Use of Twitter by a Public Library during the Pandemic (Paper)

Abstract
Social media such as Twitter and Facebook are used by organizations including public libraries to disseminate a variety of information to community members. This research aims to identify key areas in which Twitter was used to share information with users during the initial pandemic phase by a large public library operating in the Western region of Canada. The findings resulting from the analysis of 150 tweets revealed that the library shared information primarily in the following areas: Programs and Services, Library Operations, Health and Hygiene, Resources, and Other.

1. Introduction
Organizations including libraries use social media (e.g., Facebook and Twitter) for various purposes such as collaboration, knowledge sharing, communication, engagement, and interaction with stakeholders including patrons (Palmer 2014; Stokić et al. 2019; Forcier et al. 2013). Libraries use Twitter to promote the library and its services, build community connections (Stvilia and Gibradze 2014), and disseminate information to users on a wide range of topics such as library operations, resources, current events, and collections (Shiri and Rathi 2013; Palmer 2014). Citing Palmer (2014), Stokić et al. (2019) noted that “libraries use Twitter for time-sensitive notices and information about current events, and Facebook for static linking and community building” (p.251). Substantial research has been conducted to understand the use of Twitter in libraries prior to the pandemic but there is limited research on this subject in the context of the pandemic, particularly in the Library and Information Science (LIS) field. This research examined the use of Twitter by a public library during the initial pandemic phase i.e., between mid-March and mid-August, 2020. The analysis revealed that the public library used Twitter to deliver information in various areas including Programs and Services, Library Operations, Health and Hygiene, and Resources. The findings in this paper will provide a foundation to understand and investigate the pandemic-driven use of Twitter (e.g., health and hygiene), and will help in fulfilling a gap in the literature, particularly in LIS with respect to Canada and the pandemic context.

2. Literature Review
Twitter is one of the most widely studied social media applications in the LIS field, which has led to an accrual of a very rich literature (Yep et al. 2017). The Twitter and libraries landscape has been researched from a wide range of perspectives including: discerning differences between public and academic libraries’ tweets (e.g., Aharony 2010); discovering categories of tweets (e.g., Shiri and Rathi 2013; Stvilia and Gibradze 2014; Al-Daihani and AlAwadhi 2015); evaluating social networks in a library context (e.g.,Yep et al. 2017); analyzing user motivation to engage with libraries (e.g., VanScoy et al. 2018); exploring the use of Twitter in specific context of digital libraries (e.g., Xie and Stevenson 2014); examining the ability to interact and assist library patrons using Twitter (e.g., Del Bosque et al. 2012), and; investigating “micro-blogging practices” in public libraries in Canada (Cavanagh 2016, p.247). Researchers are examining online
communication and use of social media including Twitter in context of the pandemic. Publications are emerging on the use of Twitter in relation to the pandemic but literature, particularly in LIS, is not equally rich considering that the pandemic is a recent event and is still unfolding. For example: Martínez-Cardama and Pacios (2020) analyzed the use of Twitter in the Spanish university libraries “during the first weeks of the state of alarm” (p.1). Wang and Lund (2020) analyzed online announcements posted (March 14–April 12, 2020) by ten US public libraries, while Alajmi and Albudaiwi (2020) examined the use of Twitter (between December 2019–April 2020) by the New York City public libraries.

3. Methodology

This research focuses on analyzing tweets posted particularly during the initial pandemic period, i.e., between mid-March and mid-August, 2020, by a large public library operating in the Western region of Canada. A total of 150 tweets (including retweets posted by the organization) reflecting the pandemic-related context were analyzed using the content analysis approach (Vaismoradi et al. 2013; Weber 1990). These tweets were drawn from a large pool of tweets collected by the Grebe Social Media Aggregator (Samuel et al. 2018). The coding of tweets was done by a single reviewer, and was inspired by the work of various authors such as Aharony (2010), Shiri and Rathi (2013), and Al-Daihani and AlAwadhi (2015). Some tweets may have reflected more than one theme but they were assigned only to one prominent thematic category (Hemphill and Roback 2014). The paper has a number of limitations including analyzing a small sample size of tweets from one public library, coding by a single reviewer, and focusing on a specific temporal period.

4. Key Findings

The analysis of tweets revealed that the public library used Twitter during the initial pandemic period to share information in five major areas: Program and Services, Library Operations, Resources, Health and Hygiene, and Other. A number of sub-topics (sub-categories) emerged within these broad areas, and the italicized text in the bullet points in each of the sub-sections below provides a few examples of such sub-categories. Figure 1 provides percentage distribution of tweets in the five major areas.

![Figure 1. Information Sharing by a Public Library using Twitter](image-url)
4.1 Programs and Services

The programs and services category had the highest percentage of pandemic-relevant tweets (42.7%) posted by the public library, and the italicized text in the bullet points provides a few examples of sub-categories within this high-level category. The tweets were primarily used to post information on offerings, for example, that either moved from in-person offerings (before the pandemic) to a virtual mode and/or were suspended (after the pandemic began). Examples include:

- A large number of tweets were posted to share information related to the family and kids programs (e.g., Baby Laptime and Family Storytime). Also, Twitter was used to cross promote programs offered via a specific social media platform like Facebook (e.g., “Our Baby Laptime class on Facebook Live is starting now! Head over to our Facebook page to join…”).

- The library posted tweets on Book Club related activities (e.g., “Did you participate in our… digital book club… Join us today… as we chat online about the book…”), library services such access to computers (e.g., “…partnering with social agencies to provide access to public computers…”), and educational services (e.g., “…Don't worry though, we have lots of educational classes you can stream whenever you want…”).

- Library also shared information on the suspension of programs and services to timely inform patrons (e.g., “…suspending all classes and events to help limit the spread of Covid-19…”).

4.2 Library Operations

A number of tweets (24.0%) from the library shared information with stakeholders on a wide-range of topics that had relevance with library operations including:

- The library provided the pandemic-related general updates emerging from the city and/or provincial government announcements, particularly the ones that had implications on the library functioning (e.g., “Public libraries are included in Stage 2 of [the Provincial]… relaunch strategy….”).

- A number of tweets focused on advising library users on issues related to checked-out materials including changes in late fees, extension of (returning) dates, and process of returning material (e.g., “…please keep your library materials at home until our branches reopen”).

- The library was sharing information on emerging changes in closing and opening of branches (e.g., “…a few branches open last week, but opened more today”) and library hours (e.g., “…now open at … select locations from 10a.m.-9p.m.”).

4.3 Resources

The library posted tweets (18.7%) containing information on both library and non-library resources that are available online such as videos and books including:

- There were tweets advising users on available digital resources such as eAudiobooks, ebooks, and book reading videos (e.g., “Working from home… someone could read a book to your kiddo… Here's a fun video… reading Llama Llama Red Pajama…”), and supporting learning and skill development (e.g., “…interested in learning more about the writing process during this time of physical distancing... [use] these resources…”).
• The library provided links to help users on various topics and issues that gained prominence due to the pandemic such as remote working (e.g., “…working from home is a brand new thing. We've gathered some tips and online resources…”), and the use of (specific) technology (e.g., “… wanting to use Zoom… but are not really sure where to start? You can learn how to use this popular tool…”).

• There were resources (e.g., videos) to alert users on the forthcoming changes in the library emerging due to changes in the provincial government policies like provincial relaunch strategy to open organizations (e.g., “…Watch this video to learn more about what you can expect during your next visit to one of our locations”).

4.4 Health and Hygiene

The library posted tweets (8.0%) to disseminate information on the pandemic-oriented health- and hygiene-related topics. These sources of information were from both internal and external to the library. For example:

• The library posted tweets to update users on ways it is responding to health-related protocols and measures such as the handling of returned library materials (e.g., “…taking measures to ensure all of our materials are disinfected. We will also be distributing disinfecting wipes…”).

• The library shared information to enhance citizens’ awareness and provide guidance on various health-related topics including mask making (e.g., “[create] your own non-medical cloth face mask with these eight easy steps…”), mental health (e.g., “…pandemic can impact your mental health… need support, call the 24-hour Mental Health Help…”), and ways to reduce COVID-19 spread by undergoing self-isolation (if required), maintaining physical distance, and practicing good hygiene.

4.5 Other

The library posted tweets (6.7%) to share information on a number of other topics that were not directly related to the library and were not included in the above categories but were useful for its community members. The library, for example, shared information on virtual events and celebrations happening in the city (e.g., Summer Solstice Indigenous Festival), and emerging and evolving situations within the province and/or the city such as the cancellation of classes, and closure of recreation facilities.

The physical closure of branches due to the pandemic caused disruption to ‘in-person’ library services requiring the library to readjust and adapt to changing circumstances (Martínez-Cardama and Pacios 2020). The library made a concerted effort to share important and time-sensitive information related to library operations, access to various kinds of digital resources, and deliver programs and services remotely (Alajmi and Albudaiwi 2020). The public library was also going beyond by sharing the pandemic-related important information (e.g., mask making, and strategies to reduce COVID-19 spread) with its community members using Twitter (Martínez-Cardama and Pacios 2020; Wang and Lund 2020; Alajmi and Albudaiwi 2020).

5. Conclusion

The paper presents some key findings on the use of Twitter in the initial pandemic phase by a large public library operating in the Western region of Canada. Twitter was primarily used to share
information in the five broad areas. There is a plan to expand this work by analyzing tweets from other libraries and the findings from this paper will provide a foundation for similar future work. The paper aims to enrich research literature on the use of social media, particularly Twitter, during the pandemic by public libraries in Canada. This paper connects to the conference theme of “…data, information…as they are entangled with people, communities, and society…”.

References List:

Aharony, N. (2010). Twitter use in libraries: an exploratory analysis. *Journal of web librarianship, 4*(4), 333-350. [https://doi.org/10.1080/19322909.2010.48776](https://doi.org/10.1080/19322909.2010.48776)

Alajmi, B. M. and Albudaiwi, D. (2020). Response to COVID-19 Pandemic: Where Do Public Libraries Stand?. *Public Library Quarterly, 39*(4), 283-294. [https://doi.org/10.1080/01616846.2020.1827618](https://doi.org/10.1080/01616846.2020.1827618)

Al-Daihani, S.M. and AlAwadhi, S.A. (2015). Exploring academic libraries’ use of Twitter: a content analysis, *The Electronic Library, 33*(6), 1002-1015. [https://doi.org/10.1108/EL-05-2014-0084](https://doi.org/10.1108/EL-05-2014-0084)

Cavanagh, M. F. (2016). Micro-blogging practices in Canadian public libraries: A national snapshot. *Journal of Librarianship and Information Science, 48*(3), 247-259. [https://doi.org/10.1177/0961000614566339](https://doi.org/10.1177/0961000614566339)

Del Bosque, D., Leif, S. A. and Skarl, S. (2012). Libraries atwitter: trends in academic library tweeting, *Reference Services Review, 40*(2), 199-213. [https://doi.org/10.1108/00907321211228246](https://doi.org/10.1108/00907321211228246)

Forcier, E., Rath, D. and Given, L. M. (2013). Knowledge management and social media: A case study of two public libraries in Canada. *Journal of Information & Knowledge Management, 12*(04), 1350039-1 – 1350039-10.

Hemphill, L. and Roback, A. J. (2014, February). Tweet acts: how constituents lobby congress via Twitter. In the *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing*, 1200-1210. [https://doi.org/10.1145/2531602.2531735](https://doi.org/10.1145/2531602.2531735)

Martínez-Cardama, S. and Pacios, A. R. (2020). Twitter communication of university libraries in the face of Covid-19. *Profesional de la información, 29*(6), e290618, 1-15. [https://doi.org/10.3145/epi.2020.nov.18](https://doi.org/10.3145/epi.2020.nov.18)

Palmer, S. (2014). Characterizing university library use of social media: a case study of Twitter and Facebook from Australia. *The Journal of Academic Librarianship, 40*(6), 611-619.

Samuel, H., Noori, B., Farazi, S. and Zaiane, O. (2018). Context Prediction in the Social Web using Applied Machine Learning: A Study of Canadian Tweeters. In the *Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence (WI)*, Santiago, Chile, December 3-6, 2018, 230-237. [https://doi.org/10.1109/WI.2018.00-85](https://doi.org/10.1109/WI.2018.00-85)

Shiri, A. and Rath, D. (2013). Twitter content categorisation: A public library perspective. *Journal of Information & Knowledge Management, 12*(04), 1350035. [https://doi.org/10.1142/S0219649213500354](https://doi.org/10.1142/S0219649213500354)

Stokić, A., Stojanović, D., Bogdanović, Z., Despotović-Zrakić, M. and Radenković, B. (2019), Enhancing the customer relationship management in public libraries: Findings from three
developing countries, *Library Hi Tech*, 37(2), 247-268. https://doi.org/10.1108/LHT-07-2017-0138.

Stvilia, B. and Gibradze, L. (2014). What do academic libraries tweet about, and what makes a library tweet useful? *Library & Information Science Research*, 36(3-4), 136-141. https://doi.org/10.1016/j.lisr.2014.07.001.

Vaismoradi, M., Turunen, H., and Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & health sciences*, 15(3), 398-405. https://doi.org/10.1111/nhs.12048.

VanScoy, A., Hicks, D. and Cavanagh, M. (2018). What motivates twitter users to engage with libraries? In *Proceedings of ISIC, The Information Behaviour Conference, Krakow, Poland, 9-11 October: Part 1. Information Research*, 23(4), paper isic1807. Retrieved from http://InformationR.net/ir/23-4/isic2018/isic1807.html.

Wang, T. and Lund, B. (2020). Announcement information provided by United States’ public libraries during the 2020 COVID-19 pandemic. *Public Library Quarterly*, 39(4), 283-294. https://doi.org/10.1080/01616846.2020.1764325.

Weber, R. P. (1990). *Basic Content Analysis* (Second Edition). Paper Series on Quantitative Applications in the Social Science, Series No. 49, Newbury Park, CA, USA: Sage Publications.

Xie, I. and Stevenson, J. A. (2014). Functions of twitter in digital libraries. *Proceedings of the American Society for Information Science and Technology*, 51(1), 1-4. https://doi.org/10.1002/meet.2014.14505101117.

Yep, J., Brown, M., Fagliarone, G. and Shulman, J. (2017). Influential players in Twitter networks of libraries at primarily undergraduate institutions. *The Journal of Academic Librarianship*, 43(3), 193-200. https://doi.org/10.1016/j.acalib.2017.03.005.