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Failures in Library Website Accessibility: A Problem of Accountability

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ABSTRACT

At KSU libraries we began a revamp of our website at the same time a new librarian, who is an expert in web accessibility, started a position at the library. In this process we learned that lack of accountability is often a significant barrier to libraries designing an accessible website. In this paper we argue that designating one person, who will be held accountable, as responsible for accessibility and advocating for the needs of disabled users is an essential step in creating an accessible library web presence. In addition, we present a viable pathway for a non-expert in accessibility to develop sufficient competency in order to, with the help of outside resources, serve as an advocate for disabled users in the web development process.

Keywords: Accessibility, Disability, Libraries, WCAG, Usability

INTRODUCTION

Not every library can have an accessibility expert on staff while redesigning their website. Every library can, however, develop their own informed personnel. At Kansas State University Libraries, a task force focused on developing and maintaining a new website formed, coinciding with the hire of a librarian who is disabled and experienced in human factors, user experience, and accessibility. This provided an opportunity not only for improved accessibility, but a more nuanced understanding of the needs and experiences of disabled patrons.

To successfully design an accessible website, accessibility must be a priority from the beginning of the design process rather than a checklist and fixes applied at the end of the process. A common hurdle to an organization adopting an accessibility focused approach to design is the lack of personnel dedicated specifically to accessibility. By distributing responsibility among a team of designers, accessibility becomes an afterthought. To paraphrase Bandura (1990), If everybody is in charge, nobody is in charge (pp. 36–37).

At least one person must be tasked with developing knowledge of accessibility and advocating for the needs of disabled users. While everyone on the team responsible for web content development should possess some basic knowledge of Web Content Accessibility Guidelines (WCAG), one person needs to have primary responsibility and accountability.

If the person responsible for accessibility does not currently have a grounding in disability theory, then developing a basic understanding of disability

theory should be their priority. Our literature review would serve as a solid foundation.

Just as usability testing should be done with human users, accessibility should be tested by people who both will use the website and use assistive and adaptive technology on a regular basis. Finding disabled users for testing can present some ethical dilemmas. In the United States, for example, information about a student's disability status is protected by both FERPA AND HIPAA. While this does present a challenge, it is possible to overcome this challenge and find disabled users in an ethical manner. It should be understood when testing website accessibility, the real question is not, for example, "can a blind person use my website," but rather, "can a person who uses magnification or a screen reader use my website." Any office or organization on campus that works with disabled students can assist with recruiting volunteers and snowball sampling can be used from there.

LITERATURE REVIEW

A frequent failure point for libraries and other institutions is a lack of awareness of the prevalence of ableism. As Wolbring (2008) says ableism "is one of the most societally entrenched and accepted isms" (p. 253). This problem is exacerbated by fear on the part of disclosure from individuals with invisible disabilities (Syma, 2019).

According to the Center for Disease Control (2018), "[o]ne in four noninstitutionalized U.S. adults (25.7%, representing an estimated 61.4 million persons) reported any disability" (p. 882). Students with disabilities are not a small, minority population. Conley et al. (2019) noted 32% of students at Hampshire college were disabled (p. 529). Despite this, the needs of disabled people are not adequately addressed. "The central issue for the politics of representation is not whether bodies are infinitely interpretable but whether certain bodies should be marked as defective and how the people who have these bodies may properly represent their interests in the public sphere" (Seibers, 2001, p. 742). Individuals with disabilities have their advocates among the able-bodied, but many of these cling to the harmful tragedy or charity model which steals agency from the very populations they attempt to champion (Retief, 2018).

Unfortunately, libraries often fall short by adopting a reactive rather than proactive approach to service. "For example, if a patron needs assistance because of a disability, we expect the patron to ask for assistance. This is counter to the spirit of the Americans with Disabilities Act, which is to make our spaces and services accessible to all people so that they are empowered to navigate our spaces and services in the ways that work best for them" (Pionke, 2020, p. 398).

In her study of library websites, Brunksill (2020) writes, "Despite most academic libraries having an accessibility webpage as part of their larger website, only a few studies were found that examined these pages, and none of them involved consultation with users with disabilities" (p. 768). Resources for students with disabilities can hardly have an effective impact when needs are guessed at or intuited by well-meaning but misguided design.

According to Siebers (2001), "Disability exposes with great force the constraints imposed on bodies by social codes and norms. In a society of wheelchair users, stairs would be nonexistent, and the fact that they are everywhere in our society seems an indication only that most of our architects are able-bodied people who think unseriously about access" (p. 740). Attempts to correct gaps in accessibility often lead to able-bodied designers who are unaware of existing technology creating solutions in a vacuum, rather than integrating with tools familiar to the targeted end-users. If magnification truncates the text, it's not accessible. If color inversion or font changes render the website unusable, it's not accessible. This illustrates the importance of incorporating accessible design at a fundamental level – it's far easier to create accessible tools than to make inaccessible tools accessible post-deployment.

The dearth of actually useful accessibility tools (as opposed to tools which meet minimum legal requirements) is not due to a lack of effort. However, proper incorporation of human factors and usability is sorely lacking. Brunskill (2021) states "Unfortunately, while libraries' accessibility webpages have the potential to be highly useful to both users with disabilities and those assisting them, past studies of academic library accessibility pages have found common deficits among these pages in terms of both their findability and their content" (p. 935). Commonly overlooked needs included but were not limited to information about quiet spaces, lighting, transportation, service animals, instruction, and interlibrary loan accommodations (Brunksill, 2021).

Hill (2011) proposes that libraries apply an approach more in line with protecting the human dignity of disabled users, empowering them to actively participate in their community and have a hand in the creation of policies and resources. Hill's proposed framework for libraries draws heavily from the capability framework developed by Amartya Sen (2009), viewing accessibility as a matter of justice. Sen's (2009) capability framework focuses on what people can actually be and do, differentiating "token" from "true" accessibility.

NEXT STEPS

So, how can universities and departments within them develop informed personnel? The first step is to realize that how we think about accessibility and disability matters. While there are many models of disability, the two most relevant to web design, and especially to understanding how we think about web design are the medical model and the social model (Retief, 2018). The medical model focuses on fixing broken people. Not only can most "broken" people not be fixed, but the narrative of people as broken is problematic at best and wrongly relieves institutions of the responsibility to fix barriers. The social model focuses on the removal of barriers.

If we continue to see disabled people as other or some sort of special use case, then accessibility will continue to lag behind other elements of user centered design. For this reason, we advocate those designers take a social justice or capabilities model approach to design. In other words, the focus of designers should be on removing barriers rather than fixing users. For

example, the medical model would see a design that required a magnification user to do a great deal of horizontal scrolling as acceptable. They can still read the text, so what more is required? The social justice model, on the other hand, would consider the fact that horizontal scrolling is exponentially more work for the user and know that it renders a website unusable in most cases. Wayne Dick (2017) writes "Scrolling is not a part of reading comprehension. It is just a necessity of viewing the material so that it can be read...Every scroll is excess activity needed to perceive text. It is overhead to reading" (p. 280).

To develop real expertise in accessible and inclusive design, it is necessary to read widely not just in practical web accessibility literature but to have some understanding of disability theory written by disabled voices. Paul Longmore's (2003) seminal essay "Why I Burned My Book" is an excellent place to start, illustrating the financial and legal obstacles impeding individuals from enriching their lives through education, meaningful work, and participation in their community. Longmore (2003) writes of his experiences, "…the major obstacles we must overcome are pervasive social prejudice, systematic segregation, and institutionalized discrimination" (p. 231).

There are a wide variety of sources for staying up to date on the nitty gritty of accessible design for web development.

- https://www.lflegal.com/ the law office of Lainey Feingold: For insight into disability laws and regulations.
- https://projectenable.syr.edu/ Project Enable, information for and by librarians working to improve access for all.
- https://www.glaucoma.org/ The Glaucoma Research Foundation, one of the best examples of a website designed accessibly.
- https://www.mhc.ie/latest/insights/overview-of-the-european-accessibility-act Overview of the European Accessibility Act, a breakdown of accessibility standards for web design.
- https://visionaware.org/blog/visionaware-blog/new-research-blindness-simulation-activities-may-do-more-harm-than-good-1746/ Research into "blindness simulators" and the unintended consequences of incorporating these into design. While disability simulators have been successfully used, giving the abled bodied a view into a disabled person's abilities, this has been shown to be harmful rather than helpful in terms of design (Silverman, 2015).
- https://www.w3.org/TR/WCAG22/ A description of the WCAG standards, version 2.2, along with a preview of the upcoming revisions in version 3.0.
- https://usablenet.com/ A guide for web design incorporating WCAG standards and ADA compliance.

As with many large projects a strong network of sources is essential. The person in charge of accessibility should develop a relationship with the office or person on campus that serves disabled students. The aim here is to gather information about the needs of disabled students and other stakeholders in

the community. The unfortunate reality is that disability is still deeply stigmatized, so finding disabled subjects who are willing to come forward can be tricky. As Good (2020) writes, "[t]here is a danger that poor-quality research conducted without careful attention to ethical practice leads to a poor knowledge base underpinning changes in policy and service provision for disabled people" (p. 655). Fortunately, universities should have an office tasked with accommodation of student accessibility needs. Asking this office to forward volunteer requests respects student privacy while allowing them to come forward. User research often uses smaller sample sizes, but should additional subjects be needed, using snowball sampling of the first round of subjects is acceptable and the first round of subjects will have helped you establish your credibility and trustworthiness.

This connection can also provide ethical access to disabled users and be another resource for staying up to date on both the basics of disability theory and current information on accessible and inclusive web design. Menzi-Centin et al. (2017) began by contacting a known student with impaired vision living on campus, who then contacted and recruited other student volunteers and interviewed them in according to the voluntariness principle. They found that "participants were moderately satisfied with the university website in terms of learnability, feedback, accessibility, consistency and navigation. However, they were not satisfied with the website insofar as it did not comply with the universal design principles such as adding information about diagrams and visuals and the web page having text version support" (p. 155).

When testing for accessibility, the correct question to ask is whether the website is compatible with various assistive and adaptive technologies. In fact, when possible, it is advisable to seek out users with different disabilities who use the same technology. For example, screen readers are used by people who are dyslexic, have ADHD or even those who get headaches while trying to read over extended periods. Sighted screen reader users can pick out accessibility problems that those who use screen readers because of visual impairment may miss.

While libraries and universities have a duty to ensure access to tools and resources to their stakeholders (both students and employees) with disabilities, it should be noted that accessible design also benefits able bodied users. Schmutz et al. (2017) found that "non-disabled users and users with visual impairments profited from higher accessibility to the same extent" (p. 965). Having at least one person on the web team accountable for accessible design not only ensures meeting the needs of patrons with disabilities but also introduces that person to new perspectives on user needs and design which can enhance their professional competence, further demonstrating that an accessible design process benefits all users. While designing with accessibility in mind from the beginning may take more time, effort, and accountability than merely hoping for the best, the end result is design that considers and accounts for the whole spectrum of human need.

REFERENCES

Bandura, A. (1990) Selective activation and disengagement of moral control. Journal of Social Issues, 46(1), 27–46.

Barryhill, D. (2021). WCAG 3.0: What you need to know about the future of accessibility standards. https://uxdesign.cc/wcag-3-0-what-you-need-to-know-about-the-future-of-accessibility-standards-2e1f6374f2c7

Brunskill, A. (2020). "Without that detail, I'm not coming": The perspectives of students with disabilities on accessibility information provided on academic library websites. College & Research Libraries, 81(5), 768–788. https://doi.org/10.5860/crl.81.5.768

Brunskill, A. Lantz, C., & Mundle, K. (2021). What information are we providing to users with disabilities? An analysis of ARL libraries' accessibility webpages. College & Research Libraries, 82(7). https://doi.org/10.5860/crl.82.7.935

Conley, S., Ferguson, A., & Kumbier, A., (2019). Supporting students with histories of trauma in libraries: A collaboration of accessibility and library. Library Trends, 67(3), 526–549. http://doi.org/10.1353/lib.2019.0001

Dick, W. (2017). Usability of enlargement methods: How enlargement method influences the amount of scrolling actions needed to read publications. In Ahram, T., & Falcão, C., Advances in Usability and User Experience: Proceedings of the AHFE 2017 International Conference on Usability and User Experience. 271–281. Springer.

Duffy, M. (2015), New research: "Blindness Simulation" activities may do more harm than good VisionAware: For independent living with vision loss. https://visionaware.org/blog/visionaware-blog/new-research-blindness-simulation-activities-may-do-more-harm-than-good-1746/

Feingold, L. (2022). Disability laws and regulations. Law Office of Lainey Feingold. https://www.lflegal.com/

Glaucoma Research Foundation. (n.d.). https://www.glaucoma.org/

Good A. (2020) Disability research ethics. In: Iphofen R. (eds) Handbook of Research Ethics and Scientific Integrity. Springer, Cham. https://doi.org/10.1007/978-3-030-16759-2_30

Hill, H. (2011). Ontario public libraries, accessibility, and justice: a capability approach. Canadian Journal of Information and Library Science, 35(4), 423–435.

International Association of Accessibility Professionals. (2022). Solving digital accessibility: technology and expertise for WCAG & ADA web compliance. https://usablenet.com/

Longmore, P. (2003) Why I burned my book and other essays on disability. Temple University Press

McGirr, D. (2022). Overview of the European Accessibility Act: A new era for accessibility. Mason Hayes & Curran LLP https://www.mhc.ie/latest/insights/overview-of-the-european-accessibility-act

Menzi-Cetin, N., Alemdag, E., Tuzun, H., & Yildiz, M. (2015). Evaluation of a university website's usability for visually impaired students. Universal Access in the Information Society, 16(1), 151–160. https://doi.org/10.1007/s10209-015-0430-3

Okoro, C., Hollis, N., Cyrus, A., Griffin-Blake, S. (2018). Prevalence of disabilities and health care access by disability status and type among adults — United States, 2016. Morbidity and Mortality Weekly Report, 67(32), 882–887. http://dx.doi.org/10.15585/mmwr.mm6732a3

Pionke, J. (2020). COVID-19, accessibility, and libraries: A call to action" C&RL News 81(8), 398–399. https://doi.org/10.5860/crln.81.8.398

Project Enable (n.d.). Expanding non-discriminatory access by librarians everywhere. https://projectenable.syr.edu/

Retief, M. & Letšosa, R. (2018). Models of disability: A brief overview. HTS Teologiese Studies/Theological Studies 74(1), a4738. https://doi.org/10.4102/hts.v74i1.4738

Schmutz, S., Sonderegger, A., & Sauer, J. (2017). Implementing recommendations from web accessibility guidelines: A comparative study of nondisabled users and users with visual impairments. Human Factors, 59(6), 956–972. https://doi.org/10.1177/0018720817708397

Sen, A. (2009). The idea of justice. New York: Harvard University Press.

Siebers, T. (2001). Disability in theory: From social constructionism to the new realism of the body. American Literary History, 13(4), 737–754.

Silverman, A. M. (2015). The perils of playing blind: Problems with blindness simulation and a better way to teach about blindness. The Journal of Blindness Innovation and Research 5(2), https://nfb.org/images/nfb/publications/jbir/jbir15/jbir050201.html

Syma, C. (2019). Invisible disabilities: Perceptions and barriers to reasonable accommodations in the workplace. Library Management, 40(1), 113–120. http://dx.doi.org/10.1108/LM-10-2017-0101

W3C. (2021). Web content accessibility guidelines (WGAC 2.2). https://www.w3.org/TR/WCAG22/

Wolbring, G. (2008). The politics of ableism. Development, 51(2), 252–258. http://dx.doi.org/10.1057/dev.2008.17