

The Intersection of Digital Media and Accessibility Accommodation

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Objective

When individuals transition from academia to private sector employment, they deserve access to a disability accommodation plan as they experienced within their education. To assist in this, the AODA created guidelines to help develop, implement, and enforce accessibility standards in Ontario. ("Act (AODA)," 2014) This Major Research Paper is proposed to explore themes surrounding neurodivergent individuals, those who have non-physical disabilities and are considered learning disabled, and their relationship with what types of accommodation software can be integrated into enterprise software and used in tandem with their daily work assignments. Therefore focusing on software that assists the following types of individuals: individuals that have a learning disability in which they struggle with the process of understanding or using symbols or spoken language, a condition of mental impairment or a developmental disability, a mental disorder. ("Act (AODA)," 2014) This proposed Major Research Paper would look into the technology supports that assist these individuals.

The author will research and create plug-ins or bots that will take already existing technology and accessibility tools, which would allow them to be integrated into currently existing software. Using plug-ins and bots will enable the disabled user to add accommodation technology to their current daily tasks. These plug-ins will provide the user with lower-level accommodations, increasing their productivity and allowing them to excel beyond their current work level. Accommodations allow individuals to complete the same tasks as their peers but require some variation in formatting, setting, time and presentation. (Kessler & Schneider, 2019)

Additionally, the author would create a website to house the software and help the individuals communicate with their employers by providing videos and written information regarding accommodations. This website would feature video content for both the employer and

the employee on how to communicate their accommodation requests and how to provide for those requests. There would also be a community-based forum so that individuals could share their current practices (i.e., hacks, tips and tricks) for disability-related accommodations with others.

Learning Objectives:

Throughout writing this MRP, the author will learn the five most common software accommodations, how they are currently being used within the educational field, how they are being transitioned into private sector employment, and how technology can narrow this gap.

By identifying the five most common software accommodations, the author will identify where accommodations are already being integrated and what individuals still need. This will be done through research with Ryerson's Academic Accommodation Support centre and a coinciding literary review. Using Ryerson's Academic Accommodation Support centre, the author will collect a large data sample relevant to current and future individuals entering employment. The author will also see current research being done and past research on this topic by completing a literary review.

Related to MDM

This project will investigate the relationship between neurodivergent individuals, individuals with non-physical disabilities, and are considered learning disabled, needs and Digital media. Currently, accessibility is being treated as a usability requirement and, if not addressed in the early stages of development, is challenging to incorporate in the product's final result (Henry et al., 2016). Prototyping plug-ins and bots that integrate directly into pre-existing

enterprise software will allow individuals to incorporate much-needed accommodations that were not taken into consideration when designing the products.

One in five (22%) of the Canadian population from the ages of 15 and over has one or more disabilities (Morris et al., 2018); this project aims to develop technology that can be incorporated into pre-existing software to help those individuals. Additionally, by creating a network and information on a website, we allow individuals to open discussions with employers through using our examples. This is being done to allow employers to educate themselves, as accommodating to individuals with specific needs is a human rights issue in the workplace. ("9. More about disability-related accommodation," n.d.) Additionally, these educational videos can support employees as some may be reluctant to seek accommodations in the workplace due to stigma. ("9. More about disability-related accommodation," n.d.)

Method

This Major Research Project aims to use a practice-led research methodology that will create new innovative technology. This project will explore a creative integration of two industries; a practice-led research method will allow the author to incorporate the creator practices, creative methods and creative output into the research design, incorporating it as part of the research output. ("Research methodologies for the creative arts & humanities: Practice-based & practice-led research," 2020) As there is yet to be a clear outcome for this project, practice lead research will allow the author to focus on the research through advancing iterations of technology and learning what to incorporate through the required literary review and required research. The author will look at how that research will benefit the project outcome. (Candy,

2016) Leaving flexibility for change and iteration will allow the author to implement any additional information found through the research process.

Within this MRP, the currently envisioned deliverables are divided into two sections, the education section for employers and employees and the software created for accommodations.

For the website component, the author will investigate through researching standard practices in the educational sector on neurodivergent individuals, those who have non-physical disabilities and are considered learning disabled. By identifying the top most common required accommodations, the rest of the research will take shape. By creating a website, the information will be displayed to educate employers on behalf of the employee by describing and communicating why these accommodations supports are required. This project's community section will also provide these individuals with a community-based place to share their tips and tricks with others on methods they are using within their jobs.

The software section of this major research paper will be available for download on the created website so that all the information to be accessible in one place. Once the author has found the five most common accommodations, individual plug-ins will be created to support those accommodations through digital media. More information regarding the final result will be discovered once further research has been completed.

This project will take a new and innovative step in allowing individuals to access integration for their daily use in enterprise software. Creating these hacks, bots, and plug-in's individuals will be able to take it their accommodations into their own hands and no longer be reliant on companies to finance expensive accommodation software. Current examples of scan

and read software are priced at \$1344, plus taxes. ("Kurzweil 1000 V14 (single user) download," n.d.)

Additionally, this project's innovation comes from repurposing existing technology and integrating it to service users' unmet needs by consolidating the technology into one platform, therefore, allowing easy user interaction. These bots and plug-ins will be an easy and low-cost integration to consolidate the technology; currently, examples would be Grammarly and their ability to provide free support. ("Grammarly prices and plans | Grammarly," n.d.)

This project will contribute to both the digital media and disability studies industries, as the collaboration of technology, digital media and disability accommodations will be integrated. This collaboration and integration can explore how beneficial a collaboration could be to the individuals in the marginalized areas of disability. Therefore spread future conversations within and allow for a more technological advance is within the accommodation industry.

This project will benefit individuals who have non-physical disabilities currently working or looking for work in private sector employment as it will allow them to incorporate accommodation into their workflow.

Preliminary Literature Review

The author's preliminary literary research will be divided into two primary categories: previous educational support provided for individuals and current supports being used for disabilities in the workplace. By dividing the research categories into these two sections, a direct comparison will be seen as to what is currently being used in academia compared to private sector employment. Through this process, key players will be identified within the academic accommodation conversations, allowing the most up-to-date information to be included in this

project. The author will also be researching physical disabilities, the accommodations they were provided within academia, and these transitions into private sector employment to fully understand what accommodations are currently being made for these individuals and how we can incorporate this into non-physical disability accommodation. The following references are current scholarly articles based on predetermined themes.

Educational Supports

Cullen, J., Richards, S. B., & Frank, C. L. (2008). Using software to enhance the writing skills of students with special needs. *Journal of Special Education Technology*, 23(2), 33-44. <https://doi.org/10.1177/016264340802300203>

Hsiao, F., Zeiser, S., Nuss, D., & Hatschek, K. (2018). Developing effective academic accommodations in higher education: A collaborative decision-making process. *International Journal of Music Education*, 36(2), 244-258. <https://doi.org/10.1177/0255761417729545>

Lewthwaite, S. (2011). Critical approaches to accessibility for technology-enhanced learning. *Learning, Media and Technology*, 36(1), 85-89. <https://doi.org/10.1080/17439884.2010.529915>

Lopez, N. J., Uphold, N. M., Douglas, K. H., & Freeman-Green, S. (2020;2019;). Teaching high school students with disabilities to advocate for academic accommodations. *The Journal of Special Education*, 54(3), 146-156. <https://doi.org/10.1177/0022466919892955>

Terras, K., Anderson, S., & Grave, S. (2020). Comparing disability accommodations in online courses: A cross-classification. *The Journal of Educators Online*, 17(2)

Current Supports being used for disabilities

- Chow, C. M., & Cichocki, B. (2016). Predictors of job accommodations for individuals with psychiatric disabilities. *Rehabilitation Counseling Bulletin*, 59(3), 172-184. <https://doi.org/10.1177/0034355215583057>
- Information access for people with disabilities. (2004). *Library Technology Reports*, 40(3), 10.
- Khalifa, G., Sharif, Z., Sultan, M., & Di Rezze, B. (2020). Workplace accommodations for adults with autism spectrum disorder: A scoping review. *Disability and Rehabilitation*, 42(9), 1316-1331. <https://doi.org/10.1080/09638288.2018.1527952>
- Sabata, D., Bruce, C., & Sanford, J. (2006). Preparing Home Health Clients for Work Opportunities With Workplace Accommodation. *Home Health Care Management & Practice*, 19(1), 12–18. <https://doi.org/10.1177/1084822306292532>
- Telwatte, A., Anglim, J., Wynton, S. K. A., & Moulding, R. (2017). Workplace accommodations for employees with disabilities: A multilevel model of employer decision-making. *Rehabilitation Psychology*, 62(1), 7-19. <https://doi.org/10.1037/rep0000120>

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- Henry, S., Abou-Zahra, S., & White, K. (2016, May 6). *Accessibility, usability, and inclusion*. Web Accessibility Initiative (WAI). <https://www.w3.org/WAI/fundamentals/accessibility-usability-inclusion/>
- Hsiao, F., Zeiser, S., Nuss, D., & Hatschek, K. (2018). Developing effective academic accommodations in higher education: A collaborative decision-making process. *International Journal of Music Education*, 36(2), 244-258. <https://doi.org/10.1177/0255761417729545>
- Information access for people with disabilities. (2004). *Library Technology Reports*, 40(3), 10.
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Lewthwaite, S. (2011). Critical approaches to accessibility for technology-enhanced learning. *Learning, Media and Technology*, 36(1), 85-89. <https://doi.org/10.1080/17439884.2010.529915>

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