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“MAY BE A PICTURE OF A DOG AND A BOOK”: THE INACCESSIBILITY OF PUBLIC LIBRARY SOCIAL MEDIA FEEDS (Paper)

Abstract or Résumé:

Libraries use social media to connect with their communities. This paper outlines research examining the accessibility of those social media feeds within public libraries in Ontario. Of particular focus are the accessibility of social media feeds and their use of alt text to describe visual media. Findings are rather bleak. Only two libraries were found to regularly use alt text. This research outlines three key issues including the enormity of the access issue for people with visual disabilities, the limitations of accessibility legislation, and the limitations of AI generated alt text.

1. Introduction

Libraries use social media to connect with their communities. Over the last three years with the COVID-19 pandemic, they have significantly increased their online profiles in lieu of patrons having access to the physical library. Given this significant online profile for libraries comes questions around accessibility for persons with disabilities. This paper outlines research examining the accessibility of public library social media feeds within Ontario. Of particular focus here are the accessibility of social media feeds and their use of alt text

2. Alt text

Alternative text, or alt text, is descriptive text used for online imagery that provides context for those who cannot see the image. It is information that sits in the background of a website or social media feed, unseen by most viewers. For those who use screen readers, the screen reader recognizes the alt text in the background and reads that description to the reader as it navigates a website or feed. There is no standard in length, but the emphasis is on providing a contextual description of the image. Examples include describing the people in an image and what they are doing or relaying the text that exists in a screenshot that has been shared.

As social media becomes an increasingly significant component for how libraries engage with their communities, it is vital that these media be as accessible as possible. As Gleason et al note, “People with vision impairments interact with social media features to the same extent as sighted users” (2020). At the same time, while images have begun to dominate, social media is becoming less accessible (Gleason, 2019). Adding alt text to images is a simple way to build towards a more equitable online environment.

3. Literature

Libraries and accessibility literature

Much of the LIS research concerning accessibility focuses on the online environment (Hill 2013; Gibson, Bowen, Hanson 2021). This literature has significantly focused on the library website

with some consideration of databases. Library websites have been found to be varying in their accessibility (Liu, Bielefield, & McKay 2017; Yi 2015; Matta Smith 2014; Hill 2013; Oud 2012; Conway, Brown, Hollier, & Nicholl 2012; Conway 2011). Another small portion of the literature looks at how accessibility is discussed on library websites and in databases (Hill 2020; Graves & German 2018; Gabel et al. 2016). There has been no literature found examining the accessibility of library social media posts.

Libraries and social media literature

In LIS the social media literature tends to cluster around library type – public, academic or special libraries (Cavanagh 2016). Questions tend to focus around why and how libraries use social media (Cavanagh 2016). Libraries use social media for a variety of reasons including to promote and develop a sense of community and in order to reach out to community members (Vassilakaki & Garoufallou 2014; Rossman & Young, 2015). The literature around public library use of social media tends to focus on understanding the use and benefits of social media, the attitudes and experiences of library staff who use social media, and the impact of social media on the identity and organizational practices of the library (Choi & Harper 2019).

Social media and accessibility literature

Gleason et al (2019) found that as images have begun to dominate, social media is becoming less accessible. They found that over 25% of Twitter contains visual media, but only around 0.1% of images contains appropriate alt text. In a study of blind users' web use, a lack of alt text for images was one of the top complaints (Lazar, et al 2007). This lack of alt text has led some blind and low vision users to leave Twitter because of the lack of accessibility (Morris, et al 2016; Whitney & Kolar 2019). A combination of issues led to the lack of alt text including not remembering to add it, not having time to add it, or not knowing what to include when writing descriptions (Gleason, et al 2019).

4. Legislation

Legislation provides some guidance to creating a more accessible online environment, but only in regards to organizational websites. Even with this legislation and similar legislation across Canada and internationally, websites still have accessibility challenges. WebAIM, an organization focused on website accessibility publishes research each year on the accessibility of the top one million home pages on the internet. For their 2022 report, 96.8% of web pages tested had some accessibility error and 23% of web pages tested had missing alternative text (WebAIM, 2022).

5. The Research Question

The problem exists in two parts. The first is that libraries are increasingly engaging with their communities through social media. The second is that social media posts are not covered under the umbrella of any accessibility legislation. Given the increasing dominance of social media posts, how accessible are public library social media feeds?

6. Methodology

The social media of focus included Twitter, Instagram, and Facebook. Public libraries use a variety of social media platforms, but these three are the ones used most often (Koulouris et al., 2021; The Global Statistics, 2022).

The assumption that preceded this research was that larger libraries would likely be more consistent with alt text usage than smaller libraries due differences in personnel numbers and resources. As such, we started with a broad examination of public libraries in Ontario so that we could have representatives of a variety of library sizes. The Ontario Ministry of Heritage, Sport, Tourism, and Culture Industries publishes the library statistics on Ontario public libraries each year and the 2020 list was used to produce a list of libraries.

This list was put into a spreadsheet and a random number generator was used to obtain three samples of 30 libraries each. This sampling method allowed for a much more varied overall sample than would have been possible from using one list of libraries. The initial list included 76 unique libraries. In addition to these 76 libraries, we also included the nine library systems that serve populations greater than 250,000 as a targeted example. These nine systems serve over 52% of the residential population of Ontario (Ontario Ministry of Tourism, Culture, and Sport, 2020).

In the end there were three lists: one each for Twitter, Instagram, and Facebook. Each of the three samples included the 30 libraries from the initial random sampling method with the addition of the nine largest systems when they did not appear on the initial list. We then examined the social media feeds of the list of libraries assigned to that platform. We focused on the 10 most recent posts with images to see how alt text was being used. Overall, approximately 900 posts with images were analyzed, divided evenly between the three platforms. The posts and associated images were analyzed with the assistance of two browser extensions for Mozilla Firefox, 'Alt or Not' and 'Image Block.' 'Alt or Not' works within Twitter and displays alt text used within the platform. 'Image Block' prevents online images from displaying and will display alt text when it's available. This second extension was used for Instagram and Facebook.

7. Findings

Findings are rather bleak. Of the 76 libraries in the initial sample and the additional nine largest systems, only two libraries regularly add alt text to the images they post on social media – Toronto Public Library and Kingston-Frontenac Library. These findings carried across all three social media platforms. The consequences of these absences varied depending on the platform and depending on the content of the image.

For Twitter, no alt text means there was nothing there. As an example, a library shared information about accessing and printing out covid vaccination certificates. The text in the post stated that people could use the library to do this, but the details about the information needed to access the certificates (health card, postal code, etc) was embedded in a PDF poster image with no alt text. In this case, a screen reader user would have incomplete information.

For Facebook and Instagram, the situation is somewhat different. Facebook and Instagram share similar capabilities. One of these capabilities is the inclusion of computer-created alt text if a user does not choose to write their own. In more comical instances, the software is making a guess at what it thinks is in the image which is where the title of this paper comes from, 'May be a picture of a dog and a book.' In other cases, the text is garbled and unreadable.

8. Discussion

This research outlines three key issues. 1) The enormity of the access issue for people with visual disabilities. 2) The limitations of accessibility legislation. 3) the limitations of AI generated alt text

9. References

- Cavanagh, Mary F. (2016). Micro-blogging practices in Canadian public libraries: A national snapshot. *Journal of Librarianship and Information Science*, 48, no. 3, 247-259.
- Choi, N., & Harper, L. M. (2020). [Public libraries and the social web: A review and analysis of the existing literature](#). *Journal of Documentation*, 76(1) 197–211.
- Conway, V. (2011). Website accessibility in western Australian public libraries. *Australian Library Journal*, 60(2), 103-112.
- Gabel, S. L., Reid, D., Pearson, H, Ruiz, L., & Hume-Dawson, R. (2016). Disability and diversity on CSU websites: A critical discourse study. *Journal of Diversity in Higher Education*, 9(1), 64-80.
- Gibson, A., Bowen K., & Hanson, D. (2021). [We need to talk about how we talk about disability: A critical quasi-systematic review](#). *In the Library With the Lead Pipe*.
- Gleason, C., Carrington, P., Cassidy, C., Ringel Morris, M., Kitani, K. M., and Bingham, J. P. (2019). [“It’s almost like they’re trying to hide it”: How user-provided image descriptions have failed to make Twitter accessible](#). In *Proceedings of the World Wide Web Conference WWW 2019* (pp. 549–559). ACM.
- Gleason, C., Pavel, A., McCamey, E., Low, C., Carrington, P., Kitani, K., Bigham, J. (2020). [Twitter A11y: A browser extension to make Twitter images accessible](#). In *CHI '20: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1–12). ACM.
- Graves, S. J., & German, E. (2018). Evidence of Our values: Disability inclusion on library instruction websites. *Portal: Libraries and the Academy*, 18(3), 559-574.
- Hill, H. (2013). [Disability and accessibility in the library and information science literature: A content analysis](#). *Library and Information Science Research*, 35(2), 137–142.
- Hill, H. (2020) Ontario public library websites and the framing of disability. *The Partnership: The Canadian Journal of Library and Information Practice and Research*. 15(2).
- Koulouris, A., Vraimaki, E., & Koloniari, M. (2021). [COVID-19 and library social media use](#). *Reference Services Review*, 49(1), 19–38.

- Lazar, J., Allen, A., Kleinman, K., & Malarkey, C. (2007). [What frustrates screen reader users on the web: A study of 100 blind users](#). *International Journal of Human-Computer Interaction*, 22(3), 247–269.
- Liu, Y. Q., Bielefield, A., & McKay, P. (2017). Are urban public libraries websites accessible to Americans with disabilities? *Universal Access in the Information Society*, 18(1), 191-206.
- Matta Smith, S. L. (2014). Web accessibility assessment of urban public library websites. *Public Library Quarterly*, 33(3), 187-204.
- Morris, M. R., Zolyomi, A., Yao, C., Bahram, S., Bingham, J. P., & Kane, S. K. (2016). [“With most of it being pictures now, I rarely use it”](#): Understanding Twitter’s evolving accessibility to blind users. In *CHI '16: Proceedings of the 2016 CHI*
- Ontario Ministry of Tourism, Culture and Sport. (2020). [Ontario public library statistics](#).
- Oud, J. (2012). How well do Ontario library websites meet new accessibility requirements? *Partnership: The Canadian Journal of Library & Information Practice & Research*, 7(1), 1-17.
- Rossmann, D., & Young, S. W. H. (2015). [Social media optimization: Making library content shareable and engaging](#). *Library Hi Tech*, 33(4), 526–544.
- The Global Statistics. (2022). [Canada social media statistics 2022 | most popular platforms](#).
- Vassilakaki, Evgenia, & Emmanouel Garafallou (2015). The impact of Twitter on libraries: A critical review of the literature. *The Electronic Library*, 33 no. 4, 795-809.
- WebAIM. (2022). [The WebAIM million: The 2022 report on the accessibility of the top 1,000,000 home pages](#).
- Whitney, G., & Kolar, I. (2020). [Am I missing something? Experiences of using social media by blind and partially sighted users](#). *Universal Access in the Information Society*, 19, 461–469.
- Yi, Y. J. (2015). Compliance of Section 508 in Public Library Systems with the Largest Percentage of Underserved Populations. *Government Information Quarterly*, 32(1), 75-81.