections. The first focused on the demographic information of the respondents, while the second focused on COVID-19 information seeking and utilization, and included five items: (1) COVID-19 information needs; (2) sources of COVID-19 information used by LIS professionals; (3) evaluation of sources of COVID-19 information used; (4) purposes for which COVID-19 information

was used; and (5) barriers to access to COVID-19 information by the respondents. Data were collected through a Google web form, which was circulated to individuals and LIS-related WhatsApp group platforms in different libraries and institutions. A total of 167 LIS professionals responded from different libraries and institutions in Nigeria. This represented 60.7% of LIS professionals with WhatsApp accounts in Nigeria.

Online survey research enables individuals in far-off places to access and answer automated data. Wright (2005) asserts that online surveys possess more benefits than traditional surveys in that questionnaires with closed-ended and open-ended items can be completed without stress. The responses were automatically collated, analysed and saved into Google Sheets, from which the data was extracted for this study. The questionnaire items used a 5-point Likert scale with response options with the following scores: 5 = *to a very great extent*; 4 = *to a great extent*; 3 = *to a moderate extent*; 2 = *to a small extent*; and 1 = *to no extent*. In order to obtain the average score for an item, the total scores were added up and divided by 5.

Results

This section covers the results of the study. Table 1 lists the institutions of the respondents. A total of 167 LIS professionals from 54 institutions responded to the online survey. As indicated in the IFLA (n.d.) country database, there are 1131 libraries in Nigeria, while the available records reveal that there are 3624 registered and inducted librarians (Okojie, 2014). The response by 167 librarians from 54 institutions was due to the online survey, which restricted respondents to only those with WhatsApp accounts.

Table 2 shows the distribution of the respondents by gender. The highest number of responses (90, 53.9%) was from females, whereas the number of males who responded was 77 (46.1%). It can be deduced that the LIS profession is dominated by females in Nigeria.

Table 3 focuses on the educational qualifications of the respondents. Holders of a Master in Library and Information Science or Master of Science degree had the highest response rate (90, 53.9%), followed by holders of PhDs (57, 34.1%), while the lowest response rate was 1 (0.6%) for respondents with a Higher National Diploma. Table 3 clearly reveals that the LIS profession is dominated by Master's degree-holders in Nigeria. The high academic profile of the respondents is due to the fact that the majority (162, 90.74%) work in academic and research institution libraries, compared with 5 (9.26%) who work in other

types of libraries (one each in the National Library of Nigeria, Central Bank of Nigeria, Nigerian National Petroleum Corporation Library, Independent National Electoral Commission, and Wole Olanipekun and Co Library). This result corroborates Adomi and Solomon-Uwakwe's (2019) study, which reported that the majority of the respondents who worked in university libraries in Nigeria held higher degrees because university libraries are academic libraries where librarians are required to possess higher degrees in order to progress. In Nigeria, a Master's degree in Library and Information Science is required to be appointed and progress in an academic library (Onifade et al., 2018). This is possibly why the respondents with a Master's degree were in the majority.

Table 4 shows the COVID-19 information needs of the LIS professionals. The findings reveal that the majority of the respondents required COVID-19 information on preventive measures, cures or treatments, causes, symptoms, how to provide library services to users, the availability of preventive/safety devices in the library, and staff safety when the library eventually opened to the user community. However, Table 4 also reveals that the overall mean (3.86) is higher than the criterion mean (3.00), which indicates that the LIS professionals needed all the information shown in Table 4.

Table 5 focuses on the sources of information the respondents consulted or used to obtain COVID-19 information. It reveals that the majority of the respondents used the Internet, social media, television, radio, Nigeria Centre for Disease Control website, World Health Organization website, and friends, colleagues, family members or neighbours. This is in accordance with Tumpey et al.'s (2020) study, who assert that, in every 24 hours, the populace receives news and digital information material constantly from many sources, ranging from print media to television and social media on mobile devices. The various sources that the LIS professionals consulted (as shown in Table 5) would enable them to meet the COVID-19 information needs indicated in Table 4. However, Table 5 reveals that the overall mean (3.72) is higher than the criterion mean (3.00), which indicates that the LIS professionals consulted the all the information sources shown in Table 5.

Table 6 displays the criteria the respondents considered when evaluating the COVID-19 information consulted. This shows that the majority of the respondents evaluated their sources of COVID-19 information according to the following: the authority of the source (e.g. government, Nigeria Centre for Disease Control), accuracy of the source, usefulness of the information, currentness of the information, and reliability of the information source. Evaluating

Table 1. Respondents' institutions.

Institution	Frequency	%
Nnamdi Azikiwe University, Awka, Anambra State	4	2.4
Federal University of Technology Minna, Niger State	3	1.8
Federal University Otuoke, Bayelsa State	3	1.8
University of Ilorin, Kwara State	3	1.8
Federal University of Petroleum Resources Effurun, Delta State	16	9.6
Petroleum Training Institute Effurun, Delta State	10	6.0
University of Benin, Edo State	1	0.6
Nigerian Institute of Advanced Legal Studies, University of Lagos, Lagos State	2	1.2
University of Abuja, Federal Capital Territory	3	1.8
University of Port Harcourt, Choba, Rivers State	2	1.2
University of Calabar, Cross River State	3	1.8
National Library of Nigeria, Abuja, Federal Capital Territory	3	1.8
Olabisi Onabanjo University, Ago-Iwoye, Ogun State	3	1.8
Ahmadu Bello University, Zaria, Kaduna State	2	1.2
University of Nigeria Nsukka, Enugu State	2	1.2
Central Bank of Nigeria, Abuja, Federal Capital Territory	3	1.8
Federal University of Technology, Owerri, Enugu State	2	1.2
Michael Okpara University of Agriculture, Umudike, Anambra State	3	1.8
Federal College of Education (Technical), Asaba, Delta State	2	1.2
Olusegun Oke Library, Ladoke Akintola University of Technology, Ogbomosho, Oyo State	3	1.8
Federal University of Agriculture, Abeokuta, Ogun State	4	2.4
Kenneth Dike Library, University of Ibadan, Oyo State	6	3.6
Nigerian National Petroleum Corporation Library, Abuja, Federal Capital Territory	2	1.2
Federal Polytechnic, Oko, Anambra State	3	1.8
Federal Polytechnic Ede, Osun State	4	2.4
Samuel Adegboyega University, Ogwa, Edo State	5	3.0
Rivers State University of Science and Technology, Nkpolu, Rivers State	4	2.4
Niger Delta University, Yenagoa, Bayelsa State	6	3.6
Catholic Institute of West Africa, Port Harcourt, Rivers State	1	0.6
Nigerian Educational Research and Development Council, Sheda, Abuja, Federal Capital Territory	1	0.6
Kwara State University, Ilorin, Kwara State	3	1.8
Auchi State Polytechnic, Edo State	4	2.4
Akwa Ibom State University of Technology, Uyo, Akwa Ibom State	3	1.8
Nasarawa State Polytechnic, Lafia, Nasarawa State	3	1.8
Adeyemi College of Education, Ondo City, Ondo State	2	1.2
Delta School of Marine Technology, Burutu, Delta State	3	1.8
Bauchi State University, Gadau, Bauchi State	3	1.8
African University of Science and Technology, Abuja, Federal Capital Territory	1	0.6
Independent National Electoral Commission, Abuja, Federal Capital Territory	1	0.6
Musa Abdullahi Central Library, Hassan Usman Katsina Polytechnic, Katsina State	2	1.2
Babcock University, Illishan-Remo, Ogun State	5	3.0
Wole Olanipekun and Co Library, Ikoyi, Lagos State	1	0.6
Afe Babalola University, Ado-Ekiti, Ekiti State	1	0.6
Edo State College of Agriculture, Ighoriakhi, Edo State	2	1.2
Abia State University, Uturu, Abia State	3	1.8
Admiralty University of Nigeria, Ibusa, Delta State	2	1.2
Caleb University, Lagos, Lagos State	1	0.6
University of Africa, Toru-Orua, Bayelsa State	4	2.4
National Institute for Freshwater Fisheries Research, Library, New Bussa, Kogi State	1	0.6
Kogi State College of Education, Ankpa, Kogi State	2	1.2
McPherson University, Seriki Sotayo, Ogun State	1	0.6
Ambrose Alli University Library, Ekpoma, Edo State	5	3.0
Mountain Top University Library, Makogi Oba, Ogun State	2	1.2
Port Harcourt Polytechnic Library, Port Harcourt, Rivers State	2	1.2
Total	167	100

Table 2. Gender of the respondents.

Gender	Frequency	%
Female	77	46.1
Male	90	53.9
Total	167	100

Table 3. Educational qualifications of the respondents.

Educational qualification	Frequency	%
PhD	57	34.1
Master of Library and Information Science/Master of Science	90	53.9
Postgraduate Diploma/Postgraduate Diploma in Library Science	2	1.2
Bachelor of Library and Information Science/Bachelor of Library Science/Bachelor of Science	17	10.2
Higher National Diploma	1	0.6
Total	167	100

information sources is a necessity for LIS professionals to ensure that accurate and reliable information materials are disseminated to the user, as not all information is trustworthy or factual, nor will all information be suitable for particular needs. Print and electronic sources vary widely in their authority, accuracy, objectivity, currentness and coverage. Thus, LIS professionals must be able to critically evaluate the appropriateness of all types of information sources before relying on any information (Elmer E Rasmuson Library, 2020). Table 5 shows that the LIS professionals in this study consulted or used various sources of information, some of which may not have been reliable, true, relevant or current. It is only natural for them to evaluate their sources (as shown in Table 6) before using them to satisfy their COVID-19 information needs. However, Table 6 reveals that the overall mean (4.10) is higher than the criterion mean (3.00), which indicates that the LIS professionals evaluated COVID-19 information sources they consulted.

Table 7 shows that the majority of the information obtained on COVID-19 was used for protection against the virus; to keep the LIS professionals safe in their workplace/library; to obey the government's regulations during the pandemic (e.g. movement restrictions, social distancing); as a guide to provide safety measures in libraries; and to enable library services to be provided for users in the period of the pandemic. It is shown in Table 4 that the need for information on COVID-19 prevention ranked highest with 130 (77.84%) responses. Preventing COVID-19 would enable LIS professionals to provide library services

when library eventually opens to the user community. However, Table 7 reveals that the overall mean (3.97) is higher than the criterion mean (3.00), which indicates that LIS professionals used COVID-19 information to cater for their needs as shown in Table 7.

Table 8 shows that the majority of the respondents had problems with COVID-19 information access or use due to the large amount of unreliable COVID-19 information, too many sources of COVID-19 information and the closure of their library during the pandemic period.

It was due to the large amounts of unreliable COVID-19 information that the LIS professionals had to evaluate the information on the pandemic as shown in Table 6. However, Table 8 reveals that the overall mean (3.73) is higher than the criterion mean (3.00), which indicates that the LIS professionals had issues when accessing and using COVID-19 information as shown in Table 8.

Discussion

In this survey, the researchers resorted to using WhatsApp to collect data through Google Forms. It has been stated that during economic crises, surveys are very effective tools to gauge the exact effect of a situation, such as COVID-19, on business operations; that mandatory social distancing and lockdowns have, however, made physical surveys a great challenge; and that it is likely that these physical limitations will remain for a while. In the prevailing situation, online surveys make for an ideal alternative, and researchers are working on designing and using short and easy online surveys so that they do not put too much pressure and stress on respondents (Premise, 2020). During the pandemic, people have been using email and web surveys more than ever. Web surveys (also known as web-based surveys, e-surveys and online surveys) have certain advantages, which may have contributed to their growing popularity in the present context, including the possibility of collecting data remotely, as well as spin-offs and ethical issues that need to be considered when planning such surveys and interpreting their results. The speed of obtaining and publishing information is particularly important in crisis situations. Moreover, large numbers of individuals may be included in such surveys in addition to a wide geographical range, and there is the possibility of crossing borders almost instantaneously. Nationwide web surveys and even those that cover several countries can generate results in just a few weeks, especially when recruitment is performed through social networks (e.g. Facebook, Instagram, Twitter or WhatsApp; De Boni, 2020).

Table 4. COVID-19 information needs of the LIS professionals.

Information needs	Options					Mean
	To a very great extent	To a great extent	To a moderate extent	To a small extent	To no extent	
Causes of the COVID-19 virus	79 (47.3%)	49 (29.3%)	16 (9.6%)	8 (5.0%)	15 (9.0%)	4.01
Information on COVID-19 symptoms	72 (43.1%)	56 (33.5%)	22 (13.2%)	5 (3.0%)	12 (7.2%)	4.02
COVID-19 test procedures	48 (28.7%)	69 (41.3%)	21 (12.6%)	6 (3.6%)	13 (7.8%)	3.62
How COVID-19 is transmitted	64 (38.3%)	64 (38.3%)	16 (9.6%)	11 (6.7%)	12 (7.2%)	3.94
COVID-19 preventive measures	83 (49.7%)	47 (28.1%)	14 (8.4%)	9 (5.4%)	14 (8.4%)	4.05
COVID-19 cures or treatments	81 (48.5%)	52 (31.1%)	8 (4.8%)	14 (8.4%)	12 (7.2%)	4.05
Age group most vulnerable to COVID-19	49 (29.3%)	69 (41.3%)	22 (13.2%)	12 (7.2%)	15 (9.0%)	3.76
Isolation procedures for COVID-19 patients	40 (24.0%)	61 (36.5%)	28 (17.0%)	20 (12.0%)	18 (11.0%)	3.50
Drugs or vaccines for COVID-19 treatment	70 (42.0%)	47 (28.1%)	17 (10.2%)	18 (11.0%)	15 (9.0%)	3.83
Movement restrictions or curfews	52 (31.1%)	57 (34.1%)	25 (15.0%)	19 (11.4%)	14 (8.4%)	3.68
Palliatives	51 (30.5%)	46 (27.5%)	28 (16.8%)	21 (13.0%)	21 (13.0%)	3.50
Government COVID-19 policies, measures and pronouncements	57 (34.1%)	65 (38.9%)	18 (11.0%)	11 (7.0%)	16 (10.0%)	3.81
Alternative herbal or traditional treatments	63 (37.7%)	49 (29.3%)	23 (14.0%)	17 (10.2%)	15 (9.0%)	4.05
Library COVID-19 intervention measures or initiatives	64 (38.3%)	55 (32.9%)	21 (13.0%)	14 (8.4%)	13 (8.0%)	3.85
How to provide library services to users	77 (46.1%)	46 (27.5%)	18 (11.0%)	15 (9.0%)	11 (7.0%)	3.97
When the library will open physically to users	59 (35.3%)	51 (30.5%)	23 (14.0%)	15 (9.0%)	19 (11.4%)	3.69
Staff safety when library eventually opens to the user community	74 (44.3%)	50 (29.9%)	20 (12.0%)	12 (7.2%)	11 (7.0%)	3.98
Users' safety when library eventually opens to the user community	71 (42.5%)	57 (34.1%)	18 (11.0%)	8 (5.0%)	13 (8.0%)	3.98
Availability of preventive and safety devices in the library	74 (44.3%)	56 (33.5%)	14 (8.4%)	11 (7.0%)	12 (7.2%)	4.01
Overall mean			3.86			

Note: Criterion mean = 3.00.

Table 5. Sources of COVID-19 information used or consulted.

Sources of COVID-19 information	Options					Mean
	To a very great extent	To a great extent	To a moderate extent	To a small extent	To no extent	
Friends, colleagues, family members, neighbours	61 (36.5%)	40 (24.0%)	20 (12.0%)	28 (17.0%)	18 (11.0%)	3.58
Government health workers	45 (26.9%)	60 (35.9%)	24 (14.4%)	19 (11.4%)	19 (11.4%)	3.55
Magazines	57 (34.1%)	37 (22.2%)	31 (18.6%)	29 (17.4%)	13 (8.0%)	3.57
Journals	37 (22.2%)	57 (34.1%)	29 (17.4%)	31 (18.6%)	13 (8.0%)	3.44
Professional association meetings	34 (20.4%)	54 (32.3%)	39 (23.4%)	24 (11.4%)	16 (9.6%)	3.39
Internet (search)	97 (58.1%)	50 (25.4%)	11 (7.00%)	6 (4.0%)	3 (2.0%)	4.38
Social media (e.g. WhatsApp, Facebook)	95 (56.8%)	50 (29.9%)	15 (9.0%)	3 (2.0%)	4 (3.4%)	4.37
Nigeria Centre for Disease Control website	64 (38.3%)	53 (31.7%)	22 (13.2%)	10 (10.0%)	18 (11.0%)	3.80
World Health Organization website	49 (29.3%)	66 (39.5%)	19 (11.4%)	16 (10.0%)	17 (10.2%)	3.68
Institutional bulletins, memos or circulars	26 (15.6%)	61 (36.5%)	31 (18.6%)	29 (17.4%)	20 (12.0%)	3.26
Television	90 (54.0%)	48 (28.7%)	15 (9.00%)	11 (7.00%)	3 (2.00%)	4.26
Radio	73 (43.7%)	42 (25.1%)	25 (15.0%)	9 (5.4%)	18 (11.0%)	3.85
Church or mosque	29 (17.4%)	62 (37.1%)	29 (17.4%)	14 (8.4%)	33 (20.0%)	3.23
Overall mean			3.72			

Note: Criterion mean = 3.00.

Table 6. Evaluation of sources of COVID-19 information consulted.

Evaluation of sources of COVID-19 information	Options					Mean
	To a very great extent	To a great extent	To a moderate extent	To a small extent	To no extent	
Authority of source (e.g. government, Nigeria Centre for Disease Control)	89 (53.3%)	48 (28.7%)	21 (13.0%)	2 (1.2%)	6 (4.0%)	4.25
Accuracy of source	63 (37.7%)	69 (41.3%)	27 (16.2%)	3 (2.0%)	4 (2.4%)	4.08
Reliability of source	68 (40.7%)	66 (39.5%)	26 (16.0%)	1 (1.0%)	4 (2.4%)	4.11
Scope or coverage of source	57 (4.1%)	64 (38.3%)	36 (21.6%)	4 (2.4%)	5 (3.0%)	3.96
Usefulness of information	75 (44.9%)	61 (36.5%)	24 (11.4%)	3 (2.0%)	1 (0.6%)	4.16
Whether the information can be verified	49 (29.3%)	69 (41.3%)	43 (25.7%)	4 (3.4%)	1 (0.6%)	3.94
Whether the information is current	73 (43.7%)	63 (37.7%)	24 (14.4%)	4 (3.4%)	2 (1.2%)	4.18
Whether the information is true or factual	71 (42.5%)	59 (35.3%)	31 (18.6%)	2 (1.2%)	3 (1.8%)	4.13
Overall mean			4.10			

Note: Criterion mean = 3.00.

Table 7. What COVID-19 information is used for.

What COVID-19 information is used for	Options					Mean
	To a very great extent	To a great extent	To a moderate extent	To a small extent	To no extent	
Identification of symptoms of COVID-19	63 (37.7%)	67 (40.1%)	21 (12.6%)	13 (8.0%)	3 (1.8%)	3.23
Isolation or quarantine procedures and practices	44 (26.3%)	70 (41.9%)	19 (11.4%)	20 (12.0%)	14 (8.4%)	3.65
Treatment	55 (32.9%)	70 (41.9%)	19 (11.4%)	20 (12.0%)	14 (8.4%)	3.98
Protection against infection	89 (53.3%)	49 (2.9%)	18 (10.8%)	7 (4.2%)	4 (2.4%)	4.26
Obeying government regulations (e.g. movement restrictions, social distancing)	82 (49.1%)	59 (35.3%)	17 (10.2%)	5 (3.0%)	4 (2.4%)	4.25
Keeping safe in workplace/library	85 (51.0%)	59 (35.3%)	13 (7.8%)	6 (3.6%)	4 (2.4%)	4.29
Enabling the provision of library services to users	70 (41.9%)	65 (40.0%)	15 (9.0%)	9 (6.0%)	8 (5.0%)	4.07
Executing or launching COVID-19 intervention measures or initiatives	56 (33.5%)	59 (35.3%)	28 (16.8%)	16 (10.0%)	8 (11.0%)	3.83
As a guide to provide safety measures in the library	79 (47.3%)	64 (38.3%)	10 (6.0%)	11 (7.0%)	3 (2.0%)	4.22
Overall mean			3.97			

Note: Criterion mean = 3.00.

Thus, this survey of COVID-19 information seeking and utilization among LIS professionals in Nigeria is seminal, and was better conducted during the COVID-19 pandemic using an online survey due to the mandatory lockdown, which imposed physical limitations and restrictions of movement in Nigeria in 2020. WhatsApp was not restricted by the limitations occasioned by the pandemic and hence provided a veritable means of collecting data from library professionals. However, this precluded those who were not on the WhatsApp platform from participating in the survey. Accordingly, it has been observed by De Boni (2020) that the speed, large samples and wide

scope inherent in e-surveys do not guarantee external validity (representativeness or generalization of the results), which can only be achieved with a probability sampling method or census. Therefore the limitations of the findings of this study stem from the inability to guarantee the representativeness or generalization of the results.

The findings reveal that the majority of the respondents wanted COVID-19 information on preventive measures, cures or treatments, causes, symptoms, how to provide library services to users, the availability of preventive or safety devices in the library, and staff safety when the library eventually opened to the user community.

Table 8. Barriers to COVID-19 information access and use.

Barriers to COVID-19 information access and use	Options					Mean
	To a very great extent	To a great extent	To a moderate extent	To a small extent	To no extent	
Poor telecommunications networks	54 (32.3%)	55 (32.9%)	23 (13.8%)	20 (12.0%)	15 (9.0%)	3.67
Poor Internet speed	62 (35.6%)	44 (26.3%)	22 (13.2%)	25 (15.0%)	14 (9.0%)	3.68
Lack of funds to subscribe to data	55 (32.9%)	45 (26.9%)	26 (15.6%)	26 (15.6%)	15 (9.0%)	3.59
Large amount of unreliable COVID-19 information on social media and in other sources	73 (43.7%)	47 (28.1%)	20 (12.0%)	16 (9.6%)	11 (6.6%)	3.92
Poor power supply	58 (34.7%)	59 (35.3%)	17 (10.2%)	18 (10.8%)	15 (9.0%)	3.76
Too many sources of COVID-19 information	74 (44.3%)	50 (29.9%)	25 (15.0%)	11 (6.6%)	7 (4.2%)	4.03
Closure of library during the pandemic period	73 (43.7%)	46 (27.5%)	20 (12.0%)	17 (10.2%)	11 (7.0%)	3.91
High cost of newspapers and magazines	39 (23.4%)	48 (28.7%)	32 (19.2%)	25 (15.0%)	23 (14.0%)	3.32
Overall mean			3.73			

Note: Criterion mean = 3.00.

Kalayou et al. (2020) conducted a study to assess health-care providers' information-seeking behaviour during the COVID-19 pandemic and found that the respondents required and sought information on diagnosis, treatment, modes of transmission, prevention methods, and global and local case and death reports. Although this research was with health-care providers, their areas of information seeking are similar to the areas in which the information professionals required information in the current study. Also, Iyanda (2020) reveals that, in a crisis like the COVID-19 outbreak, people are more curious and eager to know specific information about the disease, and that such information includes possible strategies for containment, treatment and vaccines or drugs.

The majority of the respondents used the following sources to get information: the Internet, social media, television, radio, the Nigeria Centre for Disease Control website, the World Health Organization website and friends, colleagues, family members or neighbours. This is in line with Tumpey et al.'s (2020) study, who reveal that people constantly receive information from many sources, ranging from print media to television and social media on mobile services. It should be noted that the extent to which information is sought by anyone from any given source depends on their degree of trust in that source.

The findings show that the majority of the respondents evaluated their sources of COVID-19 information according to the following criteria: the authority of the source (e.g. the government, Nigeria Centre for Disease Control), accuracy of the source, usefulness of the information, currentness of the information and reliability of the information source. This is in line with Lima et al.'s (2020) research, which reveals that information from

reliable sources such as government health-care authorities and specialists should be trusted. In this period of the COVID-19 pandemic, there has been a proliferation of fake information or information that has not been properly vetted, and some of this information can impact how we live our lives, which makes it very important to consult sources that are reliable (Malhotra, 2020). It is interesting to note that the information professionals who participated in this study assessed the COVID-19 information sources they consulted. This implies that they are very concerned about the possible impact that the information consulted and used may have on their health and well-being.

The study reveals that the majority of the LIS professionals sought COVID-19 information to enable them to keep safe in their workplace/library ($\bar{x} = 4.29$). The possible reason for this is that staff are frequently consulted by numerous users in the library and therefore may be apprehensive about the possibility of being infected with the coronavirus. In order to mitigate this, they seek information on how to keep safe in the workplace.

The majority of the respondents had problems with accessing or using COVID-19 information due to the large amount of unreliable COVID-19 information, too many sources of COVID-19 information and the closure of their library during the pandemic period. These findings corroborate those of Ebrahim et al. (2020), who note that obstacles to COVID-19 information seeking include the spread of unverified information and the huge amount of information about the disease. It is also in agreement with Lima et al.'s (2020) research, who reveal that we are living not just in a pandemic, but also in an 'infodemic', where fake news is becoming more common.

Conclusion

Based on the findings of this study, it is concluded that LIS professionals are interested in COVID-19 information on preventive measures, cures, causes, symptoms, how to provide library services to users, the availability of preventive or safety devices in the library, and staff safety when libraries eventually open to the user community. Moreover, LIS professionals' sources of information on COVID-19 are mostly the Internet, social media, television, radio, the Nigeria Centre for Disease Control website, the World Health Organization website and friends, colleagues, family members or neighbours. In addition, information on COVID-19 is used by LIS professionals to keep safe in the library. The purpose of this study is to enable LIS professionals in Nigeria get accurate, timely and reliable information on COVID-19. The study will be helpful for LIS professionals to learn where to source genuine information on COVID-19. This study will be made available to the Nigeria Centre for Disease Control to help assist LIS professionals where necessary.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Further research should be conducted on the COVID-19 information needs of LIS professionals in African countries.
2. The study has revealed the various areas in which information professionals need COVID-19 information. Since the respondents are not health professionals, it would be helpful if institutions and professional associations like the Nigerian Library Association were to organize virtual conferences on the various areas of information needs indicated by the respondents. Relevant health professionals should be invited to speak to address these needs.
3. LIS professionals should increase the extent to which they share the COVID-19 sources they are using, including with colleagues who may not be on WhatsApp.

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Abstracts

Challenges and opportunities for parliamentary libraries during COVID-19

التحديات والفرص أمام المكتبات البرلمانية خلال جائحة كوفيد-19

كارولين مينارد

مجلة الإفلا، 48-1

الخلاصة:

تؤدي المكتبات البرلمانية دورًا حاسمًا في توفير الدعم المعلوماتي لصناع القرار في جميع أنحاء العالم. وقد واجهت هذه المؤسسات وضعًا غير مسبقًا في أثناء جائحة كوفيد-19. حيث اضطر العديد منها إلى إجراء تعديلات كبيرة على ممارساته للاستمرار في خدمة المستخدمين. ويكشف هذا المقال كيفية استجابة مكتبة الجمعية الوطنية في كيبك لهذه المشكلة، وكيفية قيامها بإعادة توصيف خدماتها أثناء الجائحة. وتعرض المؤلفة التحديات التي تم مواجهتها، والفرص التي تم اغتنامها أثناء تكييف الخدمات الافتراضية، فضلًا عن وضع تعريف جديد لتداول الوثائق، وتواصل فريق العمل على نحو أفضل، كما تتنبأ بالعقبات التي قد تواجه المؤسسة في المستقبل. وتشارك هذه الدراسة للحالة أفضل الممارسات، والدروس المستفادة أملًا في إبلاغ المؤسسات المماثلة التي تواجه تحديات أثناء هذه الجائحة وإرشادها.

Remembering COVID-19; Or, A Duty to Document the Coronavirus Pandemic

تذكر كوفيد-19؛ أو واجب توثيق جائحة فيروس كورونا

مارك كوسيجيو

مجلة الإفلا، 48-1

الخلاصة:

إن تذكر جائحة فيروس كورونا هو التزام نحو الحاضر والمستقبل. ومن خلال تسليط الضوء على أوجه التداخل بين التذكر، والتراث الوثائقي، ومؤسسات الذاكرة، وكوفيد-19، ترى هذه المقالة أن مهمة فريدة وعاجلة تقع على عاتق المكتبات ودور المحفوظات والمتاحف (LAMs) لتوثيق جائحة فيروس كورونا أثناء انتشاره للمساعدة في ضمان جمع التراث المسجل ذي الصلة وحفظه وأرشفته لأغراض التشارور والمرجعية والتذكر في الوقت الحاضر وفي المستقبل. وفي إطار توثيق الجائحة ينبغي للمكتبات ودور المحفوظات والمتاحف "اعتماد أحكام سياسة واضحة" تهدف أولاً إلى تعزيز مبادراتهم

الراهنة لتوثيق كوفيد-19، وثانيًا تدعم مبادرات وثائقية أخرى محتملة تتعلق بالأزمات الصحية العالمية الراهنة أو المستقبلية. من خلال توثيق جائحة كوفيد-19، يمكننا معا تذكر الأزمات الصحية المحتملة وتوقعها في المستقبل على نحو أفضل.

Onboarding in the Age of COVID-19

العمل في عصر كوفيد-19

أندرو كارلوس، وديزي سي موراليس

مجلة الإفلا، 48-1

الخلاصة:

نظرًا إلى التحول إلى بيئة عمل افتراضية/عن بُعد، فإن عملية تعيين الموظفين الجدد يجب أن تؤدي أيضًا عن بُعد/افتراضيا. وتستعرض هذه المقالة على نحو شامل الممارسات السابقة والراهنة في مكتبة أكاديمية متوسطة الحجم، إضافة إلى تأثير الأنتولوجرافية الذاتية لتجربة التعيينات الجديدة مع الانطلاق للعمل. كما تقدم أفضل الممارسات والاقتراحات للمساعدة في إعلام المكتبات الأخرى التي تخوض أيضًا تجربة العمل عن بُعد/افتراضيا.

School Library Media Specialists: An Evolving Profession in a Pandemic

المتخصصون في وسائط الإعلام في المكتبات المدرسية: مهنة متطورة في جائحة

هيدر كابانكا

مجلة الإفلا، 48-1

الخلاصة:

في مارس 2020، واجه المتخصصون في وسائط الإعلام بمكتبات مدرسة ميشيغان، والمجتمع التعليمي كافة تحديات غير مسبوقة نجمت عن اندلاع جائحة كوفيد-19. ومع تحول التعلم إلى الإنترنت، تغيرت أيضًا أدوار متخصصي وسائط المكتبات المدرسية.

وأجريت مقابلات مع ثلاثة منهم في مكتبة مدرسة جنوب شرق ميشيغان لاستطلاع وجهات نظرهم فيما يتعلق بالتكيف مع التعلم عن بعد، إضافة إلى توقعاتهم بشأن كيفية تطور الممارسات التعليمية في المستقبل. وتبين أن الممارسات التعليمية لمساحات التعلم،

والاستفسارات الموجهة، والتدريس المشترك، ومحو الأمية المعلوماتية تكتسي قيمة خاصة أثناء التحول إلى التعلم عن بعد. ومن المرجح أن يؤدي الاعتماد المتزايد على هذه الممارسات أثناء الجائحة إلى زيادة استخدام هذه الممارسات عند استئناف التعلم بصورة مباشرة.

Exploring National Library of Scotland datasets with Jupyter Notebooks

استكشاف مجموعات بيانات مكتبة اسكتلندا الوطنية باستخدام دفاتر جوبيتر "Jupyter"

سارة أميس ولوسي هافينز

مجلة الإفلا، 48-1

الخلاصة:

تقوم خدمة المنح الرقمية بمكتبة اسكتلندا الوطنية بإصدار المجموعات في صورة بيانات على منصتها داتا فوندرى "Data Foundry"، لتقديم البيانات منذ سبتمبر 2019. ولوحظ عقب الإغلاق الناجم عن كوفيد-19، ارتفاع معدل استخدام هذه الخدمة ارتفاعاً كبيراً، حيث تزايد إقبال مستخدمي المكتبة على الموارد المتاحة على الإنترنت. ولضمان تمكن أكبر عدد ممكن من المستخدمين من استكشاف مجموعات البيانات في داتا فوندرى، استثمرت المكتبة في Digital Research Intern، لتوفير تحليل تمهيدي لمجموعات الموجودة فيه باستخدام دفاتر جوبيتر. وتقدم هذه الورقة حالة إفرادية لهذا المشروع، وتشرح ما أنجزته المكتبة من عمل حتى الآن بشأن خدمة المنح الرقمية الجديدة التي تقدمها، وإصدارها مجموعات البيانات على داتا فوندرى؛ ومبررات البدء في استخدام دفاتر جوبيتر؛ فضلاً عن معلومات عن الدفاتر نفسها، وأنواع التحليلات التي تتضمنها، والتحديات التي تعوق إنشائها ونشرها وتأثيرها.

LibGuide development and impact of COVID19 Lockdown on their usage

تطوير LibGuide وتأثر استخدامها بإغلاق الناظم عن كوفيد-19
ديبورا أ. بيكر، وجوان أرنديسي، وفيليسوا تشيتشا، وزولايجا دافينز، وفويوكازي كيفا جونسون

مجلة الإفلا، 48-1

الخلاصة:

استخدم المكتبيون تطبيق LibGuides في جامعة شبه جزيرة كيب للتكنولوجيا (CPUT) كوسيلة لتوفير المعلومات المتعلقة بموضوع ما للطلاب، وتوفير روابط سريعة لموارد مختارة، فضلاً عن توفير معلومات مكملة للتدريب على محو الأمية المعلوماتية منذ عام 2012. ويستخدم المحاضرون الموارد في إعداد المحاضرات، وتحديد المواد التعليمية، كما يستخدمها الباحثون وطلاب الدراسات العليا عند كتابة أوراقهم. ونظرًا للإغلاق الذي عم في جميع أنحاء العالم بسبب الجائحة، أغلقت المؤسسات الأكاديمية في جنوب إفريقيا أبوابها وعاد الطلاب إلى أوطانهم. ولأن الطلاب ما يزالون بحاجة إلى إكمال دراساتهم كان على المكتبيين في الجامعة مواصلة تقديم الدعم لهؤلاء الطلاب.

و LibGuides هو أحد هذه الخدمات المتوفرة عبر الإنترنت. وتقدم هذه المقالة نظرة متعمقة للتطورات التاريخية لاستخدام هذا التطبيق في الجامعة، وأثناء الإغلاق، كما تعرض تجارب مجموعة منتقاة من الطلاب وموظفي المكتبة في هذا الصدد.

Cooking Up Engagement during a Pandemic

المشاركة في مسابقة للطهي أثناء الجائحة

كريستينا إي ريمان مورفي، وأن هولواي، ومارك ماتسون

مجلة الإفلا، 48-1

الخلاصة:

في يوليو 2020، وأثناء جائحة كوفيد-19، أثمرت الشراكة الدولية بين مكتبة جامعة موناخ في مليونر بأستراليا، ومكتبة جامعة ولاية بنسلفانيا، في الولايات المتحدة الأمريكية، التي سبق عقدها في إطار برنامج المكتبات الشقيقة، عن استضافة فعالية تشجع على المشاركة الافتراضية، وتركز على تعزيز الشراكة، وعلى مجموعات خاصة مختارة في كلتا المؤسسات.

وقامت جامعة موناخ بتنظيم مسابقة Great Rare Books Bake Off، وهي مسابقة ودية تعاونت المكتبتان الأكاديميتان في تطويرها، وأسهمت مجتمعات المؤسسات بمجموعاتها ومواردها في دعوة المشاركين لابتكار وصفات مميزة من مجموعاتهم، ونشر أدلة على تجاربهم على منصات التواصل الاجتماعي. إضافة إلى إكفاء الوعي بالشراكة الدولية للمؤسسات ومجموعاتها، ويتمثل الهدف الأساسي للمشروع التعاوني في تزويد المجتمعات المحلية للجامعتين بمنفذ ممنوع وإبداعه خلال الأوقات الصعبة. كما تصف دراسة الحالة التوضيحية هذه كيفية تخطيط المؤسسات للمشروع وتنفيذه وتقييمه.

Expanding digital academic library & archive services in response to COVID

توسيع نطاق الخدمات الرقمية والأرشيفية للمكتبة الأكاديمية استجابة لكوفيد-19

جيمس إي مورفي، وكارلا جيه لويس، وكريستينا إيه ماكيلوب، ومارك ستويكل

مجلة الإفلا، 48-1

الخلاصة:

على الرغم من التحديات المتغيرة التي تواجه المكتبات من جميع الأنواع خلال جائحة كوفيد-19، فقد ظهرت نماذج أفضل من الممارسات الجديدة والطرق المبتكرة للتعامل مع الخدمات. مثال ذلك مكتبة عائلة تيلور الرقمية الرائدة في 2011، إذ واصلت المكتبة والموارد الثقافية في الإسهام في تطوير المكتبة الأكاديمية الرقمية. وتحتم في ظل جائحة كوفيد-19 الاستفادة السريعة من المهارات الرقمية، والمنصات، والخبرات، ونماذج تقديم الخدمات لمواصلة تقديم تجارب استثنائية وتحولية لمجتمع جامعة كالجارى.

ومن بين المبادرات التي تناقشها هذه المقالة؛ فرق العمل على الإنترنت، والجولات الافتراضية 360، وخدمات المكتبة للمحادثة الفورية على الإنترنت، واتفاقيات المجموعات الرقمية، والخدمة عن بُعد للأرشيفات والمجموعات الخاصة.

Continuity during COVID: Critical Digital Pedagogy and Special Collections Instruction

مواصلة العمل أثناء كوفيد-19: علم أصول التدريس الرقمية النقدية وتعليمات بشأن المجموعات الخاصة

أماندا بوكزار وسيدني الأردن

مجلة الإفلا، 48-1

الخلاصة:

عندما بدأ العالم يدرك المخاطر المتزايدة الناجمة عن كوفيد-19 في أوائل ربيع 2020، تحولت مكتبات تامبا بجامعة جنوب فلوريدا - مجموعات تامبا الخاصة- إلى فصول التدريس الافتراضية لتمكين الطلاب من الوصول إلى الكتب النادرة ومواد المصدر الأساسي الأرشيفية. وفي إطار الاستجابة إلى الحاجة إلى التحول إلى التعليم عبر الإنترنت سريعاً، وضعت إدارة المكتبة خطة لدعم الطلاب من خلال تجربة تعلم رقمية مفتوحة الوصول باستخدام تطبيق ArcGIS StoryMaps. وبناء على أصول التدريس الرقمية النقدية والإنسانيات الرقمية النسوية، توفر الدورات عبر الإنترنت موارد التدريس لأعضاء هيئة التدريس الذين تعذر عليهم تحديد مواعيد زيارات فعلية للطلاب. وقد قدمت خلال السنة الأولى من التعليم عن بُعد، دورات لخمس عشرة قسماً دراسياً. وتطلعا إلى المستقبل، من المقرر أن تستمر المجموعات الخاصة في توفير خيار الدورات الافتراضية كجزء من العملية التعليمية التي تضطلع بها المكتبة.

ونظر للطبيعة الرقمية للدورات التدريبية باتت عملية التدريس تكرارية، مما أتاح مواءمة الدورات الأكاديمية على نحو مستمر.

The experiences of UFSC Library Working Group on Covid-19 prevention

تجارب مجموعة عمل مكتبة UFSC للوقاية من كوفيد-19

جيلهيري جولارت ريجيتو، وتاتيانا روسي، وجوليان فونسيكا سواريس

مجلة الإفلا، 48-1

الخلاصة:

تقدم هذه المقالة لمحة موجزة عن عواقب جائحة كوفيد-19 في سياق مكتبات الجامعات البرازيلية، فضلاً عن الجهود التي تبذلها هذه المؤسسات لمواجهةها. وتهدف المقالة إلى الإبلاغ عن تجارب مجموعة العمل المسماة مجموعة عمل مكتبة BU/UFSC للوقاية من كوفيد-19 - داخل مكتبة الجامعة التابعة للجامعة الفيدرالية في سانتا كاترينا (BU/UFSC)، في جنوب البرازيل. كما تصف المبادئ التوجيهية التي

أنشأتها مجموعة العمل، وتشرف آفاق العودة إلى العمل وجهاً لوجه. كما تأخذ في الحسبان أهمية دور المكتبات في الوصول إلى العلوم ونشرها. وتسلط الضوء على فرص التغيير والتقدم المحرز في الدراسات والبحوث والخدمات الموجهة للمكتبات بوجه عام. وخُصت المقالة إلى أن المكتبة الاتحادية لسانت كاترينا BU/UFSC، تمكنت من خلال برنامج BU/UFSC Covid-19 WG من أداء دورها في دعم التدريس، وتطوير شبكة لتبادل المعلومات حول كوفيد-19 مع الموظفين العموميين، حيث جرت البحوث تحت إشراف إدارة BU/UFSC.

Information Dissemination in COVID-19 Era in University Libraries in Nigeria

نشر المعلومات في عصر كوفيد-19 في المكتبات الجامعية في نيجيريا

سترادي أوميلوزور، وأنجيلا إي. نووماه، وأوغوشي إستر مولوكو، وأتاندو ساليو سامبو

مجلة الإفلا، 48-1

الخلاصة:

تم تشخيص أول حالة إصابة بفيروس كورونا (كوفيد-19) في نيجيريا في 27 فبراير 2020، ويوجد نحو 13000 حالة مؤكدة في جميع أنحاء البلد. وقد أجبر انتشار الفيروس المكتبات على الإغلاق. وتنقصي هذه الدراسة مدى النجاح في نشر المعلومات لتلبية الاحتياجات المعلوماتية لرواد المكتبات في أثناء جائحة كوفيد-19، وإغلاق المكتبات الجامعية في نيجيريا، وذلك باستخدام تصميم استقصاء وصفي، شمل عينة من 178 مكتبة من جامعات اتحادية وحكومية وخاصة في نيجيريا. وأظهرت النتائج أن المكتبة نشرت معلومات عن النظافة الشخصية لروادها (غسل اليدين والنظافة واستخدام معقم اليدين)، وأعدت ملصقات ونشرات إعلانية لتوعية الجمهور بشأن كوفيد-19. كما كشفت النتائج أن المكتبة نشرت معلومات وروابط لمصادر إلكترونية لدعم بحوث المستفيدين على نحو مستمر. وأشارت النتائج أيضاً إلى التحديات التي اعترضت المكتبات؛ مثل الافتقار إلى التنسيق، واضراب اتحاد أعضاء هيئة التدريس بالجامعات (ASUU)، وعدم وجود اشتراك لخدمة العمل من المنزل.

Australian public libraries and COVID-19 crisis

مكتبات استراليا العامة وأزمة كوفيد-19

سيمون واكيلينج، وجين جارنر، وفيليب هايدر، وحמיד جمالي، وجيسي ليمن، ويزدان منصوريان، وهولي رانديل مون

مجلة الإفلا، 48-1

الخلاصة:

أثرت أزمة كوفيد-19 تأثيراً كبيراً على المكتبات العامة في جميع أنحاء العالم. وفي أستراليا، شهدت جميع المكتبات العامة تقريباً بعض فترات الإغلاق لمبانيها، مما تطلب من المكتبات تكيف خدماتها ونماذج تسليم هذه الخدمات. وتتناول هذه المقالة نتائج استقصاء واسع النطاق أجري

في أغسطس 2020، وشمل مديري المكتبات العامة في أستراليا، كما تعرض، على وجه الخصوص، نتائج التحليل الموضوعي للردود النصية الحرة للمشاركين على الأسئلة المفتوحة التي طرحت في الاستقصاء. يبين هذا التحليل رؤى مهمة تتعلق بالاستجابات لإغلاق المكتبات، وقضايا التوظيف، والخدمات، والبرامج الجديدة والموسعة، والعلاقات مع الهيئات الأم، ودور المكتبات العامة أثناء الأزمة وبعدها. وعلى الرغم من أن المديرين ينظرون إلى المكتبات العامة على أنها أكثر قدرة على التفاعل والتكيف، وأنها تستخدم التكنولوجيا بصورة فعالة، فإن النتائج تظهر بوضوح قيمة مستخدمي مباني المكتبات، وتشير إلى نتائج مهمة تترتب على فهمنا لدور المكتبات العامة.

وتشغيل الوسائط الجديدة، ودعم محور الأمية المعلوماتية، والوصول المفتوح، والتطوير التعاوني.

Public Libraries' Responses to a Global Pandemic: Bangladesh Perspectives

استجابة المكتبات العامة للجائحة العالمية: الآفاق المستقبلية لمكتبات بنغلاديش

ديلارا بيجوم، ومحمد ركن الزمان، ومحبيب الشبهاني

مجلة الإفلا، 48-1

Reimagining public library programming during a pandemic

إعادة تصور برمجة المكتبات العامة أثناء الجائحة

نوح لينسترا، وكريستين داربا

مجلة الإفلا، 48-1

الخلاصة:

استعانت هذه المقالة ببيانات استقصاء أجري لوصف الوسائل التي استخدمتها المكتبات العامة الصغيرة والريفية لتعديل برامجها أثناء جائحة كوفيد-19 ومناقشة هذه الوسائل وفحصها. وقد أجبرت القيود الناجمة عن الجائحة المكتبات على إغلاق أبوابها، وإعادة تصور الكيفية التي يمكنها من تقديم البرامج لمجتمعاتها.

الخلاصة:
يشهد العالم بأسره واقعاً جديداً نجم عن انتشار كوفيد-19 على مستوى العالم، وهو ما أجبر كل المؤسسات على الإغلاق. وتهدف هذه الدراسة إلى استكشاف استجابة المكتبات العامة الحكومية في بنغلاديش، استناداً إلى استبيان أجري على الإنترنت بهدف جمع بيانات أولية من جميع المكتبات العامة البالغ عددها 71 مكتبة، ثم أجريت مقابلات شبه منظمة مع ثمانية مكتبيين. ويشير تحليل النتائج إلى تدني مستوى الاستعداد لمواجهة أي أزمة في أكثر من 50% من المكتبات، وافقارها جميعاً إلى الاستعداد التام لإدارة هذه الجائحة. وقد فتحت جميع المكتبات أبوابها لأداء الوظائف الإدارية فقط دون الوصول الفعلي إلى المستخدمين. وتشير النتائج إلى أن 52% من المكتبات قدمت توعية عامة من خلال وسائل التواصل الاجتماعي، وقامت 46% منها بدعم المؤسسات الحكومية محلية، كما قدمت 40% منها خدمات استشارية. وفي ضوء التحديات القائمة، توصي الدراسة ببعض التدابير للمكتبات العامة في بنغلاديش للتصدي لهذه الحالة.

Practices and Thinking of Public Libraries in China during COVID-19

الممارسات والتفكير في دور المكتبات العامة في الصين خلال جائحة كوفيد-19

شين تشو

مجلة الإفلا، 48-1

الخلاصة:

بسبب جائحة كوفيد-19، أغلقت المكتبات في الصين أبوابها في أوائل 2020، وقدمت جميع خدماتها عبر الإنترنت.

تمخض هذا التغيير عن تحديات غير مسبقة أمام تطوير خدمات المكتبات، كما أتاح في الوقت نفسه أيضاً فرصاً وحافزاً لتحول المكتبات في المستقبل. وتنتشهد هذه المقالة بالحسابات الرسمية للمكتبة الوطنية الصينية على موقع WeChat، وحسابات ما يزيد على 30 مكتبة عامة إقليمية كمصادر رئيسية للمعلومات، لتلخيص وتصنيف الخدمات المقدمة خلال فترة الإغلاق. كما جمعت مقالات إخبارية صادرة عن المكتبات آفة الذكر، وقامت بتحليلها لتوجيه الارتقاء بخدمات المكتبة العامة على الإنترنت في بيئة الجائحة. وأخيراً، تطرح تأملات المؤلف واقتراحاته حول اتجاهات التنمية الرئيسية للمكتبات في فترة ما بعد الجائحة، ويشمل ذلك ستة جوانب؛ الترويج للقراءة، والمكتبة الذكية،

Prevalence and source analysis of COVID-19 misinformation of 138 countries

انتشار المعلومات المضللة عن كوفيد-19 في 138 بلداً وتحليل

مصدرها

دكتور طبيب. محمد سيد الزمان

مجلة الإفلا، 48-1

الخلاصة:

حللت هذه الدراسة 9657 معلومة مضللة نشأت في 138 بلداً، ودققت حقائق قدمتها 94 منظمة لفهم انتشار المعلومات المضللة في بلدان شتى ومصادرها. وتظهر النتائج أن البلدان الأربعة الأكثر تأثراً بالمعلومات المضللة هي: الهند (15.94%)، والولايات المتحدة (9.74%)، والبرازيل (8.57%)، وإسبانيا (8.03%). واستناداً إلى النتائج، يُفترض وجود ارتباط إيجابي بين انتشار المعلومات المضللة عن كوفيد-19 والوضع الناشئ عن كوفيد-19. ولوحظ أن القسط الأوفر من المعلومات المضللة يُعزى إلى وسائل التواصل الاجتماعي (84.94%)، وشبكة الإنترنت (90.5%)؛ إذ يشكلان معاً مصدر معظم المعلومات المضللة عن كوفيد-19. ومن بين جميع منصات التواصل الاجتماعي ينتج فيس

بوك وحده 66.87% من هذه المعلومات المضللة. ومن بين جميع البلدان، تعد الهند مصدر الأكبر للمعلومات المضللة على وسائل التواصل الاجتماعي (18.07%)، ربما يعزى ذلك إلى ارتفاع معدلات النفاذ إلى الإنترنت فيها، وزيادة معدلات استخدام وسائل التواصل الاجتماعي، وافتقار المستخدمين إلى مهارات استخدام الإنترنت.

Older Adults' Information Seeking in India and U.S. During Covid-19

بحث كبار السن عن المعلومات في أثناء جائحة كوفيد-19 في الهند والولايات المتحدة

برادي لوند، وسانجاي كومار موريا

مجلة الإفلا، 48-1

الخلاصة:

طرحت جائحة كوفيد-19 عام 2020 تحديات معلوماتية كبيرة أمام كبار السن في جميع أنحاء العالم. ونظراً إلى التفاوتات الشاسعة في البنية التحتية للمعلومات، وفي سبل وصول البلدان النامية والمتقدمة إلى المعلومات، فإن خطورة التحديات التي ظهرت خلال هذه الفترة قد تتعاظم في العالم النامي. وتبحث هذه الدراسة، التي شملت مقابلات، تجارب مجموعتين من كبار السن (ممن تزيد أعمارهم عن 65 عاماً) في بلدين هما الولايات المتحدة والهند؛ للحصول على احتياجاتهم من المعلومات ومصادرها، والعقبات التي اعترضتهم. تشير النتائج إلى تباين كبير في تجارب كلتا المجموعتين. فقد أعرب الأفراد في الولايات المتحدة عن احتياجات أكثر تنوعاً، بينما ركز المشاركون الهنود على تأثير كوفيد-19. وتشير الدراسة أيضاً إلى استخدام المشاركين الأمريكيين موارد الإنترنت بمعدلات أكبر بالمقارنة مع المستجيبين الهنود الذين يستخدمون مصادر التلفزيون والمطبوعات بصورة متكررة. وأبلغ معظم المجيبين الهنود عن صعوبات جمة في العثور على المعلومات اللازمة لتلبية احتياجاتهم من المعلومات. وكان لنتائج هذه الدراسة تداعيات مهمة على تصميم المداخلات والتعليم ودعم الاحتياجات المتعلقة بالمعلومات لكبار السن في جميع أنحاء العالم.

COVID-19 information seeking and utilization among LIS professionals in Nigeria

التماس المعلومات المتعلقة بكوفيد-19 واستخدامها من جانب المتخصصين في نظم المكتبات والمعلومات في نيجيريا

إشارينانا إي أدومي، وغلوريا أويوفوي تينوي

مجلة الإفلا، 48-1

الخلاصة:

معلومات أساسية/الأهداف والأغراض
شأنها شأن العديد من البلدان، تأثرت خدمات المكتبات في نيجيريا بفيروس كوفيد-19. وتتناول هذه الدراسة (التي أجريت 2020)

أولويات البحث عن المعلومات واستخدامها من جانب المتخصصين في نظم المكتبات والمعلومات في نيجيريا، والعقبات التي تعترضهم، ويشمل ذلك نوع المعلومات المنشودة والمصادر المستخدمة وكيفية تقييمها.

الوسائل: أرسل استبيان يتضمن أسئلة تسترشد بدراسة استقصائية للمؤلفات إلى المتخصصين في نظم المكتبات والمعلومات في نيجيريا، على حساباتهم (أفراداً ومجموعات) على تطبيق WhatsApp عبر الإنترنت. وجمعت الردود وحفظت مباشرة/تلقائياً في جدول بيانات جوجل لمزيد من التحليل بالإحصاءات الوصفية.

النتائج: تم تلقي 167 رداً (معدل الاستجابة 61%). المعلومات الأساسية المطلوبة وقت إجراء هذا الاستقصاء: أسباب انتشار الفيروس، وأعراض كوفيد-19، وتقديم خدمات المكتبة أثناء الإغلاق المادي، وتوقيت إعادة فتح المكتبة، وإجراءات سلامة الموظفين والمستخدمين المطلوبة لإعادة فتح المكتبة. وقد أعرب المستجيبون أيضاً عن قلقهم بشأن إجراءات اختبار كوفيد-19، وآليات انتقاله ومعالجته (مثل الأدوية العشبية).

Challenges and opportunities for parliamentary libraries during COVID-19

التهديدات والفرص التي تواجهها المكتبات البرلمانية خلال جائحة كوفيد-19

كارولين · مينايد

الخلاصة:

البلدان البرلمانية في توفير معلوماتية كوفيد-19 في الهند والولايات المتحدة. ونظراً إلى التفاوتات الشاسعة في البنية التحتية للمعلومات، وفي سبل وصول البلدان النامية والمتقدمة إلى المعلومات، فإن خطورة التحديات التي ظهرت خلال هذه الفترة قد تتعاظم في العالم النامي. وتبحث هذه الدراسة، التي شملت مقابلات، تجارب مجموعتين من كبار السن (ممن تزيد أعمارهم عن 65 عاماً) في بلدين هما الولايات المتحدة والهند؛ للحصول على احتياجاتهم من المعلومات ومصادرها، والعقبات التي اعترضتهم. تشير النتائج إلى تباين كبير في تجارب كلتا المجموعتين. فقد أعرب الأفراد في الولايات المتحدة عن احتياجات أكثر تنوعاً، بينما ركز المشاركون الهنود على تأثير كوفيد-19. وتشير الدراسة أيضاً إلى استخدام المشاركين الأمريكيين موارد الإنترنت بمعدلات أكبر بالمقارنة مع المستجيبين الهنود الذين يستخدمون مصادر التلفزيون والمطبوعات بصورة متكررة. وأبلغ معظم المجيبين الهنود عن صعوبات جمة في العثور على المعلومات اللازمة لتلبية احتياجاتهم من المعلومات. وكان لنتائج هذه الدراسة تداعيات مهمة على تصميم المداخلات والتعليم ودعم الاحتياجات المتعلقة بالمعلومات لكبار السن في جميع أنحاء العالم.

Remembering COVID-19; Or, A Duty to Document the Coronavirus Pandemic

تذكر كوفيد-19: واجبنا في توثيق الوباء

ماك · كوشيف

الخلاصة:

تذكر كوفيد-19: واجبنا في توثيق الوباء
البلدان البرلمانية في توفير معلوماتية كوفيد-19 في الهند والولايات المتحدة. ونظراً إلى التفاوتات الشاسعة في البنية التحتية للمعلومات، وفي سبل وصول البلدان النامية والمتقدمة إلى المعلومات، فإن خطورة التحديات التي ظهرت خلال هذه الفترة قد تتعاظم في العالم النامي. وتبحث هذه الدراسة، التي شملت مقابلات، تجارب مجموعتين من كبار السن (ممن تزيد أعمارهم عن 65 عاماً) في بلدين هما الولايات المتحدة والهند؛ للحصول على احتياجاتهم من المعلومات ومصادرها، والعقبات التي اعترضتهم. تشير النتائج إلى تباين كبير في تجارب كلتا المجموعتين. فقد أعرب الأفراد في الولايات المتحدة عن احتياجات أكثر تنوعاً، بينما ركز المشاركون الهنود على تأثير كوفيد-19. وتشير الدراسة أيضاً إلى استخدام المشاركين الأمريكيين موارد الإنترنت بمعدلات أكبر بالمقارنة مع المستجيبين الهنود الذين يستخدمون مصادر التلفزيون والمطبوعات بصورة متكررة. وأبلغ معظم المجيبين الهنود عن صعوبات جمة في العثور على المعلومات اللازمة لتلبية احتياجاتهم من المعلومات. وكان لنتائج هذه الدراسة تداعيات مهمة على تصميم المداخلات والتعليم ودعم الاحتياجات المتعلقة بالمعلومات لكبار السن في جميع أنحاء العالم.

提供支持 通过记录新冠疫情,我们可以将牢牢记住这一事件,并更好地预测未来的突发卫生事件

Onboarding in the Age of COVID-19

新冠疫情期间的新员工入职

安德鲁·卡洛斯、黛西·穆拉莱斯

摘要:

在向远程和虚拟工作环境过渡的过程中,新员工入职流程也必须转变 本文介绍、评估了中等规模的高校图书馆过去和现在的开展此项工作的举措,并研究了新员工的入职经历 本文为其他面临向远程和虚拟环境转型的图书馆提供了最佳实践和建议

School Library Media Specialists: An Evolving Profession in a Pandemic

学校图书馆媒体专家 大流行期间的新兴职业

希瑟·卡潘卡

摘要:

2020年3月,密歇根州的学校图书馆媒体专家以及整个教育界面临着新冠大流行带来的前所未有的挑战 随着网课的兴起,学校图书馆媒体专家的角色也发生了变化

本文采访了密歇根州东南部的三名学校图书馆媒体专家,了解他们对适应远程学习的看法,以及对于教育实践未来发展的预测 在向远程学习转变的过程中,学习共享、引导式探究、合作教学和信息素养等方面的教育实践尤其重要 在大流行期间,对这些手段的更多依赖可能会导致在恢复线下学习以后继续采用这些做法

Exploring National Library of Scotland datasets with Jupyter Notebooks

利用Jupyter Notebooks探索苏格兰国家图书馆数据

莎拉·艾姆斯·艾姆斯、露西·哈文斯

摘要:

自2019年9月以来,苏格兰国家图书馆的数字学术服务部一直在其数据交付平台Data Foundry上发布馆藏数据 随着新冠疫情造成的物理封锁,图书馆用户越来越多地利用在线资源,导致该服务使用量显著增加 为了确保更多用户能在该平台上检索数据,图书馆出资设立了一个数字研究实习生职位,主要任务是利用Jupyter Notebooks对Data Foundry上的数据进行基础分析 本文针对该项目开展案例研究,介绍了图书馆围绕新设立的数字研究服务部开展的工作,以及在Data Foundry平台上发布数据的情况 解释了图书馆决定提供Jupyter Notebooks服务的原因 介绍了Jupyter

Notebooks的概况及其包含的分析类型,在创建过程中存在的挑战,以及其发布和影响等

LibGuide development and impact of COVID19 Lockdown on their usage

LibGuide平台的开发与新冠疫情对其使用产生的影响

黛博拉·贝克、乔安·阿伦斯、韦利斯瓦·特沙、祖莱加·戴维斯、弗约卡兹·基瓦—约翰逊

摘要:

自2012年以来,开普半岛科技大学的图书馆员使用LibGuides平台向学生提供基于主题的信息、选定资源的链接以及信息素养培训材料 教学人员利用平台资源准备讲座内容和确定学习资料,研究人员和研究生在撰写论文时利用平台资源 由于全球大流行带来的大规模封锁,南非的各级院校被迫关闭,学生放假在家 然而,学生仍须完成学业,开普半岛科技大学的图书馆员也要继续为其提供支持 LibGuides是一个便捷的在线服务平台 本文介绍、分析了大学图书馆使用LibGuides平台的情况,以及学生和图书馆工作人员的使用体验

Cooking Up Engagement during a Pandemic

提高疫情期间的参与度

克里斯蒂娜·雷曼·墨菲、安妮·霍洛韦、马克·迈特森

摘要:

2020年7月,在新冠大流行期间,澳大利亚莫纳什大学图书馆和美国宾夕法尼亚州立大学图书馆基于姊妹图书馆国际合作伙伴关系举办了一场线上活动,重点是深化双方合作、推广精品特藏 这场主题为“莫纳什—宾州善本烘焙食谱”的活动由两家高校图书馆合作开发,以友好竞赛形式举行,邀请两馆所在社区的参与者从收藏中筛选整理特色内容,并将自己的经历发布到社交媒体平台 除了提高外界对两馆的伙伴关系及各自馆藏的关注以外,该合作项目的目标是在困难时期为当地社区提供愉快而富有创意的活动 本文介绍了该项目的策划、执行和评估情况

Expanding digital academic library & archive services in response to COVID

在新冠疫情期间拓展高校数字图书馆和档案服务

詹姆斯·墨菲、卡拉·刘易斯、克里斯蒂娜·麦基洛普、马克·斯托克尔

摘要:

在新冠大流行期间,所有类型的图书馆都面临着不确定的挑战,但新的最佳实践和创新服务方式已经出现。包括2011年具有开创性的泰勒家族数字图书馆在内,图书馆和文化资源机构一直在为高校数字图书馆的持续发展做出贡献。新冠大流行要求卡尔加里大学快速掌握数字技能、平台、专业知识和服务提供模式,从而继续为当地社区提供卓越且具有变革性的体验。本文探讨了在线工作团队情况、线上全景导览服务、在线聊天、数字馆藏协议以及档案和特藏的远程服务举措等。

Continuity during COVID: Critical Digital Pedagogy and Special Collections Instruction

在新冠疫情期间保持服务连续性 关键数字教学法和特藏指导

阿曼达·博克扎、希尼·乔丹

摘要:

在2020年初春,当全球各国逐渐认识到新冠疫情的危险时,南佛罗里达大学图书馆——坦帕特藏馆开始提供线上教学课程,为学生提供善本和原始档案资料的访问权限。为了满足新的在线教学的需求,该部门制定了一项计划,支持学生使用 ArcGIS StoryMaps 获得开放式数字学习体验。这些课程以批判性数字教育学和女性数字人文学科为基础,为无法进行线下教学的教师提供在线教学资源。该部门针对十五门课程建立了网络课堂。未来,特藏馆将继续提供在线课程。这些课程的数字形式有助于实现递归教学法,帮助我们在学术周期中不断适应。

The experiences of UFSC Library Working Group on Covid-19 prevention

圣卡塔琳娜州联邦大学图书馆新冠疫情防控工作经验

吉列尔梅·古拉特·里赫托、塔蒂亚娜·罗西、朱利安·丰塞卡·索阿雷斯

摘要:

本文简要介绍了新冠大流行对巴西各个大学图书馆的影响,以及这些机构所做的努力。分享了位于巴西南部的圣卡塔琳娜州联邦大学图书馆设立的新冠疫情防控工作经验、工作小组制定的指导方针以及恢复线下工作的预期。本文思考了图书馆在获取和传播科学文献方面的作用,强调了在学习、研究和服务等方面的变革和发展机遇。结论表明,在工作小组的努力下,大学图书馆履行了为教学活动提供支持的职能,与政府机构一道建立了有关新冠疫情的信息交流网络,并在此基础上开展研究、指导图书馆管理工作。

Information Dissemination in COVID-19 Era in University Libraries in Nigeria

尼日利亚大学图书馆在新冠疫情期间的信息传播

赛特戴伊·欧米卢佐、安吉拉·恩瓦玛、乌戈奇·莫洛库、阿坦达·桑博

摘要:

2020年2月27日,尼日利亚诊断出首例新冠病毒感染病例,目前全国已有确诊病例1.3万人。新冠病毒的传播迫使图书馆关闭。本文调查了在尼日利亚新冠大流行和图书馆闭馆期间,图书馆为满足用户需求开展的信息传播活动。本文采用了描述性调查方法,针对联邦、州立和私立大学的178名图书馆员展开调查。结果表明,图书馆向用户发布了有关个人卫生的信息(洗手、清洁和使用洗手液),并利用海报和传单等手段使公众对有关新冠疫情的信息保持敏感。结果还显示,图书馆发布了信息和电子资源链接,为用户开展研究工作提供支持。最后,文中指出,缺乏协调、大学教职人员工会罢工和无人申请在家办公是当前存在的一些挑战。

Australian public libraries and COVID-19 crisis

澳大利亚公共图书馆与新冠疫情危机

西蒙·威克林、简·加纳、菲利普·海德、哈米德·贾马利、杰西·莱恩、亚兹丹·曼苏里安、霍莉·兰德尔—穆恩

摘要:

新冠疫情危机对世界各地的公共图书馆产生了重大影响。在澳大利亚,几乎所有公共图书馆都闭馆了一段时间,并调整服务和交付模式。本文介绍了2020年8月针对澳大利亚公共图书馆管理人员进行的大规模调查的结果,尤其展示了对于开放性问题的自由回答作出的主题分析结果。本文分享了有关应对图书馆闭馆、人员配备问题、扩展服务与项目、与上级机构的关系、以及公共图书馆在危机期间及后危机时代的作用等方面的深刻见解。虽然管理者认为公共图书馆较为灵活且适应性强,并且有效地利用了技术,但调查结果清楚地表明了图书馆建筑对用户价值,这对于我们理解公共图书馆的作用具有重要意义。

Reimagining public library programming during a pandemic

在疫情期间重新设计公共图书馆服务

诺亚·伦斯特拉、克里斯蒂娜·达尔帕

摘要:

本文利用调查数据,描述了小型和农村公共图书馆在新冠大流行期间对服务的调整,并进行审

视和分析 疫情带来的限制迫使图书馆闭馆,并重新设计向社区提供服务的方式

Practices and Thinking of Public Libraries in China during COVID-19

中国公共图书馆在新冠疫情期间的实践与思考

周鑫

摘要:

2020年初,中国国内图书馆在新冠疫情的影响下纷纷闭馆,并将所有服务转移至线上。这一变化给图书馆服务带来了前所未有的挑战,同时也为图书馆的未来转型带来了机遇和动力。本文以中国国家图书馆微信公众号和30多个省级公共图书馆为主要信息来源,对闭馆期间提供的服务进行汇总和分类。此外,本文对上述图书馆发布的新闻进行收集和分析,为公共图书馆在疫情期间的改进在线服务提供了指导。最后,本文从阅读推广、智慧图书馆、新媒体运营、信息素养提升、开放获取、协同发展六个方面提出了作者对后疫情时代图书馆发展方向的思考和建议。

Public Libraries' Responses to a Global Pandemic: Bangladesh Perspectives

公共图书馆应对全球大流行 以孟加拉国为例

迪拉拉·贝古姆、穆罕默德·罗克努萨曼、马布布·肖巴尼

摘要:

全世界正在经历一个新的现实——新冠疫情在全球的爆发迫使机构关闭。本文旨在研究孟加拉国公共图书馆的应对方式。作者利用在线调查问卷向国内71个公共图书馆收集原始数据,并对八名图书馆员进行半结构化访谈。分析结果表明,超过50%的图书馆面对各种危机的准备不够充分,但没有一家图书馆为应对这一流行病做好了准备。所有图书馆的行政管理职能继续开放,但不允许用户到馆。研究发现,52%的图书馆通过社交媒体提高公众意识,46%支持地方政府组织开展工作,40%提供咨询服务。面对当前的挑战,本文建议孟加拉国公共图书馆采取具体应对措施。

Prevalence and source analysis of COVID-19 misinformation of 138 countries

138个国家有关新冠疫情的虚假信息传播情况与来源分析

赛义德·扎曼

摘要:

本文分析了来自138个国家、经94家组织进行事实核查的9657条虚假信息,以了解不同国

家虚假信息的来源与传播情况。结果显示,印度(15.94%)、美国(9.74%)、巴西(8.57%)和西班牙(8.03%)是受虚假信息影响最大的四个国家。根据结果推测,有关新冠疫情的虚假信息的传播可能与疫情本身呈正相关。社交媒体(84.94%)上产生的虚假信息数量最多,而整个互联网(90.5%)是虚假信息的最大来源。此外,在所有社交媒体产生的虚假信息中,仅Facebook就占了66.87%。在所有国家中,印度(18.07%)产生的社交媒体虚假信息数量最多,这可能是由于该国较高的互联网普及率、不断增长的社交媒体消费以及用户缺乏互联网素养所导致的。

Older Adults' Information Seeking in India and U.S. During Covid-19

新冠疫情期间印度和美国老年人信息检索情况分析

布雷迪·隆德、桑杰·库马尔·莫里亚

摘要:

2020年的新冠大流行给全球老年人带来了重大的信息挑战。由于发展中国家和发达国家在信息基础设施和接入方面存在广泛差异,这一时期发展中国家面临的挑战可能更为严峻。本文采用访谈手段,调查了美国和印度的老年人(65岁以上)面临的信息需求、信息来源和使用障碍。结果表明,两个国家的老年群体拥有完全不同的经历。美国老年人表达了更多样化的需求,而印度受访者更加关注疫情造成的影响。前者使用互联网资源较多,而后者更多地使用电视和印刷资源,且大多表示在检索信息方面存在重大挑战。这项研究的结果对于设计干预、教育和支持手段,满足全球老年人的信息需求具有重要意义。

COVID-19 information seeking and utilization among LIS professionals in Nigeria

尼日利亚图情专业人员对于新冠疫情相关信息的检索和使用

埃沙雷纳·阿多米、格洛丽亚·奥约维—蒂诺耶

摘要:

背景、目的和目标 与许多国家一样,尼日利亚的图书馆服务也受到新冠疫情的影响。本研究(于2020年开展)探索了尼日利亚图情专业人员检索和使用信息的重点和障碍,包括检索的信息类型、检索的位置以及对信息的评估。

方法 作者通过WhatsApp向尼日利亚图情专业人员的个人和专业团体帐户发送了一项在线调查,其中根据文献调查设计了一些问题。之后利用网络系统自动收集回复的问卷,并保存到谷歌表格中,以便使用描述性统计数据进一步分析。

结果 作者共收到167份回复(回复率为61%)。从结果上看,受访者的信息需求主要涉及

以下领域 病毒的来源、新冠肺炎的症状、图书馆闭馆期间提供的服务、重新开放的时间、重新开放所需的工作人员和用户安全措施 受访者还关注这一疾病的检测流程和传播机制, 以及治疗方法(包括使用草药)

Challenges and opportunities for parliamentary libraries during COVID-19

Défis et opportunités pour les bibliothèques parlementaires pendant le COVID-19

Carolyne Ménard

IFLA Journal, 48-1, 9-19

Résumé:

Les bibliothèques parlementaires jouent un rôle crucial en fournissant un support d'information aux décideurs du monde entier. Avec la pandémie de COVID-19, ces institutions ont dû faire face à une situation sans précédent. Beaucoup ont dû modifier considérablement leurs pratiques pour pouvoir continuer à proposer leurs services aux utilisateurs. Cet article s'intéresse à la façon dont la bibliothèque de l'Assemblée nationale du Québec a réagi à ce problème et redéfini ses services au cours de la pandémie. L'auteure présente les défis et opportunités rencontrés pour adapter les services virtuels, redéfinir le traitement des documents et améliorer la communication entre les équipes, et elle anticipe sur les obstacles futurs pour l'institution. Cette étude de cas partage les meilleures pratiques et les leçons tirées dans l'espoir d'informer et de conseiller des institutions similaires confrontées à des problèmes durant cette pandémie.

Remembering COVID-19; Or, A Duty to Document the Coronavirus Pandemic

Se souvenir du COVID-19 ou le devoir de documenter la pandémie de coronavirus

Marc Koscieljew

IFLA Journal, 48-1, 20-32

Résumé:

Se souvenir de la pandémie de coronavirus est un devoir pour le présent et pour l'avenir. S'intéressant aux points d'intersection entre mémoire, patrimoine documentaire, institutions patrimoniales et COVID-19, cet article estime que les bibliothèques, archives et musées (BAM) ont un devoir unique et urgent de documenter l'évolution de la pandémie de coronavirus afin de faire en sorte que le patrimoine documentaire qui y est associé soit collecté, conservé et archivé à des fins présentes et futures de

consultation, référence et commémoration. Des dispositions de principe explicites sur le « devoir de documenter la pandémie de coronavirus » devraient être adoptées par les BAM afin, premièrement, de renforcer leurs initiatives documentaires actuelles relatives au COVID-19 et deuxièmement, de soutenir d'autres initiatives documentaires éventuelles en rapport avec cette crise ou avec d'autres crises sanitaires mondiales futures. En documentant le COVID-19, nous pouvons nous en souvenir collectivement et mieux anticiper sur les éventuelles futures crises sanitaires.

Onboarding in the Age of COVID-19

Le recrutement à l'ère du COVID-19

Andrew Carlos, Daisy C Muralles

IFLA Journal, 48-1, 33-40

Résumé:

En raison du recours au télétravail/à un cadre de travail virtuel, la procédure de recrutement des nouveaux employés a dû également se faire à distance/de façon virtuelle. Cet article passe en revue les pratiques passées et présentes au sein d'une bibliothèque universitaire de taille moyenne et étudie sous un angle auto-ethnographique l'expérience des nouveaux employés à l'égard de la procédure de recrutement. Il présente les meilleures pratiques et fait des suggestions afin d'informer d'autres bibliothèques qui doivent aussi mener des procédures de recrutement à distance/virtuelles.

School Library Media Specialists: An Evolving Profession in a Pandemic

Spécialistes des médias dans les bibliothèques scolaires: une profession en pleine évolution pendant la pandémie

Heather Kapanka

IFLA Journal, 48-1, 41-49

Résumé:

En mars 2020, les spécialistes des médias dans les bibliothèques scolaires du Michigan ainsi que la communauté enseignante dans son ensemble ont dû faire face à des défis sans précédent dus aux bouleversements causés par la pandémie de COVID-19. De même qu'il a fallu passer à l'enseignement en ligne, le rôle des spécialistes des médias au sein des bibliothèques scolaires a également évolué.

Trois spécialistes des médias de bibliothèques scolaires du sud-est du Michigan ont été interviewés pour

savoir ce qu'ils pensaient de l'adaptation à la formation en ligne, et également comment ils envisageaient l'évolution future des pratiques d'enseignement. Ces pratiques composées des espaces d'apprentissage, de la recherche encadrée, du co-enseignement et de la maîtrise de l'information se sont révélées particulièrement précieuses lors du passage à la formation en ligne. La dépendance croissante à l'égard de ces pratiques au cours de la pandémie va probablement entraîner leur utilisation de plus en plus fréquente lorsque l'enseignement en présentiel reprendra.

Exploring National Library of Scotland datasets with Jupyter Notebooks

Examen des fichiers de données de la Bibliothèque nationale d'Écosse avec Jupyter Notebooks

Sarah Ames Ames, Lucy Havens

IFLA Journal, 48-1, 50-56

Résumé:

Depuis septembre 2019, le service numérique universitaire de la Bibliothèque nationale d'Écosse diffuse des collections sous forme de données sur sa plateforme de fourniture de données, The Data Foundry. Suite au confinement dû au COVID-19, ce service a connu une fréquentation nettement plus élevée, dans la mesure où les utilisateurs des bibliothèques ont utilisé de plus en plus des ressources en ligne. Afin de permettre au plus grand nombre possible d'utilisateurs de consulter les fichiers de données sur The Data Foundry, la bibliothèque a investi dans un poste de stagiaire en recherche numérique, devant réaliser à l'intention de The Data Foundry une analyse introductive aux collections à l'aide de Jupyter Notebooks. Cet article présente une étude de cas sur ce projet, expliquant le travail de la bibliothèque jusqu'à présent en rapport avec son service numérique universitaire et publiant des fichiers de données sur The Data Foundry. Il évoque pourquoi il a été décidé de proposer les cahiers électroniques Jupyter Notebooks, présente ces cahiers électroniques et les types d'analyses qu'ils contiennent, et évoque aussi les défis rencontrés pour créer ces cahiers ainsi que leur publication et leur impact.

LibGuide development and impact of COVID19 Lockdown on their usage

Développement des LibGuides et impact du confinement sur leur utilisation en raison du COVID19

Deborah A. Becker, Joanne Arendse, Veliswa Tshetsha, Zulaiga Davids, Vuyokazi Kiva-Johnson

IFLA Journal, 48-1, 57-68

Résumé:

Depuis 2012, les bibliothécaires de l'Université de Technologie de la Péninsule du Cap (Cape Peninsula University of Technology ou CPUT) utilisent les LibGuides afin de fournir des informations thématiques aux étudiants, mettant à disposition des liens rapides vers des ressources sélectionnées ainsi que des informations qui complètent les formations à la maîtrise de l'information. Les professeurs utilisent ces ressources pour préparer leurs cours et trouver des outils pédagogiques, cependant que les chercheurs et les étudiants de troisième cycle utilisent des guides de soutien à la recherche pour rédiger leurs articles. Avec le confinement sans précédent provoqué par la pandémie mondiale, les institutions universitaires d'Afrique du Sud ont dû fermer et les étudiants ont été renvoyés chez eux. Cependant, les étudiants devaient tout de même poursuivre leurs études et les bibliothécaires de la CPUT continuer à proposer un soutien à ces étudiants. Les LibGuides étaient l'un des services disponibles en ligne. Cet article donne un aperçu de l'évolution historique des LibGuides à la CPUT, de l'utilisation des LibGuides pendant le confinement et des expériences d'un groupe sélectionné d'étudiants et d'employés de la bibliothèque.

Cooking Up Engagement during a Pandemic

Une compétition culinaire pendant la pandémie

Christina E Riehm-Murphy, Anne Holloway, Mark Mattson

IFLA Journal, 48-1, 69-82

Résumé:

En juillet 2020, pendant la pandémie de COVID-19, la bibliothèque de l'Université Monash de Melbourne en Australie et les bibliothèques de l'Université d'État de Pennsylvanie aux États-Unis ont mis à profit leur partenariat international déjà existant pour accueillir un événement virtuel visant à promouvoir ce partenariat, et ont sélectionné des collections spéciales dans ces deux institutions. L'événement intitulé « Monash-Penn State Great Rare Books Bake Off », une compétition amicale organisée en collaboration par les deux bibliothèques universitaires, a eu pour but de susciter l'intérêt des membres de ces deux institutions pour leurs collections et leurs ressources, en invitant les participants à cuisiner des recettes tirées de ces collections et à poster les preuves de leurs expériences sur les réseaux sociaux. En plus de faire connaître le partenariat international entre ces institutions ainsi que leurs collections respectives, l'un des principaux objectifs de ce projet en collaboration était d'offrir aux communautés locales un exutoire agréable et créatif pendant une période difficile. Cette étude de cas exemplaire décrit comment les deux institutions ont planifié, organisé et évalué le projet.

Expanding digital academic library & archive services in response to COVID

Étendre les services numériques et d'archives des bibliothèques universitaires en réaction au COVID

James E Murphy, Carla J Lewis, Christena A McKillop, Marc Stoeckle

IFLA Journal, 48-1, 83-98

Résumé:

Malgré les challenges imprévus auxquels ont été confrontées les bibliothèques de toutes sortes pendant la pandémie de COVID-19, de nouvelles meilleures pratiques ainsi que des façons innovantes d'aborder les services ont vu le jour. En créant la révolutionnaire bibliothèque numérique Taylor Family Digital Library en 2011, le département Ressources bibliothécaires et culturelles a contribué au développement de la bibliothèque universitaire numérique. En raison de la pandémie de COVID-19, il a fallu exploiter rapidement les compétences, plateformes, expertises et modèles de fourniture de services numériques pour continuer à offrir des expériences exceptionnelles et transformatives aux membres de la communauté de l'Université de Calgary. Les initiatives abordées dans cet article comprennent des groupes de travail en ligne, des visites virtuelles à 360 degrés, un chat en

ligne avec la bibliothèque, des autorisations numériques d'accès aux collections et des services à distance pour les archives et les collections spéciales.

Continuity during COVID: Critical Digital Pedagogy and Special Collections Instruction

La continuité pendant le COVID: pédagogie numérique critique et formation aux collections spéciales

Amanda Boczar, Sydney Jordan

IFLA Journal, 48-1, 99-111

Résumé:

Quand le monde a commencé à réaliser les risques grandissant que représentait le COVID-19 au début du printemps 2020, les bibliothèques de l'Université de Floride du Sud/Collections spéciales de Tampa sont passées à des séances virtuelles d'enseignement afin de permettre aux étudiants d'accéder à des livres rares et à des sources primaires de documents d'archives. Pour répondre à la nécessité de passer rapidement à l'enseignement en ligne, notre département a formulé un plan afin d'offrir un soutien aux étudiants sous forme d'une expérience d'apprentissage en ligne en accès libre utilisant ArcGIS StoryMaps. Basées sur une pédagogie numérique critique et les sciences humaines féministes numériques, les sessions ont fourni des ressources d'enseignement en ligne aux enseignants qui ne pouvaient pas accueillir les étudiants de façon physique. Au cours de la première année de travail à distance, le département a créé des sessions pour quinze cours distincts. À l'avenir, le département des collections spéciales va continuer à proposer des sessions virtuelles dans le cadre de notre enseignement. La nature numérique des cours s'inspire d'une pédagogie récursive, susceptible d'être modifiée en permanence pour correspondre aux cycles universitaires.

The experiences of UFSC Library Working Group on Covid-19 prevention

Les expériences du groupe de travail de la bibliothèque de l'UFSC en rapport avec la prévention du Covid-19

Guilherme Goulart Righetto, Tatiana Rossi, Juliane Fonseca Soares

IFLA Journal, 48-1, 112-125

Résumé:

Cet article présente un bref aperçu des conséquences de la pandémie de Covid-19 pour les bibliothèques universitaires brésiliennes ainsi que les efforts faits par ces institutions. Il relate les expériences du groupe de travail « BU/UFSC Library Working Group » en rapport avec la prévention du Covid-19 au sein de la bibliothèque universitaire de l'Université fédérale de Santa Catarina (BU/UFSC), située dans le sud du Brésil. Il évoque les principes directeurs définis par le groupe de travail et les perspectives pour revenir au travail en présentiel. Il étudie l'importance du rôle des bibliothèques pour l'accès au savoir et sa diffusion. Il signale les possibilités de changement et de progrès en ce qui concerne les études, la recherche et les services visant les bibliothèques en général. Il conclut en disant que la BU/UFSC, par le biais du groupe de travail BU/UFSC consacré au Covid-19 et en remplissant son rôle de soutien à l'enseignement, a permis de structurer l'échange d'informations relatives au Covid-19 avec les fonctionnaires, en effectuant des recherches et en guidant la direction de la bibliothèque BU/UFSC.

Information Dissemination in COVID-19 Era in University Libraries in Nigeria

Diffusion d'informations à l'ère du COVID-19 dans les bibliothèques universitaires au Nigeria

Saturday Unwelegbemenwe Omeluzor, Angela E. Nwaomah, Ugochi Esther Molokwu, Atanda Saliu Sambo

IFLA Journal, 48-1, 126-137

Résumé:

Au Nigeria, le premier cas d'infection au coronavirus (COVID-19) a été diagnostiqué le 27 février 2020, et il y a environ 13 000 cas confirmés dans l'ensemble du pays. La propagation du COVID-19 a forcé les bibliothèques à fermer leurs portes. L'étude porte sur la diffusion d'informations pour tenir les clients des bibliothèques informés au cours de la pandémie de COVID-19 et de la fermeture des bibliothèques universitaires au Nigeria. La méthode d'enquête descriptive utilisée est basée sur un échantillon de population composé de 178 bibliothécaires d'universités fédérales, d'état et privées au Nigeria. Les conclusions de l'enquête montrent que les bibliothèques

ont communiqué à leurs clients des informations concernant l'hygiène personnelle (lavage des mains, propreté et utilisation d'un désinfectant pour les mains) et ont sensibilisé le grand public à propos du COVID-19 à l'aide d'affiches et de prospectus. Ces conclusions montrent également que les bibliothèques ont diffusé des informations et des liens vers des ressources en ligne afin d'aider leurs clients à poursuivre leurs recherches. L'enquête révèle que le manque de coordination, le mouvement de grève de l'ASUU (Union du personnel des bibliothèques universitaires au Nigeria) et l'absence d'abonnement pour travailler à domicile ont posé problème.

Australian public libraries and COVID-19 crisis

Les bibliothèques publiques australiennes et la crise du COVID-19

Simon Wakeling, Jane Garner, Philip Hider, Hamid Jamali, Jessie Lymn, Yazdan Mansourian, Holly Randell-Moon

IFLA Journal, 48-1, 138-154

Résumé:

La crise du COVID-19 a eu un impact significatif sur les bibliothèques publiques à travers le monde. En Australie, pratiquement toutes les bibliothèques publiques ont dû fermer pendant un certain temps et ont donc été forcées d'adapter leurs services et modèles de délivrance. Cet article présente les conclusions d'une vaste enquête menée en août 2020 auprès des gestionnaires de bibliothèques publiques en Australie. Il présente en particulier les résultats d'une analyse thématique des commentaires des participants sur des questions ouvertes posées dans le cadre de l'enquête. Cette analyse fournit des informations importantes sur les réactions aux fermetures des bibliothèques, les problèmes d'effectif, les services et programmes nouveaux ou élargis, les relations avec les organes de tutelle et le rôle des bibliothèques publiques pendant la crise et au-delà. Alors que les responsables des bibliothèques publiques estimaient que celles-ci avaient fait preuve de flexibilité et de dynamisme et utilisé les technologies avec efficacité, les conclusions de l'enquête montrent clairement la valeur accordée par les utilisateurs aux bâtiments des bibliothèques, ce qui a d'importantes conséquences sur notre compréhension du rôle des bibliothèques publiques.

Reimagining public library programming during a pandemic

Repenser la programmation des bibliothèques publiques pendant une pandémie

Noah Lenstra, Christine D'Arpa

IFLA Journal, 48-1, 155-160

Résumé:

Cet article utilise les données d'une enquête pour décrire, commenter et examiner les façons dont les bibliothèques de petite taille et bibliothèques rurales ont modifié leur programmation pendant la pandémie de COVID-19. Les restrictions liées à la pandémie ont forcé les bibliothèques à fermer leurs portes et à repenser la façon dont elles pouvaient fournir des services à leur communauté.

Practices and Thinking of Public Libraries in China during COVID-19

Pratiques et raisonnement des bibliothèques publiques en Chine pendant le COVID-19

Xin Zhou

IFLA Journal, 48-1, 161-173

Résumé:

En raison de l'épidémie de COVID-19, les bibliothèques en Chine ont fermé leurs portes début 2020 et transféré tous leurs services en ligne. Ce changement a entraîné des défis sans précédent pour le développement des services bibliothécaires, tout en créant des possibilités et une volonté de transformation future des bibliothèques. Cet article utilise pour principales sources d'informations les comptes officiels WeChat de la Bibliothèque nationale de Chine et de plus de 30 bibliothèques publiques provinciales, afin de synthétiser et catégoriser les services fournis pendant la période de fermeture. Il rassemble et analyse également les nouveaux articles publiés par les bibliothèques citées précédemment pour aider à améliorer les services en ligne des bibliothèques publiques dans le cadre de la pandémie. Enfin, il invoque les réflexions et suggestions de l'auteur à propos des principales possibilités de développement pour les bibliothèques après la pandémie, en se basant sur six aspects: promotion de la lecture, bibliothèque intelligente, mise en œuvre de nouveaux médias, culture de la maîtrise de l'information, accès libre et développement en collaboration.

Public Libraries' Responses to a Global Pandemic: Bangladesh Perspectives

Réactions des bibliothèques publiques à une pandémie mondiale: les perspectives du Bangladesh

Dilara Begum, Md Roknuzzaman, Mahbub E Shobhane

IFLA Journal, 48-1, 174-188

Résumé:

Le monde entier connaît une nouvelle réalité: la pandémie de COVID-19, qui a forcé chaque institution à fermer ses portes. Cette étude s'intéresse aux réactions des bibliothèques gouvernementales publiques au Bangladesh. Un questionnaire en ligne a été utilisé pour rassembler des données primaires auprès de la totalité des 71 bibliothèques publiques, suivi par un entretien semi-structuré avec huit bibliothécaires. L'analyse suggère que plus de 50% des bibliothèques étaient faiblement préparées à faire face à une quelconque crise, mais qu'aucune n'était entièrement préparée à gérer cette pandémie. Toutes les bibliothèques étaient ouvertes pour des activités administratives, sans accès physique pour les utilisateurs. L'étude a constaté que 52% des bibliothèques ont sensibilisé le public par le biais des réseaux sociaux, alors que 46% ont soutenu des organisations gouvernementales locales et 40% ont fourni des services de conseil. Étant donné les problèmes existants, l'étude recommande certaines mesures pour permettre aux bibliothèques publiques du Bangladesh de gérer cette situation.

Prevalence and source analysis of COVID-19 misinformation of 138 countries

Prévalence et analyse des sources de désinformation à propos du COVID-19 dans 138 pays

Md. Sayeed Al-Zaman

IFLA Journal, 48-1, 189-204

Résumé:

Cette étude a analysé 9657 fausses informations provenant de 138 pays et vérifiées par 94 organisations, dans le but de comprendre la prévalence de la désinformation et ses sources dans différents pays. Les résultats ont montré que l'Inde (15,94%), les États-Unis (9,74%), le Brésil (8,57%) et l'Espagne (8,03%) sont les quatre pays les plus affectés par la désinformation. Au vu de ces résultats, on suppose que la prévalence des fausses informations au sujet

du COVID-19 peut avoir un rapport positif avec la situation du COVID-19. Les réseaux sociaux (84,94%) produisent la quantité la plus importante de fausses informations à propos du COVID-19 et Internet (90,5%) dans son ensemble est responsable de la plupart d'entre elles. En outre, parmi tous les réseaux sociaux, Facebook produit à lui-seul 66,87% des fausses informations. De tous les pays, l'Inde (18,07%) produit la plus grande quantité de fausses informations sur les réseaux sociaux, peut-être en raison du taux de pénétration élevé d'Internet dans ce pays – ce qui augmente la fréquentation des réseaux sociaux – et du manque de maîtrise d'Internet de la part des utilisateurs.

Older Adults' Information Seeking in India and U.S. During Covid-19

Recherche d'informations par les seniors en Inde et aux États-Unis pendant le Covid-19

Brady Lund, Sanjay Kumar Maurya

IFLA Journal, 48–1, 205–215

Résumé:

En 2020, la pandémie de COVID-19 a entraîné de gros défis pour les seniors du monde entier pour se tenir informés. Étant donné les disparités généralisées en matière d'infrastructures d'information et d'accès aux informations entre pays en développement et pays industrialisés, les problèmes rencontrés au cours de cette période sont encore plus importants dans le monde en développement. Cette étude examine l'expérience des seniors (personnes âgées de plus de 65 ans) dans deux pays – les États-Unis et l'Inde – souhaitant se procurer des informations ainsi que les sources d'informations et les obstacles rencontrés pour y accéder. Les résultats montrent des disparités entre les deux populations. Les personnes interrogées aux États-Unis exprimaient des besoins plus diversifiés, alors que les participants en Inde se concentraient plus sur l'impact du COVID-19. Les participants américains indiquaient aussi utiliser plus les ressources sur Internet, en comparaison avec les participants indiens, qui utilisaient plus souvent la télévision et les supports imprimés. Bien plus de participants indiens ont signalé des problèmes importants pour trouver des informations afin de satisfaire leurs besoins en la matière. Les conclusions de cette enquête ont des ramifications importantes pour concevoir des moyens d'intervention, des formations et un soutien afin de répondre aux besoins des seniors du monde entier en matière d'information.

COVID-19 information seeking and utilization among LIS professionals in Nigeria

Recherche et utilisation d'informations relatives au COVID-19 par les professionnels de la bibliothéconomie au Nigeria

Esharenana E. Adomi, Gloria O. Oyovwe-Tinuoye

IFLA Journal, 48–1, 216–227

Résumé:

Contexte /Buts et objectifs

Comme de nombreux pays, les services bibliothécaires au Nigeria ont été affectés par le COVID-19. Cette étude (menée en 2020) a examiné les priorités et obstacles à la recherche et l'utilisation d'informations par les professionnels de la bibliothéconomie au Nigeria, y compris le type d'information recherchées, les sources utilisées et comment celles-ci étaient évaluées.

Méthodes: Une enquête en ligne avec des questions s'appuyant sur un examen documentaire a été envoyée aux professionnels de la bibliothéconomie au Nigeria ayant des comptes sur WhatsApp (comptes individuels et groupes de professionnels de la bibliothéconomie). Les réactions ont été rassemblées et sauvegardées automatiquement avec Google Sheet à des fins d'analyse à l'aide de statistiques descriptives.

Résultats: 167 personnes y ont participé (taux de réponse de 61%). Les principaux besoins en informations au moment de l'enquête portaient sur: les causes du virus, les symptômes du COVID-19, la fourniture de services bibliothécaires pendant la fermeture physique des bibliothèques, le timing de la réouverture, le personnel et les mesures de sécurité requises pour rouvrir les bibliothèques. Les participants étaient aussi préoccupés par les procédures de test pour le COVID-19 et les mécanismes de transmission du virus ainsi que son traitement (y compris la phytothérapie).

Challenges and opportunities for parliamentary libraries during COVID-19

Herausforderungen und Chancen für Parlamentsbibliotheken während der COVID-19-Pandemie

Carolyné Ménard

IFLA Journal, 48–1, 9–19

Zusammenfassung:

Parlamentsbibliotheken spielen eine entscheidende Rolle bei der Informationsbereitstellung für Entscheidungsträgerinnen und Entscheidungsträger in aller Welt. Mit der COVID-19-Pandemie sahen sich diese Institutionen einer nie dagewesenen Situation gegenüber. Viele von ihnen mussten ihre Arbeitsweise erheblich ändern, um ihre Nutzerinnen und Nutzer weiterhin bedienen zu können. Dieser Artikel untersucht, wie die Bibliothek der Nationalversammlung von Québec auf dieses Problem reagierte und ihre Dienstleistungen während der Pandemie neu definierte. Die Autorin stellt die Herausforderungen und Chancen dar, die sich bei der Anpassung der virtuellen Dienste, der Neudefinition der Dokumentenbearbeitung und der Verbesserung der Teamkommunikation ergeben haben, und gibt einen Ausblick auf die künftigen Hindernisse für die Institution. In dieser Fallstudie werden bewährte Verfahren und Erfahrungen aufgezeigt, in der Absicht, ähnliche Institutionen, die mit den Herausforderungen dieser Pandemie konfrontiert sind, zu informieren und zu beraten.

Remembering COVID-19; Or, A Duty to Document the Coronavirus Pandemic

Erinnerung an COVID-19 oder die Pflicht zur Dokumentation der Coronavirus-Pandemie

Marc Kosciejew

IFLA Journal, 48–1, 20–32

Zusammenfassung:

Die Erinnerung an die Coronavirus-Pandemie ist eine Verpflichtung gegenüber der Gegenwart und der Zukunft. Dieser Artikel beleuchtet die Überschneidungen zwischen Erinnerung, dokumentarischem Erbe, Gedächtnisinstitutionen und COVID-19 und vertritt den Standpunkt, dass Bibliotheken, Archive und Museen (LAMs) die einzigartige und dringende Pflicht haben, die Coronavirus-Pandemie in ihrem Verlauf zu dokumentieren, um sicherzustellen, dass das damit verbundene dokumentarische Erbe für gegenwärtige und zukünftige Zwecke der Konsultation, Referenz und Erinnerung gesammelt, bewahrt und archiviert wird. Die Bibliotheken, Archive und Museen sollten ausdrückliche „Bestimmungen zur Dokumentationspflicht der Coronavirus-Pandemie“ festlegen, um erstens ihre derzeitigen COVID-19-Dokumentationsinitiativen zu stärken und zweitens andere mögliche Dokumentationsinitiativen im Zusammenhang mit dieser oder zukünftigen globalen Gesundheitskrisen zu unterstützen.

Indem wir COVID-19 dokumentieren, können wir uns gemeinsam daran erinnern und mögliche künftige Gesundheitskrisen besser vorhersehen.

Onboarding in the Age of COVID-19

Einarbeitung im Zeitalter von COVID-19

Andrew Carlos, Daisy C Muralles

IFLA Journal, 48–1, 33–40

Zusammenfassung:

Aufgrund des Übergangs zu einer dezentralen/virtuellen Arbeitsumgebung muss auch der Prozess der Einarbeitung neuer Mitarbeitender auf die dezentrale/virtuelle Arbeitsumgebung umgestellt werden. Dieser Artikel vermittelt einen Überblick über frühere und aktuelle Praktiken in einer mittelgroßen wissenschaftlichen Bibliothek und eine autoethnografische Reflexion über die Erfahrungen der neuen Mitarbeitenden mit der Einarbeitung. Es werden bewährte Praktiken und Vorschläge vorgestellt, die anderen Bibliotheken, die ebenfalls mit der Frage einer virtuellen Einarbeitung auf Abstand konfrontiert werden, helfen sollen.

School Library Media Specialists: An Evolving Profession in a Pandemic

Medienfachleute in Schulbibliotheken: ein aufkommender Beruf in Zeiten der Pandemie

Heather Kapanka

IFLA Journal, 48–1, 41–49

Zusammenfassung:

Im März 2020 sahen sich die Medienfachleute der Schulbibliotheken in Michigan (USA), wie die gesamte Bildungsgemeinschaft, mit noch nie dagewesenen Herausforderungen konfrontiert, die durch die COVID-19-Pandemie ausgelöst wurden. Mit der Verlagerung des Lernens zum Online-Unterricht haben sich auch die Aufgaben des Schulbibliothekspersonals verändert.

Drei Medienfachleute von Schulbibliotheken aus dem Südosten Michigans wurden befragt, um ihre Sichtweise bezüglich der Anpassung an den Fernunterricht zu erfahren und um herauszufinden, wie sich ihrer Meinung nach die pädagogische Praxis in Zukunft entwickeln wird. Die pädagogische Praxis des gemeinsamen Lernens, der geleiteten Untersuchung, des Co-Teachings und der Informationskompetenz erwiesen sich während der Umstellung auf den Fernunterricht als besonders wertvoll. Die erhöhte Abhängigkeit von dieser Arbeitsweise

während der Pandemie wird wahrscheinlich zu einer verstärkten Anwendung dieser Praxis führen, wenn das Lernen im physischen Klassenzimmer wieder aufgenommen wird.

Exploring National Library of Scotland datasets with Jupyter Notebooks

Erforschung der Datensätze der Nationalbibliothek von Schottland mit Jupyter Notebook

Sarah Ames Ames, Lucy Havens

IFLA Journal, 48–1, 50–56

Zusammenfassung:

Der Digital Scholarship Service der Nationalbibliothek von Schottland stellt seit September 2019 Sammlungen als Daten auf seiner Datenbereitstellungsplattform „Data Foundry“ zur Verfügung. Nach dem Lockdown wegen COVID-19 verzeichnete dieser Dienst ein deutlich höheres Besucheraufkommen, da die Bibliotheksnutzer verstärkt auf Online-Ressourcen zurückgriffen. Damit möglichst viele Nutzerinnen und Nutzer die Datensätze in der Data Foundry erkunden können, investierte die Bibliothek in eine Praktikantenstelle für digitale Forschung, die eine einführende Analyse der Data Foundry-Sammlungen mithilfe von Jupyter Notebook bieten sollte. Dieses Papier präsentiert eine Fallstudie zu diesem Projekt und erläutert die bisherige Arbeit der Bibliothek im Zusammenhang mit ihrem neuen Digital Scholarship Service und der Freigabe von Datensätzen auf der Data Foundry, die Gründe für die Entscheidung, Jupyter Notebook bereitzustellen, die App selbst und die Arten von Analysen, die sie enthält, sowie die Herausforderungen bei ihrer Erstellung und die Veröffentlichung und Wirkung dieser App.

LibGuide development and impact of COVID19 Lockdown on their usage

Entwicklung von LibGuide und Auswirkungen des COVID-19-Lockdowns auf deren Nutzung

Deborah A. Becker, Joanne Arendse, Veliswa Tshetsha, Zulaiga Davids, Vuyokazi Kiva-Johnson

IFLA Journal, 48–1, 57–68

Zusammenfassung:

LibGuides werden seit 2012 von Bibliothekspersonal der südafrikanischen Cape Peninsula University of

Technology (CPUT) eingesetzt, um Studierende mit fachbezogenen Informationen zu versorgen, schnelle Links zu ausgewählten Ressourcen bereitzustellen und Informationen zu liefern, die die Ausbildung in Informationskompetenz ergänzen. Lehrkräfte nutzen die Ressourcen zur Vorbereitung von Vorlesungen und zur Ermittlung von Lernmaterialien, während Forschende und Doktorandinnen und Doktoranden bei der Abfassung ihrer Arbeiten auf Leitfäden zur Forschungsunterstützung zurückgreifen. Als die weltweite Pandemie einen umfassenden Lockdown verursachte, wurden akademische Einrichtungen in Südafrika geschlossen und die Studierenden nach Hause geschickt. Dennoch mussten die Studierenden ihr Studium abschließen, und die Bibliotheksmitarbeitenden der CPUT mussten diese Studierenden weiterhin unterstützen. Einer der verfügbaren Online-Dienste war LibGuides. Dieser Artikel gibt einen Einblick in die historische Entwicklung der LibGuides an der CPUT, den Einsatz der LibGuides während des Lockdowns und die Erfahrungen einer ausgewählten Gruppe von Studierenden und Bibliotheksmitarbeitenden.

Cooking Up Engagement during a Pandemic

Engagement während einer Pandemie vorbereiten

Christina E Riehman-Murphy, Anne Holloway, Mark Mattson

IFLA Journal, 48–1, 69–82

Zusammenfassung:

Im Juli 2020, während der COVID-19-Pandemie, nutzten die Monash University Library in Melbourne, Australien, und die Penn State University Libraries in Pennsylvania, USA, ihre bereits bestehende internationale Schwesterbibliotheks-Partnerschaft, um eine virtuelle Veranstaltung zur Förderung der Partnerschaft und ausgewählter Sondersammlungen beider Institutionen zu organisieren. Der „Monash-Penn State Great Rare Books Bake Off“, ein freundschaftlicher Back-Wettbewerb, der von den beiden wissenschaftlichen Bibliotheken gemeinsam entwickelt wurde, brachte die Communities beider Institutionen mit ihren Sammlungen und Ressourcen in Kontakt, indem er die Teilnehmenden aufforderte, Rezepte aus ihren Sammlungen zu backen und ihre Ergebnisse und Erfahrungen auf Social-Media-Plattformen zu veröffentlichen. Neben der Förderung des Bewusstseins für die internationale Partnerschaft der Institutionen und ihrer jeweiligen Sammlungen bestand ein Hauptziel des Kooperationsprojekts darin, ihren

lokalen Gemeinschaften in einer schwierigen Zeit eine vergnügliche und kreative Challenge zu bieten. In dieser anschaulichen Fallstudie wird beschrieben, wie die beiden Einrichtungen das Projekt geplant, durchgeführt und bewertet haben.

Expanding digital academic library & archive services in response to COVID

Ausbau der digitalen wissenschaftlichen Bibliotheks- und Archivdienste als Antwort auf COVID

James E Murphy, Carla J Lewis, Christena A McKillop, Marc Stoeckle

IFLA Journal, 48-1, 83-98

Zusammenfassung:

Trotz der ungewissen Herausforderungen, mit denen Bibliotheken aller Art während der COVID-19-Pandemie konfrontiert sind, haben sich neue erfolgreiche Verfahren und innovative Wege für die Erbringung von Dienstleistungen herauskristallisiert. Mit der bahnbrechenden Taylor Family Digital Library aus dem Jahr 2011 haben Bibliotheken und kulturelle Ressourcen einen Beitrag zur kontinuierlichen Entwicklung der digitalen wissenschaftlichen Bibliothek geleistet. Die COVID-19-Pandemie erforderte eine rasche Nutzung digitaler Fähigkeiten, Plattformen, Fachkenntnisse und Modelle zur Erbringung von Dienstleistungen, um der Gemeinschaft der Universität Calgary, Kanada, weiterhin außergewöhnliche und transformative Erfahrungen zu bieten. Zu den in diesem Artikel besprochenen Initiativen gehören Online-Arbeitsteams, virtuelle 360-Rundgänge, Online-Bibliotheks-Chat, Vereinbarungen über digitale Sammlungen und Fernservice für Archive und Sondersammlungen.

Continuity during COVID: Critical Digital Pedagogy and Special Collections

Instruction Kontinuität in Zeiten von COVID: Kritische digitale Pädagogik und Unterweisung in Spezielsammlungen

Amanda Boczar, Sydney Jordan

IFLA Journal, 48-1, 99-111

Zusammenfassung:

Als die Welt im Frühjahr 2020 von den wachsenden Risiken von COVID-19 erfuhr, ging die Abteilung Sondersammlungen der Bibliotheken der Universität von Südflorida (USF Libraries) - Tampa,

dazu über, virtuelle Unterrichtseinheiten anzubieten, um Studierenden Zugang zu seltenen Büchern und primären Archivmaterialien zu ermöglichen. Um auf die Notwendigkeit einer schnellen Umstellung auf Online-Unterricht zu reagieren, formulierte unsere Abteilung einen Plan zur Unterstützung der Studierenden mit einer frei zugänglichen digitalen Lernerfahrung unter Verwendung von ArcGIS StoryMaps. Aufbauend auf der „kritischen digitalen Pädagogik“ und den „feministischen digitalen Geisteswissenschaften“ bieten die Sitzungen Online-Lehrmittel für Fakultäten, die keine physischen Besuche für Studierende einplanen konnten. Im Laufe des ersten Jahres der Fernarbeit hat die Abteilung Sitzungen für fünfzehn Kursabschnitte erstellt. Mit Blick auf die Zukunft werden die Sondersammlungen weiterhin die Möglichkeit bieten, virtuelle Sitzungen als Teil des Unterrichts abzuhalten. Der digitale Charakter der Kurse ermöglicht eine rekursive Pädagogik, die eine kontinuierliche Anpassung an die akademischen Zyklen erlaubt.

The experiences of UFSC Library Working Group on Covid-19 prevention

Die Erfahrungen der Arbeitsgruppe der Bibliothek der Universidade Federal de Santa Catarina (UFSC, Brasilien) zur Prävention von COVID-19

Guilherme Goulart Righetto, Tatiana Rossi, Juliane Fonseca Soares

IFLA Journal, 48-1, 112-125

Zusammenfassung:

Dieser Artikel gibt einen kurzen Überblick über die Folgen der COVID-19-Pandemie im Zusammenhang mit brasilianischen Universitätsbibliotheken sowie über die von diesen Institutionen unternommenen Anstrengungen. Ziel ist es, über die Erfahrungen der Arbeitsgruppe "BU/UFSC Library Working Group on Covid-19 prevention" der Universitätsbibliothek der Bundesuniversität von Santa Catarina (BU/UFSC) im Süden Brasiliens zu berichten. Der Artikel beschreibt die Leitlinien, die die Arbeitsgruppe aufgestellt hat, und die Perspektiven für die Rückkehr aus dem Homeoffice zur Arbeit mit physischen Kontakten. Ferner befasst sich der Artikel mit der Bedeutung der Rolle, die Bibliotheken in Bezug auf den Zugang zu und die Verbreitung von Wissenschaft spielen. Möglichkeiten für Veränderungen und Fortschritte bei Studien, Forschung und Dienstleistungen für Bibliotheken im Allgemeinen werden aufgezeigt. Der Artikel kommt zu dem Schluss, dass die BU/UFSC

über die Arbeitsgruppe Covid-19 der BU/UFSC in Erfüllung ihrer Aufgabe, die Lehre zu unterstützen, ein Netz für den Informationsaustausch über Covid-19 mit den öffentlichen Bediensteten geschaffen hat, wo sie Forschungsarbeiten durchführte und die Verwaltung der BU/UFSC leitete.

Information Dissemination in COVID-19 Era in University Libraries in Nigeria

Informationsverbreitung im Zeitalter von COVID-19 in Universitätsbibliotheken in Nigeria

Saturday Unwelegbemenwe Omeluzor, Angela E. Nwaomah, Ugochi Esther Molokwu, Atanda Saliu Sambo

IFLA Journal, 48–1, 126–137

Zusammenfassung:

In Nigeria wurde der erste Fall einer Infektion mit dem Corona-Virus (COVID-19) am 27. Februar 2020 diagnostiziert, und in ganz Nigeria gibt es rund 13.000 bestätigte Fälle. Die Ausbreitung von COVID-19 zwang die Bibliotheken zur Schließung. Die Studie untersuchte die Verbreitung von Informationen zur Deckung des Informationsbedarfs der Bibliotheksbesucher während der COVID-19-Pandemie und dem Lockdown von Universitätsbibliotheken in Nigeria. Mit Hilfe eines deskriptiven Erhebungsdesigns wurde eine Stichprobe von 178 Bibliothekarinnen und Bibliothekare aus Bundes-, Landes- und Privatuniversitäten in Nigeria gezogen. Die Ergebnisse zeigten, dass die Bibliothek Informationen über persönliche Hygiene an ihre Nutzerinnen und Nutzer weitergab (Händewaschen, Sauberkeit und Verwendung von Händedesinfektionsmitteln) und die Öffentlichkeit mit Hilfe von Postern und Flugblättern über COVID-19 aufklärte. Die Ergebnisse zeigen auch, dass die Bibliothek Informationen und Links zu elektronischen Ressourcen verbreitet, um die Nutzerinnen und Nutzer bei ihren laufenden Recherchen zu unterstützen. Außerdem wurde festgestellt, dass mangelnde Koordination, Streiks des nigerianischen Verbands des akademischen Universitätspersonals (ASUU) und die fehlende Bereitschaft, von zu Hause aus zu arbeiten, Probleme darstellten.

Australian public libraries and COVID-19 crisis

Australische öffentliche Bibliotheken und die COVID-19-Krise

Simon Wakeling, Jane Garner, Philip Hider, Hamid Jamali, Jessie Lymn, Yazdan Mansourian, Holly Randell-Moon

IFLA Journal, 48–1, 138–154

Zusammenfassung:

Die COVID-19-Krise hat erhebliche Auswirkungen auf öffentliche Bibliotheken in der ganzen Welt gehabt. In Australien mussten fast alle öffentlichen Bibliotheken eine Zeit lang Gebäude schließen, was die Bibliotheken dazu zwang, ihre Dienstleistungen und Angebotsmodelle anzupassen. Dieser Artikel berichtet über die Ergebnisse einer groß angelegten Umfrage unter Leitenden öffentlicher Bibliotheken in Australien, die im August 2020 durchgeführt wurde. Insbesondere werden die Ergebnisse einer thematischen Analyse der Freitextantworten der Teilnehmenden auf die im Rahmen der Umfrage gestellten offenen Fragen vorgestellt. Diese Analyse liefert wichtige Erkenntnisse über die Reaktionen auf Bibliotheksschließungen, Personalfragen, neue und erweiterte Dienstleistungen und Programme, die Beziehungen zu übergeordneten Einrichtungen und die Rolle der öffentlichen Bibliotheken während der Krise und darüber hinaus. Während öffentliche Bibliotheken von den Leitenden als flexibel und anpassungsfähig wahrgenommen werden und die Technologie effektiv genutzt haben, zeigen die Ergebnisse deutlich den Wert der Bibliotheksgebäude für die Nutzerinnen und Nutzer, was wichtige Konsequenzen für unser Verständnis der Rolle öffentlicher Bibliotheken hat.

Reimagining public library programming during a pandemic

Neukonzeption der öffentlichen Bibliotheksprogramme während einer Pandemie

Noah Lenstra, Christine D'Arpa

IFLA Journal, 48–1, 155–160

Zusammenfassung:

In diesem Artikel wird anhand von Umfragedaten beschrieben, diskutiert und untersucht, wie kleine und ländliche öffentliche Bibliotheken ihr Programm während der COVID-19-Pandemie angepasst haben. Die mit der Pandemie verbundenen Einschränkungen zwangen die Bibliotheken, ihre Türen zu schließen und sich neu zu überlegen, wie sie ihrer Community Programme anbieten wollten.

Practices and Thinking of Public Libraries in China during COVID-19

Praktiken und Denkweisen von öffentlichen Bibliotheken in China während der COVID-19-Pandemie

Xin Zhou

IFLA Journal, 48–1, 161–173

Zusammenfassung:

Infolge der COVID-19-Pandemie schlossen die Bibliotheken in China Anfang 2020 ihre Türen und verlagerten alle ihre Dienstleistungen ins Internet. Dieser Wandel hat die Entwicklung der Bibliotheksdienste vor nie dagewesene Herausforderungen gestellt, aber auch Chancen und Motivation für die künftige Umgestaltung der Bibliothek gebracht. In diesem Artikel werden die offiziellen WeChat-Konten der chinesischen Nationalbibliothek und von mehr als 30 öffentlichen Provinzbibliotheken als Hauptinformationsquellen verwendet, um die während der geschlossenen Periode angebotenen Dienstleistungen zusammenzufassen und zu klassifizieren. Er sammelt und analysiert auch die von den oben genannten Bibliotheken veröffentlichten Nachrichtentexte, um die Verbesserung der Online-Dienste öffentlicher Bibliotheken im Umfeld der Pandemie anzuleiten. Abschließend werden die Überlegungen und Vorschläge des Autors zu den wichtigsten Entwicklungsrichtungen von Bibliotheken in der Zeit nach der Pandemie dargelegt, und zwar unter den sechs Aspekten Leseförderung, intelligente Bibliothek, Einsatz neuer Medien, Förderung der Informationskompetenz, offener Zugang und Entwicklung der Zusammenarbeit.

Public Libraries' Responses to a Global Pandemic: Bangladesh Perspectives

Antworten der öffentlichen Bibliotheken auf eine weltweite Pandemie: Perspektiven aus Bangladesch

Dilara Begum, Md Roknuzzaman, Mahbub E Shobhane

IFLA Journal, 48–1, 174–188

Zusammenfassung:

Die ganze Welt erlebt eine neue Realität - den globalen Ausbruch von COVID-19, der alle Institutionen in Lockdown gezwungen hat. Ziel dieser Studie ist es, die Antworten der staatlichen öffentlichen Bibliotheken in Bangladesch zu untersuchen. Mit Hilfe eines Online-Fragebogens wurden Primärdaten von allen 71 öffentlichen Bibliotheken gesammelt, gefolgt von einem halbstrukturierten Interview mit acht Bibliotheksmitarbeitenden. Die Analyse zeigt, dass mehr als die Hälfte der Bibliotheken nur in geringem Maße auf eine Krise vorbereitet war, aber keine der Bibliotheken war vollständig auf die Bewältigung dieser Pandemie vorbereitet. Alle Bibliotheken waren für Verwaltungsaufgaben geöffnet, Nutzerinnen und Nutzer jedoch hatten keinen physischen Zugang. Die Studie ergab, dass 52% der Bibliotheken die Öffentlichkeit durch soziale Medien sensibilisierten, 46% unterstützten lokale Regierungsorganisationen und 40% boten Beratungsdienste an. In Anbetracht der bestehenden Herausforderungen empfiehlt die Studie einige Maßnahmen für die öffentlichen Bibliotheken in Bangladesch zur Bewältigung dieser Lage.

Prevalence and source analysis of COVID-19 misinformation of 138 countries

Prävalenz- und Quellenanalyse von COVID-19-Desinformationen aus 138 Ländern

Md. Sayeed Al-Zaman

IFLA Journal, 48–1, 189–204

Zusammenfassung:

In dieser Studie wurden 9.657 Desinformationen aus 138 Ländern analysiert, die von 94 Organisationen auf ihre Richtigkeit überprüft wurden, um die Verbreitung und die Quellen von Falschinformationen in verschiedenen Ländern zu ermitteln. Die Ergebnisse zeigen, dass Indien (15,94%), die USA (9,74%), Brasilien (8,57%) und Spanien (8,03%) die vier Länder sind, die am meisten von Desinformationen betroffen sind. Auf der Grundlage der Ergebnisse wird angenommen, dass die Prävalenz von COVID-19-Desinformationen in einem positiven Zusammenhang mit der COVID-19-Situation stehen kann. Soziale Medien (84,94%) produzieren die meisten Falschinformationen, und das Internet insgesamt (90,5%) ist für den Großteil der COVID-19-Falschinformationen verantwortlich. Darüber hinaus produziert allein Facebook 66,87% der Falschinformationen aller Social-Media-Plattformen. Von allen Ländern produzierte Indien (18,07%) die größte Menge an Falschinformationen in den sozialen Medien, was vielleicht auf die höhere Internetdurchdringungsrate des Landes, den steigenden Konsum sozialer Medien und die mangelnde Internetkompetenz der Nutzerinnen und Nutzer zurückzuführen ist.

Older Adults' Information Seeking in India and U.S. During COVID-19

Die Informationssuche älterer Erwachsener in Indien und den USA während der COVID-19-Pandemie

Brady Lund, Sanjay Kumar Maurya

IFLA Journal, 48–1, 205–215

Zusammenfassung:

Die COVID-19-Pandemie im Jahr 2020 stellte ältere Erwachsene weltweit vor erhebliche Informationsprobleme. Angesichts der großen Unterschiede zwischen den Entwicklungsländern und den Industrieländern in Bezug auf die Informationsinfrastruktur und den Zugang zu Informationen könnten die Herausforderungen in dieser Zeit in den Entwicklungsländern noch gravierender sein. In dieser Interviewstudie wird untersucht, wie ältere Erwachsene (über 65 Jahre) in zwei Ländern - den Vereinigten Staaten und Indien - Informationsbedürfnisse, -quellen und -barrieren erleben. Die Ergebnisse weisen auf unterschiedliche Erfahrungen in den beiden Populationen hin. Die Befragten in den Vereinigten

Staaten äußerten vielfältigere Bedürfnisse, während sich die indischen Befragten auf die Auswirkungen von COVID-19 konzentrierten. Die amerikanischen Befragten geben auch an, dass sie häufiger das Internet nutzen als die indischen Befragten, die häufiger das Fernsehen und Printmedien nutzen. Weitaus mehr indische Befragte berichteten über erhebliche Schwierigkeiten bei der Suche nach Informationen, um ihren Informationsbedarf zu decken. Die Ergebnisse dieser Studie haben wichtige Auswirkungen auf die Gestaltung von Interventionen, Bildung und Unterstützung für die informationsbezogenen Bedürfnisse älterer Erwachsener weltweit.

COVID-19 information seeking and utilization among LIS professionals in Nigeria

COVID-19 Informationssuche und -nutzung unter LIS-Fachleuten in Nigeria

Esharenana E. Adomi, Gloria O. Oyovwe-Tinuoye

IFLA Journal, 48–1, 216–227

Zusammenfassung:

Hintergrund und Ziele

Wie viele andere Länder waren auch die nigerianischen Bibliotheksdienste von COVID-19 betroffen. Diese (im Jahr 2020 durchgeführte) Studie untersuchte die Prioritäten und Hindernisse für die Informationssuche und -nutzung durch LIS-Fachleute in Nigeria, einschließlich der Art der gesuchten Informationen, der genutzten Quellen und der Art und Weise, wie diese bewertet wurden.

Verfahren: An LIS-Fachleute in Nigeria mit WhatsApp-Konten (individuelle und LIS-Gruppen-Konten) wurde eine Online-Umfrage mit Fragen, die auf einer Literaturrecherche basierten, geschickt. Die Antworten wurden automatisch erfasst und in einem Google-Sheet für die weitere Analyse mit Hilfe der deskriptiven Statistik gespeichert.

Ergebnisse: Es gingen 167 Antworten ein (Antwortquote 61%). Die wichtigsten Informationssanfragen zum Zeitpunkt der Umfrage betrafen Ursachen des Virus, COVID-19-Symptome, Bereitstellung von Bibliotheksdiensten während der Schließung der Bibliothek, Zeitplan für die Wiedereröffnung, Sicherheitsmaßnahmen für Personal und Nutzer/Nutzerinnen, die für die Wiedereröffnung der Bibliothek erforderlich sind. Die Befragten suchten auch nach

Informationen über COVID-19-Testverfahren und Übertragungsmechanismen sowie über Behandlungen (einschließlich pflanzlicher Arzneimittel).

Challenges and opportunities for parliamentary libraries during COVID-19

Проблемы и возможности для парламентских библиотек во время пандемии COVID-19

Каролин Менар

IFLA Journal, 48–1, 9–19

Аннотация:

Решающую роль в оказании информационной поддержки лицам, принимающим решения, во всем мире играют парламентские библиотеки. Эти учреждения столкнулись с беспрецедентной ситуацией в связи с пандемией COVID-19. Многим пришлось значительно изменить подход к собственной практике с целью продолжения обслуживания своих пользователей. В этой статье дается описание того, как библиотека Национальной ассамблеи Квебека отреагировала на данную проблему, пересмотрев спектр своих услуг во время пандемии. Автор описывает проблемы, но также и возможности, возникающие при адаптации виртуальных сервисов, а также новые подходы к обработке документов, к улучшению общения в группах и предвидит возможные препятствия для работы учреждения в будущем. В этом тематическом исследовании содержится передовой опыт и извлеченные уроки в надежде предоставить больше информации и быть в состоянии консультировать аналогичные учреждения, сталкивающиеся с проблемами во время данной пандемии.

Remembering COVID-19; Or, A Duty to Document the Coronavirus Pandemic

Вспоминая COVID-19; Или Обязанность документировать Пандемию Коронавируса

Марк Косцев

IFLA Journal, 48–1, 20–32

Аннотация:

В сферу нашей ответственности перед настоящим и будущим будет входить сохранение памяти о пандемии коронавируса. Уделяя внимание точкам пересечения между памятью, документальным наследием, учреждениями для сохранения памяти и COVID-19, автор статьи утверждает, что библиотеки, архивы и музеи (LAMS) несут уникальную и неотложную

обязанность документировать пандемию коронавируса по мере ее развития, чтобы помочь обеспечить сбор, сохранность и архивирование связанного с ней записанного наследия для нынешних и будущих целей консультаций, справок и сохранения памяти. Четкие положения политики “обязанность документировать пандемию коронавируса” должны быть приняты LAMS, чтобы, во-первых, укрепить свои текущие документальные инициативы по COVID-19 и, во-вторых, поддержать другие возможные документальные инициативы, связанные с этим или будущими глобальными кризисами в области здравоохранения. Документируя COVID-19, мы сможем обеспечить коллективную память о нем, что позволит предвидеть возможные кризисы в области здравоохранения в будущем.

Onboarding in the Age of COVID-19

Эпоха COVID-19: адаптация

Эндрю Карлос, Дейзи С Мураллес

IFLA Journal, 48–1, 33–40

Аннотация:

В связи с переходом на удаленную/виртуальную работу процесс приема новых сотрудников на работу также должен стать виртуальным. В этой статье проводится обзор прошлых и нынешних практик в академической библиотеке среднего размера, а также автоэтнографическое отражение опыта новых сотрудников в процессе адаптации. В данной статье представлены лучшие практики и предложения, которые помогут информировать другие библиотеки, также находящиеся в процессе дистанционной/ виртуальной адаптации.

School Library Media Specialists: An Evolving Profession in a Pandemic

Специалисты в области средств массовой информации в школьных библиотеках: Развивающаяся профессия в условиях Пандемии

Хизе Капанка

IFLA Journal, 48–1, 41–49

Аннотация:

В марте 2020 года специалисты в области средств массовой информации школьных библиотек Мичигана вместе со всем сообществом из области образования столкнулись с беспрецедентными проблемами, вызванными разрушительной

пандемией COVID-19. По мере того как обучение перешло в режим онлайн, деятельность специалистов школьных библиотек в области средств массовой информации также изменилась. С целью изучения мнений специалистов относительно приспособления к дистанционному обучению были заданы вопросы трем лицам, работающим в области средств массовой информации в школьной библиотеке юго-восточного Мичигана. Также было важно услышать их мнение о том, как, по прогнозам, будет развиваться процесс образования в будущем. Практическое образование, связанное с общим обучением, направленным исследованием, совместным обучением и информационной грамотностью, оказалось особенно ценным во время перехода к дистанционному обучению. Возросшая зависимость от данных видов обучения во время пандемии, вероятно, приведет к более широкому внедрению этих методов, в период возобновления очного обучения.

Exploring National Library of Scotland datasets with Jupyter Notebooks

Изучение наборов данных Национальной библиотеки Шотландии с помощью ноутбуков Jupyter

Сара Эймс Эймс, Люси Хейвенс

IFLA Journal, 48–1, 50–56

Аннотация:

Служба цифровых стипендий Национальной библиотеки Шотландии выпускает собрания данных на своей платформе предоставления данных Data Foundry с сентября 2019 года. В связи с локдауном во время COVID-19 трафик этой службы значительно возрос, поскольку пользователи библиотек все чаще использовали онлайн-ресурсы. Чтобы как можно больше пользователей могли исследовать наборы данных в Data Foundry, библиотека вложила средства в должность стажера по цифровым исследованиям, чтобы предоставить вводный анализ коллекций Data Foundry с использованием ноутбуков Jupyter. В этом документе приводится тематическое исследование этого проекта, объясняющее работу библиотеки на сегодняшний день вокруг ее новой службы цифровых стипендий, и выпуск наборов данных в Data Foundry; причины решения начать поставки ноутбуков Jupyter; сами ноутбуки и виды анализа, которые они содержат, а также трудности, с которыми пришлось столкнуться при их создании; а

также публикация и оказываемое этими ноутбуками влияние.

LibGuide development and impact of COVID19 Lockdown on their usage

Дебора А. Беккер, Джоанне Арендсе, Велисва Тшетша, Зулайга Дэвидс, Вуйокази Кива-Джонсон

Разработка онлайн-сервиса LibGuide и влияние локдауна COVID19 на его использование

IFLA Journal, 48–1, 57–68

Аннотация:

С 2012 года онлайн-сервис LibGuides используются библиотекарями Технологического университета Капского полуострова (CPUT) в качестве средства предоставления студентам предметной информации, предоставления быстрых ссылок на выбранные ресурсы и обеспечения информацией, дополняющей обучение информационной грамотности. Преподаватели используют ресурсы для подготовки лекций и создания учебных материалов, в то время как исследователи и аспиранты используют руководства по поддержке исследований при написании своих работ. Поскольку всемирная пандемия привела к серьезной изоляции, академические учреждения в Южной Африке были закрыты, а студентов отправили на обучение из дома. Однако студентам нужно было завершить учебу, и библиотекари университета CPUT должны были продолжать оказывать поддержку этим студентам. Одним из доступных онлайн-сервисов был LibGuides. В этой статье дается обзор исторического развития сервиса LibGuides в университете CPUT, использовании сервиса LibGuides во время локдауна и в опыте избранной группы студентов и сотрудников библиотеки.

Cooking Up Engagement during a Pandemic

Подготовка к взаимодействию во время пандемии

Кристина Э Риман-Мерфи, Анне Холлоуэй, Марк Мэттсон

IFLA Journal, 48–1, 69–82

Аннотация:

В июле 2020 года, во время пандемии COVID-19, Библиотека Университета имени Монаша в Мельбурне, Австралия, и Библиотека Университета штата Пенсильвания, США, использовали

ранее созданное международное партнерство сестринских библиотек для проведения виртуального мероприятия, посвященного продвижению партнерства с привлечением избранных специальных коллекций в обоих учреждениях. Конкурс выдающихся редких книг Монаша и штата Пенсильвания - дружеский конкурс, совместно разработанный двумя академическими библиотеками, который привлек сообщества обоих учреждений к их коллекциям и ресурсам путем приглашения участников использовать избранные ресурсы из своих коллекций и публиковать доказательства своего опыта на платформах социальных сетей. В дополнение к повышению осведомленности о международном партнерстве данных учреждений и их соответствующих коллекциях, основной целью совместного проекта было предложить местным сообществам приятный и творческий подход к сотрудничеству в трудное время. В этом наглядном тематическом исследовании описывается процесс учреждения, планирования, осуществления и оценки данного проекта обоими учреждениями.

Expanding digital academic library & archive services in response to COVID

Расширение цифровых академических библиотечных и архивных услуг в ответ на COVID

Джеймс Э. Мерфи, Карла Дж. Льюис, Кристина А. Маккиллоп, Марк Стокл

IFLA Journal, 48–1, 83–98

Аннотация:

Несмотря на непредсказуемые проблемы, с которыми сталкиваются библиотеки всех типов во время пандемии COVID-19, появились также новые лучшие практики и инновационные способы подхода к их услугам. Библиотеки и культурные ресурсы вносят свой вклад в постоянное развитие цифровой академической библиотеки, включая новаторскую цифровую библиотеку семьи Тейлор в 2011 году. В условиях пандемии COVID-19 была поставлена задача быстрого использования цифровых навыков, платформ, опыта и моделей предоставления услуг с целью продолжения обеспечения сообщества Университета Калгари исключительным и преобразующим опытом. Инициативы, обсуждаемые в этой статье, включают рабочие группы онлайн, 360 виртуальных туров, чат онлайн-библиотек, соглашения о цифровых коллекциях и удаленное обслуживание архивов и специальных коллекций.

Continuity during COVID: Critical Digital Pedagogy and Special Collections Instruction

Непрерывность во время COVID: Цифровая педагогика в критических условиях обучения и особые коллекции в области образования

Аманда Бочар, Сидней Джордан

IFLA Journal, 48–1, 99–111

Аннотация:

Когда мир начал обращать внимание на растущие риски заболеваний в связи с COVID-19 в начале весны 2020 года, Библиотека университета штата Южная Флорида (USF) – особые коллекции в области образования горда Тампа - перешла на виртуальные учебные занятия с целью предоставления студентам доступа к редким книгам и архивным материалам из первоисточников. Наш департамент разработал план поддержки студентов цифровым обучением с открытым доступом к использованию системы ArcGIS StoryMaps с целью удовлетворения потребности в быстром переходе на онлайн-обучение. Основанные на цифровой педагогике в критических условиях и феминистских цифровых гуманитарных науках, занятия представляют собой учебные ресурсы онлайн для преподавателей, которые не могли преподавать студентам лично. За первый год дистанционной работы отделением были созданы программы занятий для пятнадцати разделов курса. В будущем и впредь будут создаваться специальные программы для того, чтобы была возможность продолжать предоставление возможности виртуальных сеансов в рамках нашего обучения. Цифровой характер курсов способствует рекурсивной педагогике, обеспечивая непрерывное развитие, дополняющее академические циклы.

The experiences of UFSC Library Working Group on Covid-19 prevention

Опыт Рабочей группы Библиотеки UFSC по профилактике Covid-19

Гильерме Гуларт Ригетто, Татьяна Росси, Джулиана Фонсека Соарес

IFLA Journal, 48–1, 112–125

Аннотация:

В данной статье представлен краткий обзор последствий пандемии Covid-19 в работе университетских библиотек Бразилии, а также перечень мер, предпринимаемых данными учреждениями.

Данная статья освещает опыт рабочей группы под названием Библиотечная рабочая группа по профилактике Covid-19 BU/UFSC – в Университетской библиотеке Федерального университета Санта-Катарина (BU/UFSC), расположенной на юге Бразилии. В работе описываются принципы руководства, установленные Рабочей группой, а также возможности возвращения к очной работе. Здесь также рассматривается вопрос о том, насколько роль библиотек является актуальной в обеспечении доступа к научным исследованиям и их распространении. В статье освещаются возможности для изменений и достижений в разработках, исследованиях и услугах, направленных на работу библиотек в целом. Здесь делается вывод о том, что на базе университетской библиотеки BU/UFSC удалось создать сеть обмена информацией о Covid-19 с государственными служащими через рабочую группу библиотеки BU/UFSC по Covid-19. Работники библиотеки выполняли свою роль в области поддержки преподавания, при этом еще проводились исследования и руководство осуществляло управление университетской библиотекой BU/UFSC.

Information Dissemination in COVID-19 Era in University Libraries in Nigeria

Распространение информации в эпоху COVID-19 в университетских библиотеках Нигерии

Сэттердэй Анвелегбенме Омелузор, Анжела Э. Нваома, Угочи Эстер Молокву, Атанда Салиу Самбо

IFLA Journal, 48–1, 126–137

Аннотация:

В Нигерии первый случай заражения вирусом короны (COVID-19) был диагностирован 27 февраля 2020 года, и по всей Нигерии зарегистрировано около 13000 подтвержденных случаев заболевания. Распространение COVID-19 привело к закрытию библиотек. В данном исследовании было подвергнуто исследованию распространение информации для удовлетворения информационных потребностей посетителей библиотек во время пандемии COVID-19, а также вопрос закрытия университетских библиотек в Нигерии. Используя описательный характер анкетирования, автор использовал выборку из 178 библиотекарей из федеральных, государственных и частных университетов Нигерии. Вывод показал, что библиотека распространяла информацию о личной гигиене среди своих посетителей (мытьё рук, чистота и

использование дезинфицирующего средства для рук), а также информировала широкую общественность о COVID-19 с помощью плакатов и листовок. Из результатов расследования также явствует, что через библиотеку распространялась информация и приводились ссылки на электронные ресурсы для поддержания текущих исследований клиентов. В ходе работы были констатированы следующие проблемы: отсутствие координации, забастовка союза профессорско-преподавательского состава университетов и отсутствие возможности работать из дома.

Australian public libraries and COVID-19 crisis

Австралийские публичные библиотеки и кризис COVID-19

Саймон Уэйклинг, Джейн Гарнер, Филип Хидер, Хамид Джамали, Джесси Лимн, Яздан Мансурян, Холли Рэнделл-Мун

IFLA Journal, 48–1, 138–154

Аннотация:

Кризис COVID-19 привел к значительным последствиям в работе публичных библиотек по всему миру. В Австралии почти все публичные библиотеки пережили период закрытия зданий, что потребовало от библиотек изменений в сфере услуг и способов работы. В этой статье представлены результаты крупномасштабного опроса руководителей публичных библиотек Австралии, проведенного в августе 2020 года. В частности, в исследовании представлены результаты тематического анализа ответов участников в виде свободных ответов на открытые вопросы, заданные в рамках исследования. Этот анализ раскрывает важную информацию, касающуюся мер реагирования на закрытие библиотек, проблем с кадрами, новых и расширенных услуг и программ, взаимоотношений с вышестоящими органами и роли публичных библиотек во время кризиса и в последующий период. В то время как менеджеры публичных библиотек считают, что они проявили гибкость, смогли приспособиться к новым условиям и эффективно использовали различные технологии, полученные результаты ясно демонстрируют важность зданий библиотек для пользователей, и это имеет важные последствия для понимания общественностью роли публичных библиотек.

Reimagining public library programming during a pandemic

Переосмысление программирования публичных библиотек во время пандемии

Ной Ленстра, Кристин Дарпа

IFLA Journal, 48–1, 155–160

Аннотация:

В данной статье используются данные опроса с целью описания, обсуждения и изучения того, как небольшие и сельские публичные библиотеки скорректировали свои программы во время пандемии COVID-19. Ограничения, связанные с пандемией, вынудили библиотеки закрыть двери для посетителей и переосмыслить предоставление программ своему сообществу.

Practices and Thinking of Public Libraries in China during COVID-19

Публичные библиотеки в Китае во время COVID-19: практика и осмысление

Синь Чжоу

IFLA Journal, 48–1, 161–173

Аннотация:

В результате эпидемии COVID-19 библиотеки в Китае закрыли свои здания в начале 2020 года и перевели все свои услуги в режим онлайн. Данное решение создало беспрецедентные проблемы для развития библиотечных услуг, но в то же время открыло возможности и мотивацию для будущей трансформации библиотек. В данной статье используются официальные аккаунты системы WeChat Национальной библиотеки Китая, а также данные более 30 провинциальных публичных библиотек в качестве основных источников информации для обобщения и классификации услуг, предоставляемых в течение периода закрытия. В процессе работы были также собраны и проанализированы статьи о новостях, опубликованные вышеупомянутыми библиотеками с целью улучшения онлайн-сервисов публичной библиотеки в условиях эпидемии. Наконец, в статье излагаются размышления и предложения автора по ключевым направлениям развития библиотек в эпоху после эпидемии, такие как шесть аспектов продвижения чтения, умная библиотека, работа с новыми средствами массовой информации, повышение информационной грамотности, открытый доступ и совместное развитие.

Public Libraries' Responses to a Global Pandemic: Bangladesh Perspectives

Реакция публичных библиотек на глобальную пандемию: перспективы Бангладеш

Дилара Бегум, доктор медицинских наук
Рокнуззаман, Махбуб И Шобани

IFLA Journal, 48–1, 174–188

Аннотация:

Весь мир переживает новую реальность - глобальную вспышку COVID-19, которая вынудила все учреждения закрыться. Целью данного исследования является изучение ответов государственных публичных библиотек Бангладеш. Для сбора первичных данных из 71 публичной библиотеки была использована онлайн-анкета, за которой последовало полуструктурированное интервью с восемью библиотекарями. Анализ показывает, что более 50% библиотек были недостаточно подготовлены к любому кризису и ни одна из библиотек не была полностью готова к тому, чтобы справиться с этой пандемией. Все библиотеки были открыты для административных функций без физического доступа пользователей. Исследование показало, что 52% библиотек повышали осведомленность общественности через социальные сети, в то время как 46% поддерживали организации местного самоуправления и 40% предоставляли консультационные услуги. Учитывая существующие проблемы, в исследовании рекомендуется принять некоторые меры для публичных библиотек Бангладеш, чтобы справиться с этой ситуацией.

Prevalence and source analysis of COVID-19 misinformation of 138 countries

Анализ распространенности и источников дезинформации о COVID-19 в 138 странах

Доктор медицинских наук Саид Аз-Заман

IFLA Journal, 48–1, 189–204

Аннотация:

В этом исследовании было проанализировано 9 657 фрагментов сообщений дезинформации, которые появились в 138 странах и были проверены 94 организациями, чтобы понять распространенность и источники дезинформации в разных странах. Результаты показывают, что Индия (15,94%), США (9,74%), Бразилия (8,57%) и Испания (8,03%) являются четырьмя странами, наиболее подверженными влиянию дезинформации.

Основываясь на результатах, автор высказывает предположение, что распространенность дезинформации о COVID-19 может иметь положительную ассоциацию с ситуацией с COVID-19. В социальных сетях (84,94%) публикуется наибольшее количество дезинформации, а в Интернете (90,5%) в целом находится большая часть дезинформации о COVID-19. Более того, только Facebook распространяет 66,87% дезинформации из всех платформ социальных сетей. Из всех стран Индия (18,07%) опубликовала наибольшее количество дезинформации в социальных сетях, возможно, благодаря более высокому уровню распространения Интернета в стране, увеличению привлечения социальных сетей и недостаточной интернет-грамотности пользователей.

Older Adults' Information Seeking in India and U.S. During Covid-19

Поиск информации для пожилых людей в Индии и США во время Covid-19

Брэди Лунд, Санджай Кумар Маурья

IFLA Journal, 48–1, 205–215

Аннотация:

Пандемия COVID-19 создала серьезные информационные проблемы для пожилых людей во всем мире в 2020 году. Учитывая широко распространенные различия в информационной инфраструктуре, а также различия в доступе между развивающимися и развитыми странами, автор приходит к суждению, что проблемы, возникшие в этот период, могут быть еще более серьезными в развивающемся мире. В этом исследовании–интервью рассматривается, как пожилые люди (старше 65 лет) в двух странах – Соединенных Штатах и Индии - испытывали потребности в получении информации, какие источники использовали и с какими сложностями столкнулись. Результаты исследования свидетельствуют о различиях в опыте между двумя группами населения. Люди в Соединенных Штатах выразили более разнообразные потребности, в то время как индийские респонденты сосредоточили внимание на воздействии COVID-19. Американские респонденты также указывают на более широкое использование интернет-ресурсов по сравнению с индийскими респондентами, которые чаще пользовались телевизионными и печатными ресурсами. Гораздо большее количество индийских респондентов сообщило о серьезных проблемах с поиском информации для удовлетворения своих информационных потребностей. Результаты этого

исследования важны для разработки мер по интервенции, для улучшения образования и поддержки потребностей пожилых людей во всем мире, связанных с получением информации.

COVID-19 information seeking and utilization among LIS professionals in Nigeria

Поиск и использование информации о COVID-19 среди специалистов LIS в Нигерии

Эшаренана Э. Адоми, Глория О. Ойовве-Тинуюйе

IFLA Journal, 48–1, 216–227

Аннотация:

Предыстория /Цели и задачи

Как и во многих странах, сфера библиотечных услуг Нигерии была затронута мерами предосторожности от COVID-19. В этом исследовании (проведенном в 2020 году) были рассмотрены приоритеты и препятствия для поиска и использования информации специалистами в области LIS в Нигерии, включая тип запрашиваемой информации, используемые источники и то, как они оценивались.

Методы: Онлайн-анкета с вопросами, основанными на обзоре литературы, была отправлена специалистам в области LIS в Нигерии с учетными записями WhatsApp (индивидуальные учетные записи и учетные записи групп LIS). Ответы были автоматически собраны и сохранены в таблице Google для дальнейшего анализа с использованием описательной статистики.

Результаты: Было получено 167 ответов (61% всех респондентов). Основные информационные потребности на момент опроса касались: причин вируса, симптомов COVID-19, предоставления библиотечных услуг во время физического закрытия библиотек, сроков повторного открытия, мер безопасности для персонала и пользователей, необходимых для повторного открытия библиотек. Респонденты также были обеспокоены процедурами тестирования на COVID-19 и механизмами передачи, а также лечением (включая фитотерапию).

Challenges and opportunities for parliamentary libraries during COVID-19

Retos y oportunidades para las bibliotecas parlamentarias durante la COVID-19

Carolyne Ménard

IFLA Journal, 48–1, 9–19

Resumen:

Las bibliotecas parlamentarias desempeñan un papel crucial para ofrecer apoyo informativo a los responsables de la toma de decisiones de todo el mundo. Estas instituciones se enfrentaron a una situación sin precedentes durante la pandemia de COVID-19. Muchas tuvieron que modificar considerablemente sus prácticas para seguir atendiendo a sus usuarios. En este artículo se analiza la forma en que la Asamblea Nacional de Quebec respondió a este problema y reformuló sus servicios durante la pandemia. La autora presenta los retos y las oportunidades que se presentaron durante la adaptación de los servicios virtuales, la redefinición de la manipulación de documentos y la mejora de la comunicación entre equipos, y prevé futuros obstáculos para la institución. Este estudio de caso comparte buenas prácticas y lecciones aprendidas con la esperanza de informar y ayudar a instituciones similares que afrontan retos parecidos durante esta pandemia.

Remembering COVID-19; Or, A Duty to Document the Coronavirus Pandemic

Recordando la COVID-19. O la obligación de documentar la pandemia de coronavirus

Marc Koscijew

IFLA Journal, 48–1, 20–32

Resumen:

Recordar la pandemia de coronavirus constituye una obligación para el presente y el futuro. Iluminando las intersecciones entre los recuerdos, el legado documental, las instituciones de la memoria, y la COVID-19, este artículo señala que las bibliotecas, los archivos y los museos (BAM) tienen una obligación única y urgente de documentar la pandemia de coronavirus para ayudar a recopilar, preservar y archivar el legado registrado asociado con fines de consulta, referencia y recuerdo en el presente y el futuro. Los BAM deben adoptar disposiciones explícitas relativas a la «obligación de documentar la pandemia de coronavirus» para, en primer lugar, reforzar sus actuales iniciativas documentales sobre la COVID-19 y, después, para respaldar otras posibles iniciativas documentales relacionadas con esta crisis o con futuras crisis sanitarias mundiales. Mediante la documentación de la COVID-19, podemos recordarla

colectivamente y anticipar mejor posibles crisis sanitarias futuras.

Onboarding in the Age of COVID-19

La incorporación en la era de la COVID-19

Andrew Carlos, Daisy C Muralles

IFLA Journal, 48–1, 33–40

Resumen:

Debido a la transición a un entorno de trabajo remoto/virtual, el proceso de incorporación de los empleados nuevos también se ha visto obligado a trasladarse al terreno virtual. En este artículo se realiza una revisión de las prácticas pasadas y presentes en una biblioteca académica de tamaño mediano, así como una reflexión autoetnográfica de la experiencia de los nuevos empleados con la incorporación. Se presentan buenas prácticas y sugerencias para ayudar a informar a otras bibliotecas que estén pasando por una situación similar.

School Library Media Specialists: An Evolving Profession in a Pandemic

Especialistas en medios de bibliotecas universitarias: una profesión en evolución durante la pandemia

Heather Kapanka

IFLA Journal, 48–1, 41–49

Resumen:

En marzo de 2020, los especialistas en medios de la biblioteca universitaria de Michigan, y la comunidad educativa al completo, se enfrentaron a un reto sin precedentes por las perturbaciones ocasionadas por la pandemia de COVID-19. A medida que el aprendizaje se trasladó al mundo virtual, cambiaron los roles de los especialistas en medios.

Tres especialistas en medios de la biblioteca universitaria de Michigan fueron entrevistados para conocer su opinión sobre la readaptación al aprendizaje a distancia, y sobre cómo creen que evolucionarán las prácticas educativas en el futuro. Las prácticas educativas de *Leaning Commons*, las consultas guiadas, la co-enseñanza, y la alfabetización informacional resultaron particularmente valiosas durante la transición a la enseñanza a distancia. El aumento de la dependencia en dichas prácticas durante la pandemia probablemente generará un aumento de su aplicación cuando se reanude el aprendizaje presencial.

Exploring National Library of Scotland datasets with Jupyter Notebooks

Exploración de conjuntos de datos de la Biblioteca Nacional de Escocia con Jupyter Notebooks

Sarah Ames Ames, Lucy Havens

IFLA Journal, 48-1, 50-56

Resumen:

La Biblioteca Nacional del Digital Scholarship Service de Escocia ha estado publicando colecciones como datos en su plataforma de suministro de datos, Data Foundry, desde septiembre de 2019. Tras el confinamiento ocasionado por la COVID-19, este servicio experimentó un notable aumento del tráfico, ya que los usuarios de la biblioteca recurrieron más a los recursos en línea. Para garantizar que la mayor cantidad posible de usuarios pudiera explorar los conjuntos de datos de Data Foundry, la Biblioteca invirtió en un puesto de becario de investigación digital, cuya tarea era facilitar un análisis introductorio de las colecciones de Data Foundry que utilizaban Jupyter Notebooks. En este artículo se presenta un estudio de caso de este proyecto, se explica el trabajo que la Biblioteca ha realizado hasta la fecha en su nuevo Digital Scholarship Service y la publicación de conjuntos de datos en Data Foundry, las razones por la que se empezó a proporcionar Jupyter Notebooks, los propios Notebooks y los tipos de análisis que contienen, así como los retos que plantea su creación; y la publicación y el impacto de los Notebooks.

LibGuide development and impact of COVID19 Lockdown on their usage

Desarrollo de LibGuide y efectos del confinamiento por COVID-19 sobre su uso

Deborah A. Becker, Joanne Arendse, Veliswa Tshetsha, Zulaiga Davids, Vuyokazi Kiva-Johnson

IFLA Journal, 48-1, 57-68

Resumen:

Los bibliotecarios de la Cape Peninsula University of Technology (CPUT) utilizan desde 2012 LibGuides como medio para suministrar información basada en materias a los estudiantes, proporcionando enlaces rápidos a recursos seleccionados y facilitando información que complementa la formación sobre alfabetización informacional. Los profesores

utilizan los recursos para preparar las clases y localizar materiales de aprendizaje, mientras que los investigadores y los estudiantes de posgrado utilizan las guías de apoyo a la investigación para redactar sus trabajos. Debido a la pandemia mundial, las instituciones académicas de Sudáfrica se cerraron y los estudiantes tuvieron que quedarse en casa. Sin embargo, estos tenían que completar sus estudios y los bibliotecarios de CPUT tuvieron que seguir proporcionando apoyo a estos estudiantes. Uno de los servicios en línea disponibles era LibGuides. En este artículo se ofrece información sobre la evolución histórica de LibGuides en la CPUT, su uso durante el confinamiento y las experiencias de un grupo de estudiantes y personal de biblioteca.

Cooking Up Engagement during a Pandemic

Refuerzo de la participación durante una pandemia

Christina E Riehm-Murphy, Anne Holloway, Mark Mattson

IFLA Journal, 48-1, 69-82

Resumen:

En julio de 2020, durante la pandemia de COVID-19, la Monash University Library de Melbourne (Australia) y las Penn State University Libraries de Pensilvania (EE. UU.) aprovecharon su asociación internacional como bibliotecas hermanas para albergar un evento de participación virtual centrado en la promoción de la asociación y algunas colecciones especiales de ambas instituciones. El Monash-Penn State Great Rare Books Bake Off, un concurso desarrollado en colaboración por las dos bibliotecas académicas, atrajeron a las comunidades de ambas instituciones con sus colecciones y recursos invitando a los participantes a elaborar recetas a partir de sus colecciones y a publicar evidencias de sus experiencias en las redes sociales. Además de dar publicidad a la asociación internacional de las instituciones y sus respectivas colecciones, el objetivo fundamental del proyecto colaborativo era ofrecer a sus comunidades locales un proyecto entretenido y creativo en una época muy complicada. Este estudio de caso ilustrativo describirá la forma en que las dos instituciones planificaron, ejecutaron y evaluaron el proyecto.

Expanding digital academic library & archive services in response to COVID

Ampliación de los servicios digitales de archivo y biblioteca académica para responder a la COVID-19

James E Murphy, Carla J Lewis, Christena A McKillop, Marc Stoeckle

IFLA Journal, 48-1, 83-98

Resumen:

A pesar de los retos que afrontan las bibliotecas de todos los tipos durante la pandemia de COVID-19, han surgido buenas prácticas nuevas y formas innovadoras de abordar los servicios. Libraries and Cultural Resources, incluida la innovadora Taylor Family Digital Library, ha contribuido al desarrollo continuo de la biblioteca académica digital. La pandemia de COVID-19 ha obligado a recurrir rápidamente a competencias digitales, plataformas, conocimientos especializados y modelos de prestación de servicios para seguir proporcionando experiencias excepcionales y transformadoras para la comunidad de la Universidad de Calgary. Las iniciativas comentadas en este artículo incluyen equipos de trabajo en línea, visitas virtuales, chat en línea, acuerdos de colecciones digitales y servicios remotos para archivos y colecciones especiales.

Continuity during COVID: Critical Digital Pedagogy and Special Collections Instruction

Continuidad durante la COVID: pedagogía digital crítica y formación sobre colecciones especiales

Amanda Boczar, Sydney Jordan

IFLA Journal, 48-1, 99-111

Resumen:

Cuando el mundo empezó a tener noticias de los riesgos crecientes de la COVID-19 al inicio de la primavera de 2020, USF Libraries - Tampa Special Collections empezó a celebrar sesiones de formación virtuales para ofrecer a los estudiantes acceso a libros raros y materiales de archivo como fuente principal. Para responder a la necesidad de un rápido cambio a la formación en línea, nuestro departamento formuló un plan para ayudar a los estudiantes con una experiencia de aprendizaje digital de acceso abierto utilizando ArcGIS StoryMaps. Las sesiones «Building on Critical Digital Pedagogy» y «Feminist Digital Humanities» proporcionan recursos de enseñanza en línea para los profesores que no pudieron citar a los

estudiantes presencialmente. Durante el primer año de trabajo remoto, el departamento creó sesiones para quince cursos. En el futuro, Special Collections seguirá proporcionando la opción de sesiones virtuales en el marco de nuestra formación. La naturaleza digital de los cursos se presta a una pedagogía recursiva, lo que permite una adaptación continuada que complementa los ciclos académicos.

The experiences of UFSC Library Working Group on Covid-19 prevention

Las experiencias del Grupo de Trabajo de UFSC Library en la prevención de la COVID-19

Guilherme Goulart Righetto, Tatiana Rossi, Juliane Fonseca Soares

IFLA Journal, 48-1, 112-125

Resumen:

En este artículo se presenta un breve resumen de las consecuencias de la pandemia de COVID-19 en el contexto de las bibliotecas universitarias brasileñas, así como las iniciativas emprendidas por estas instituciones. Tiene por objeto dar a conocer las experiencias del grupo de trabajo BU/UFSC Library sobre la prevención de la COVID-19, dentro de la Biblioteca Universitaria de la Universidad Federal de Santa Catarina (BU/UFSC), ubicada en el sur de Brasil. Describe las directrices que el grupo de trabajo estableció y las perspectivas para volver al trabajo presencial. Considera la importancia del papel de las bibliotecas en el acceso a la ciencia y su difusión. Pone de manifiesto las oportunidades para el cambio y anuncia los estudios, investigaciones y servicios a los que tenderán las bibliotecas en general. Concluye que la BU/UFSC, a través del GT COVID-19 BU/UFSC, al cumplir su misión de apoyar la enseñanza, permitió articular la red de intercambio de información sobre la COVID-19 con los funcionarios públicos, que llevaron a cabo investigaciones y guiaron la gestión de la BU/UFSC.

Information Dissemination in COVID-19 Era in University Libraries in Nigeria

Difusión de información en la era de la COVID-19 en las bibliotecas universitarias de Nigeria

Saturday Unwelegbemenwe Omeluzor, Angela E. Nwaomah, Ugochi Esther Molokwu, Atanda Saliu Sambo

IFLA Journal, 48-1, 126-137

Resumen:

En Nigeria, el primer caso de infección por coronavirus (COVID-19) se diagnosticó el 27 de febrero de 2020 y hay alrededor de 13 000 casos confirmados en todo el país. La propagación de la COVID-19 obligó a las bibliotecas a cerrar. En el estudio se analizó la difusión de la información para satisfacer las necesidades informativas de los usuarios durante la pandemia de COVID-19 y el cierre de las bibliotecas universitarias en Nigeria. Se utilizaron un diseño de encuesta descriptivo y una muestra de población de 178 bibliotecarios de universidades federales, estatales y privadas de Nigeria. Los resultados demuestran que la biblioteca difundió información sobre higiene personal a sus usuarios (lavado de manos, limpieza y uso de desinfectante de manos) y sensibilizó al público en general sobre la COVID-19 a través de un póster y un panfleto. Asimismo, los resultados también revelaron que la biblioteca difundió información y enlaces a recursos electrónicos para respaldar las investigaciones en curso de los usuarios. Como retos se destacaron la falta de coordinación, la huelga de ASUU y la falta de suscripción para trabajar desde casa.

Australian public libraries and COVID-19 crisis

Las bibliotecas públicas australianas y la crisis de la COVID-19

Simon Wakeling, Jane Garner, Philip Hider, Hamid Jamali, Jessie Lynn, Yazdan Mansourian, Holly Randell-Moon

IFLA Journal, 48-1, 138-154

Resumen:

a crisis de la COVID-19 ha tenido repercusiones significativas para las bibliotecas públicas de todo el mundo. En Australia, casi todas las bibliotecas públicas experimentaron algún período de cierre, lo que las obligó a adaptar sus servicios y modelos de prestación. En este artículo se dan a conocer los resultados de una encuesta a gran escala de responsables de bibliotecas públicas de Australia, realizada en agosto de 2020. En particular, se presentan los resultados de un análisis temático de las respuestas libres de los participantes a las preguntas abiertas formuladas en el marco de la encuesta. Este análisis revela información importante en relación con las respuestas a los cierres de las bibliotecas, cuestiones de personal, servicios y programas nuevos y ampliados, relaciones con órganos rectores, y el papel de las bibliotecas públicas durante la crisis y después de ella. Si bien los responsables creen que las bibliotecas públicas se han mostrado ágiles y

adaptables, y han utilizado la tecnología de una forma eficaz, los resultados demuestran claramente el valor para los usuarios de las bibliotecas, lo que tiene consecuencias importantes para nuestra comprensión del papel de las bibliotecas públicas.

Reimagining public library programming during a pandemic

Replanteamiento de la programación de las bibliotecas públicas durante la pandemia

Noah Lenstra, Christine D'Arpa

IFLA Journal, 48-1, 155-160

Resumen:

En este artículo se utilizan los datos de una encuesta para describir, debatir y examinar las formas en que las bibliotecas públicas pequeñas y rurales adaptaron su programación durante la pandemia de COVID-19. Las restricciones asociadas a la pandemia obligaron a las bibliotecas a cerrar sus puertas y reinventar la forma de administrar sus programas a la comunidad.

Practices and Thinking of Public Libraries in China during COVID-19

Prácticas y reflexión sobre las bibliotecas públicas en China durante la COVID-19

Xin Zhou

IFLA Journal, 48-1, 161-173

Resumen:

Como resultado de la pandemia de COVID-19, las bibliotecas de China cerraron sus puertas a principios de 2020 y trasladaron sus servicios al ámbito virtual. Este cambio ha conllevado retos sin precedentes para el desarrollo de servicios bibliotecarios, pero también ha brindado oportunidades y motivación para la transformación futura de la biblioteca. Este artículo utiliza cuentas oficiales de WeChat de la Biblioteca Nacional de China y más de 30 bibliotecas públicas provinciales como principales fuentes de información, para resumir y clasificar los servicios prestados durante el período de cierre. También recopila y analiza los artículos publicados por las bibliotecas antes mencionadas para impulsar la mejora de los servicios en línea de las bibliotecas públicas durante la epidemia. Por último, presenta las reflexiones y sugerencias del autor sobre el rumbo del desarrollo de las bibliotecas en la era pospandemia en relación con seis aspectos: la promoción de la lectura, la biblioteca inteligente, los nuevos medios de comunicación, el cultivo de la

alfabetización informacional, el acceso abierto y el desarrollo colaborativo.

Public Libraries' Responses to a Global Pandemic: Bangladesh Perspectives

Respuestas de las bibliotecas públicas a la pandemia mundial: perspectivas de Bangladesh

Dilara Begum, Md Roknuzzaman, Mahub E Shobhane

IFLA Journal, 48-1, 174-188

Resumen:

El mundo entero está experimentando una nueva realidad: la pandemia mundial de COVID-19 que ha forzado a cerrar todas las instituciones. Este estudio tiene por objeto analizar las respuestas de las bibliotecas públicas gubernamentales de Bangladesh. Se utilizó un cuestionario en línea para recoger datos primarios de las 71 bibliotecas públicas, seguido de una entrevista semiestructurada de ocho bibliotecarios. El análisis indica que más del 50% de las bibliotecas tienen un nivel de preparación bajo para afrontar cualquier crisis, pero ninguna de las bibliotecas estaba totalmente preparada para gestionar una crisis. Todas las bibliotecas permanecieron abiertas para las tareas administrativas, pero sin acceso físico para los usuarios. El estudio reveló que el 52% de las bibliotecas informaron a través de las redes sociales, mientras que el 46% apoyaron a las organizaciones gubernamentales locales y el 40% prestaron servicios de asesoramiento. Teniendo en cuenta los retos existentes, el estudio recomienda algunas medidas para las bibliotecas públicas de Bangladesh en esta situación.

Prevalence and source analysis of COVID-19 misinformation of 138 countries

Prevalencia y análisis de fuentes de desinformación sobre la COVID-19 en 138 países

Md. Sayeed Al-Zaman

IFLA Journal, 48-1, 189-204

Resumen:

Este estudio analizó 9 657 artículos de desinformación originados en 138 países y revisados por 94 organizaciones para comprender la prevalencia y las fuentes de desinformación en distintos países. Los resultados revelan que India (15,94%), EE. UU. (9,74%), Brasil (8,57%) y España (8,03%) son los

cuatro países más afectados por la desinformación. Sobre la base de estos resultados, se presume que la prevalencia de la desinformación sobre la COVID-19 puede tener una relación positiva con la situación de la COVID-19. Las redes sociales (84,94%) producen la mayor cantidad de desinformación, e Internet (90,50%) es en su conjunto responsable de la mayor parte de la desinformación sobre la COVID-19. Además, solo Facebook produce el 66,87% de la desinformación entre todas las plataformas de redes sociales. De todos los países, India (18,07%) produjo la mayor cantidad de desinformación en redes sociales, quizás gracias a la mayor tasa de penetración de Internet en el país, el aumento del consumo de redes sociales y la carencia de alfabetización digital de los usuarios.

Older Adults' Information Seeking in India and U.S. During Covid-19

Búsqueda de información por parte de adultos de edad avanzada en India y EE. UU. durante la COVID-19

Brady Lund, Sanjay Kumar Maurya

IFLA Journal, 48-1, 205-215

Resumen:

La pandemia de COVID-19 en 2020 planteó retos importantes en relación con la información para los adultos de edad avanzada en todo el mundo. Habida cuenta de las disparidades generalizadas en la infraestructura de la información y el acceso entre países en desarrollo y desarrollados, los retos presentados durante este período podrían incluso agravarse en los primeros. En este estudio de entrevistas se examina la experiencia de los adultos de edad más avanzada (más de 65 años) en relación con las necesidades, fuentes y barreras de información. Los resultados indican experiencias diversas entre las dos poblaciones. En EE. UU., las personas expresaron necesidades más diversas, mientras que los encuestados indios se centraron en los efectos de la pandemia. Los encuestados estadounidenses también indican un mayor uso de recursos de Internet, en comparación con los encuestados indios, que utilizaron la televisión y los medios impresos con mayor frecuencia. Muchos más encuestados indios señalaron haber tenido dificultades importantes para hallar información que satisficiera sus necesidades. Los resultados de este estudio tienen ramificaciones importantes para el diseño de la intervención, la educación y el apoyo a las necesidades relacionadas con la información de adultos de edad avanzada en todo el mundo.

COVID-19 information seeking and utilization among LIS professionals in Nigeria

Búsqueda y utilización de información sobre la COVID-19 entre los profesionales de ByD en Nigeria

Esharenana E. Adomi, Gloria O. Oyovwe-Tinuoye

IFLA Journal, 48-1, 216-227

Resumen:

Antecedentes / Metas y objetivos

Como en muchos otros países, los servicios bibliotecarios de Nigeria se vieron afectados por la COVID-19. En este estudio (realizado en 2020) se examinan las prioridades y las barreras relacionadas con la búsqueda y el uso de información por parte de los profesionales de LyS en Nigeria, incluido el tipo de información buscada, las fuentes utilizadas y cómo se evaluaron.

Métodos: Se envió a los profesionales de ByD nigerianos con cuentas de WhatsApp una encuesta en línea, con preguntas de una encuesta literaria (cuentas individuales y de grupos de ByD). Las respuestas se recogieron automáticamente y se guardaron en una ficha de Google para su ulterior análisis utilizando estadísticas descriptivas.

Resultados: Se obtuvieron 167 respuestas (tasa de respuesta del 61%). Las principales necesidades de información en el momento de la encuesta atañían a: las causas del virus, los síntomas de la COVID-19, la prestación de servicios bibliotecarios durante el cierre físico de las bibliotecas, el momento de la reapertura, las medidas de seguridad para el personal y los usuarios exigidas para la reapertura de las bibliotecas. A los encuestados también les preocupaban los procedimientos de pruebas de la COVID-19, los mecanismos de transmisión y el tratamiento (incluidas plantas medicinales).



Corrigendum to “Editorial: Special Issue: Indigenous Librarianship”

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Page 292, column 1, paragraph 2, sentence 2: There was an error in the following sentence:

“Several steps of the reconciliation process taken at the library are discussed, including naming the library after an Indigenous former employee who helped start the library.”

The correct sentence reads as follows:

“Several steps of the reconciliation process taken at the library are discussed, including naming the library after an Indigenous former employee of the University.”

The online version of the article has been updated now.