

Participatory Accessibility in Museums: The Case of the Murney Tower Museum's Audio Tour

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Abstract

Museums around the world are increasingly developing new assistive tools and digital technologies to improve access to their spaces and accommodate the needs of disabled individuals. Despite the growing recognition of issues of accessibility in museums, most initiatives are developed without the active participation of those intended to benefit from these projects, including individuals with disabilities (Park et al. 2015; Wilson et al. 2018). As a result, participatory accessibility remains a largely overlooked area both within museum literature and museum practice. Using the Murney Tower Museum's participatory audio tour project as a case study, this paper offers insights into participatory accessibility design in museums, and reveals the social, cultural and institutional implications of this approach to design. Through a detailed analysis of the museum's three-step audio tour project, the paper argues that accessibility initiatives which are developed with the active participation of disabled people and other target audiences, may create better results in facilitating greater access to museums and cultural spaces.

Keywords: accessibility, participation, museums, heritage site, assistive technologies

Introduction: Museums as Accessible Spaces

Museums around the world today are increasingly developing assistive tools, digital technologies, and multi-sensory initiatives in order to improve access to their spaces. A growing recognition of the rights and freedoms of disabled people has encouraged museums to provide equal opportunities, and to improve access to their spaces, services, and buildings (Bieber and Rae 2013). Over the last two decades, there has been an increasing amount of research on accessibility in museums, which examines the accessibility work of museums and offers insights into its potential and challenges. Topics include assistive tools and technological equipment (Eardley et al. 2022; Ginley 2013; Hutchinson and Eardley 2019), the experiences and motivations of people with disabilities (Hayhoe 2017; Cecilia 2021; 2022), the impacts of multi-sensory experiences and touch (Candlin 2006; 2008; 2010; Levent and Pascual-Leone 2014), and transformations in institutions towards greater inclusivity (Kleege 2018; Wilson et al. 2018). Despite the growing recognition of accessibility in museums, most assistive tools and digital technologies are developed without the participation of disabled individuals as active co-researchers and co-practitioners rather than passive subjects involved in the final stages (Carrizosa et al. 2020; Seale et al. 2015; Star 2010). As a result, participatory accessibility continues to be a largely overlooked area in both museum studies and practice. More recently, there has been an increasing call within museum studies literature for new studies and projects that may offer insights into participatory approaches, and draw attention to the benefits and outcomes of involving "end-users" (e.g. disabled people, general museum audiences, and volunteers) in the co-creation, development and implementation of assistive tools and technologies (Hollinworth et al. 2016; Carrizosa et al. 2020).

This paper draws on my experience as the former Manager of the Murney Tower Museum in Kingston, Ontario where I led several accessibility initiatives, most notably the

development of an inclusive, multi-sensory audio tour between 2020 and 2024. My role in the project – from initial conception to final implementation – deeply informs the analysis presented in this paper. By positioning myself as both practitioner and researcher, I aim to critically reflect on the institutional dynamics, community relationships, and outcomes of the project, and explore how this work contributes to ongoing conversations about participatory accessibility in museums. Building on this experience, I also aim to introduce participatory accessibility research and design as a vital instrument for improved access and inclusion in museums. Drawing upon a definition of participatory research provided by Wright et al. (2011) as the active involvement of “end users” in all aspects of the research, development, and implementation of assistive projects and technologies, I define participatory accessibility practice as tools, technologies, and projects developed with ongoing collaboration, consultation, and relationship building with individuals and groups living with disabilities. I use the Murney Tower Museum's three-step audio tour project as an example to offer insights into participatory accessibility practice in museums, and to reveal its broader social, institutional, and cultural potential. Drawing upon a literature review, institutional analysis, and my reflections as the Murney Tower Museum's former Manager and the core member of the audio tour project, I put forth two arguments. The first is that participatory accessibility practice is ‘informed by a shared interest in improving the lives of disabled people’ (Seale et al. 2015: 484), and has the potential to create more usable and enjoyable experiences, thereby improving access to museums and cultural spaces. The second argument is that participatory accessibility practice creates important institutional and cultural outcomes, improving knowledge and awareness of accessibility not only within the museum but also across the broader cultural heritage sector.

My analysis in this article consists of three parts. Firstly I provide an overview of the secondary literature on accessibility and participation in museums and disability studies. I then turn my attention to the Murney Tower Museum, introducing its history and institutional objectives, as well as providing a detailed discussion about the museum's audio tour project, which was developed through three stages of community consultation, project design, and implementation. In the last part of the article I discuss the broader cultural and institutional impacts of the audio tour project, and reveal its outcomes on the museum staff's knowledge of accessibility and the broader heritage sector of Kingston. Through this analysis, I highlight the significance of participatory accessibility practice in museums, revealing how the active participation of people with disabilities in accessibility initiatives may bring museums a step closer to greater access and inclusion and to overcoming existing physical, sensory, and cultural heritage barriers.

Setting the Stage: Accessibility and Participation in Museums

Museums: Making the ‘Inaccessible’ Accessible

As the products of nineteenth-century Western colonial expansion, museums have traditionally been ocularcentric and physically inaccessible spaces, largely housed in custom-made, “temple-like” structures and historic buildings, and designed without the needs, experiences, and preferences of individuals with disabilities in mind (Ginley 2013). At the same time, museums have traditionally promoted the values, ways of life, and needs of white and so-called “able-bodied” individuals, thereby reinforcing ableist assumptions and inequalities, and denying and undermining the rights of disabled communities (Soldatic 2015; Hutcheon and Loshewisz 2020).¹ As a result, from the earliest days of the museum as an institution in the mid-eighteenth century up to the 1970s, access to museums remained strictly limited to certain segments of the population (upper middle classes, white individuals, non-disabled groups, etc.), whereas the needs, preferences, and experiences of disabled groups were neglected in and excluded from museum spaces. Over the last thirty years, the issue of access has moved to the centre of museum scholarship and practice (Candlin 2010; Bieber and Rae 2013; Cachia 2013; Ginley 2013; Hayhoe 2017; Weisen 2020). One of the major developments that paved the way for increased interest in access at museums was the rise of the “new museology” movement of the 1970s and 1980s, which drew attention to the social and politicized nature of museums (Vergo 1989; Clifford 1997), and helped to create a new

and more critical understanding of the museum as a social institution (Sandell 2007; Sandell and Nightingale 2015).² Important societal and political developments of the mid-twentieth and early twenty-first centuries such as the introduction of the Universal Declaration of Human Rights in 1947,³ the disability rights movements of the 1960s and 1970s, and the declaration of the Convention on the Rights of Persons with Disabilities that was adopted by the United Nations in 2006, paved the way for increased recognition of inclusion of individuals with disabilities in cultural spaces such as museums (Borg et al. 2011; Rix et al. 2020).⁴ Following the adoption of the Convention, new domestic and international acts, policies, and legislations were introduced to protect and promote the rights of impaired individuals and improve their participation in society, encouraging museums to develop new accessibility initiatives that helped to facilitate greater access to their buildings, spaces, and services.⁵

Accessibility in museums is now the subject of fast-growing research that focuses on a broad range of topics. This is a body of work that examines the experiences and motivations of disabled individuals, that looks to explain why they do (or do not) visit museums, and what makes their experience more accessible (Cecilia 2021, 2022; Moussouri and Roussos 2013). Another cohort examines the role of multi-sensory experiences (Candlin 2010; Kleege 2018; Eardley et al. 2022) and touch in museums (Levent and Pascual-Leone 2014; Reichinger and Purgathafer 2011). Another topic is the role and impact of accessible tools and assistive technologies in creating more accessible museum spaces. These works suggest that assistive technologies such as audio descriptions (e.g. a trained guide, a pre-recorded audio tour, etc.) are essential elements to develop multi-sensory experiences that in turn create more accessible environments (Snyder 2005; Fonseca et al. 2018; Hutchinson and Eardley 2019). Despite increased interest in assistive technologies, multi-sensory experiences, and visitor-oriented approaches, there are still fundamental barriers that inhibit full access to museums (Kastenholz et al. 2015; Poria et al. 2010). For instance, the continuing colonial and ableist legacies of museums present a major obstacle for accessibility, limiting the ability of museums to provide a welcoming, equal, and inclusive space for all. Another limitation is a continuing misconception and negative attitudes towards disabled individuals, and the lack of knowledge and understanding amongst museum staff about the needs of these communities, which in turn helps to inhibit the full participation of disabled communities in societies (Oliver and Barnes 2010; Mesquito and Carneiro 2016). This review highlights some of the central concerns of this article, including how accessibility remains one of the most pressing challenges in museums today, as well as the critical need – both in museum studies literature and in museum practice – for new approaches and strategies that support the creation of more welcoming and accessible spaces, which present museum experiences that are inclusive, equitable, and meaningful for disabled communities (Hollinworth et al. 2016; Carrizosa et al. 2020).

Participatory Research and Design

A key barrier to achieving this accessibility is the limited involvement of disabled people in the design, development, and implementation of accessibility initiatives (Cecilia 2022; Rix et al. 2020; Carrizosa *et al.* 2020; Seale and Shadwick 2017). Highlighting a pressing need to “devisualize” museums for greater inclusion of blind and partially sighted individuals, Eardley et al. (2022: 151) have drawn attention to the lack of “audience-centred approaches” in accessibility research and design museums, stating that:

We suggest that it is only when access initiatives are placed at the centre of museums’ offerings, taken seriously as artistic endeavours, and created with, offered to, and enjoyed by both blind and non-blind visitors that museums will move beyond their (often unwitting) ocularcentric assumptions towards a truly inclusive enriched experience for all.

This statement reveals an important point that underpins this article. Most assistive tools and digital technologies in museums are developed without the active participation of potential users such as disabled individuals (Ginley 2013). In most cases, these initiatives are led and developed by museum staff and researchers, whereas potential users and target audiences are only included in the final stages of the project to provide feedback for museum researchers

and practitioners (Seale et al. 2015). The lack of participation in accessibility initiatives creates a significant barrier for real-life usability and for users' enjoyment of assistive tools and technologies.

While the role and impact of participation have largely been overlooked in the context of accessibility and assistive technologies in museums, they have been more directly addressed in other areas of museum research focused on exhibitions, collections, and education. Notably, over the past two decades the Research Centre for Museums and Galleries (RCMG) at the University of Leicester has modelled participatory practices through a series of collaborative projects that fully engage disabled people as co-researchers and co-developers of museum outputs. Examples include: *Rethinking Disability Representation* (2007–2008), a groundbreaking project that has involved nine UK museums and galleries; *Exceptional & Ordinary* (2016), developed with eight medical museums to explore disability and contemporary attitudes towards disabled people; *Disorder, Dissent, Disruption* with the Wellcome Collection; and *Everywhere and Nowhere*, a collaboration between the RCMG and the National Trust. While these initiatives foreground representation and narrative agency, often focusing on how disability is framed and communicated through museum collections and displays, they exemplify an important shift towards co-production and participatory ethics in museum practice (Sandell et al. 2009).

These developments align with a substantial body of literature that examines participatory practices in museums, offers insights into the impact of the active participation of visitors in museum exhibitions, collections, and programmes (McLean and Pollock 2007; Simon 2010; Cauvin et al. 2018), and presents participation as of 'paramount importance, as it will constitute the essence of museums as institutions in the twenty-first century' (Manikowska and Jakubowski 2021: 42). Similarly, the benefits of participatory approaches are widely discussed within disability studies (Charlton 1998; MacLeod et al. 2014; Bowker and Star 1999; Star 2010). Scholars draw attention to the prolonged impact of the active involvement of disabled communities in the research and design of accessibility initiatives, such as overcoming inequalities and creating more democratic spaces of inquiry (Stone and Priestley 1996; MacLeod et al. 2014; Torre 2005), creating knowledge exchange, and power-sharing (Star 2010; Bowker and Star 1999). These accounts all agree that participatory approaches offer the potential to transform the lives of participants and to move society a step closer to greater accessibility and inclusion (Zarb 1992; Cornwall and Jewkes 1995).

Despite a growing recognition of the significance of participation in museums, and of participatory research and design in disability studies, participatory accessibility continues to remain a largely overlooked area within museum studies and practice. In their recent works on accessibility in museums, Cecilia (2022) and Smith et al. (2015) have argued that the active participation of disabled people in the research and design of assistive technologies may help to transcend ideological, physical, and external barriers, and to allow museums to achieve better results in creating more welcoming, accessible, and safe space for these individuals. The increasing need for participation raises two important questions. Firstly, what does participatory accessibility practice look like in museums? And secondly, what are the institutional and cultural impacts of participatory accessibility initiatives? In the remaining parts of this paper, I tackle both questions in an attempt to offer insights into participatory accessibility practice in museums, and to reveal some of the institutional, social, and cultural potential that this approach offers.

Murney Tower Museum: From Nineteenth-Century Military Fortification to Local History Museum

Murney Tower Museum is a small local history museum located in Kingston, southeastern Ontario, Canada. Since 1925 the museum has been operated by a non-profit organisation called the Kingston Historical Society (KHS), which is dedicated to the preservation and promotion of Kingston's history and heritage. The museum takes its name from its site, the Murney Tower, which is one of the four nineteenth-century military fortifications that were constructed by the British Government in Kingston. As a seasonal museum, it is open to the public from the end of May through to early September. The museum has over a thousand

domestic and military artifacts in its collection, which offer a portrait of nineteenth-century life in Kingston. The museum also puts on special exhibits, educational programmes, and events.⁶



Figure 1. Murney Tower Museum, Site. The photo collection of the Murney Tower Museum, 2016.

As the name of the museum demonstrates, there is a deeply intertwined relationship between the museum and its site. Murney Tower is a small defensive military fortification built by the British Government in 1846 as part of a series of fortifications which were erected to defend the British-Canadian border from possible American attacks.⁷ Between 1848 and 1875 Murney Tower served as a barracks for the British and Canadian militia and their families.⁸ Today the tower represents a city landmark and an important site of national and international resonance. In 2007 it became a UNESCO World Heritage Site (Rideau Canal and Kingston Fortifications World Heritage Site), the 14th World Heritage Site in Canada and the only one in Ontario. In 1930 the tower was designated as a National Heritage Site of Canada.

The Murney Tower Museum demonstrates a unique model of public-private partnership, which is one of the oldest of such partnerships in Canada. Murney Tower belongs to the federal department of Parks Canada, which administers 117 national historic heritage sites and 47 national parks across the country.⁹ Since 1925 the Kingston Historical Society has collaborated with Parks Canada to undertake cultural heritage services inside Murney Tower, sharing responsibilities and working together to ensure the preservation of the tower and the continuation of the museum's operation. For instance, the former is in charge of the maintenance and preservation of the building, and the staff, board members, and volunteers of the museum are responsible for providing access to the site and communicating its significance and history to audiences.



Figure 2. Murney Tower Museum, interior (barracks level). Image taken by the author, 2022.



Figure 3. Murney Tower on King George V's birthday, 1912. The photo collection of Wikimedia Commons.

This brief overview reveals several important points that I would like to address here. The first is that the museum's location in a nineteenth-century military fortification makes it inherently inaccessible. Murney Tower is a small circular structure with three floors. It has a curved and tight basement, which contains four storerooms and four round-shaped defensive rooms called the 'caponiers', where the British soldiers and their families lived, and a circular gun platform. The building contains deeply-curved, steep stairs, low overheads, and tight rooms, which pose important accessibility barriers for many groups of people. These include the elderly, individuals with visual and physical disabilities, and claustrophobic people. At the same time, there are no washrooms and no running water on site, which creates an additional barrier for individuals with medical concerns and special needs.



Figure 4. Interior stairs going into the basement (left) and the gun platform (right). Photo Collection of the Murney Tower Museum, 2021.

This means that the museum's location inside a defensive military fortification – a structure originally built, so to speak, to “keep people away” – poses an inherent challenge to the museum's accessibility objectives. As outlined in the museum's 2021–2026 Strategic Plan and values statement, improving access to the Murney Tower and Kingston's cultural heritage by ‘reshaping ways of storytelling and implementing accessibility strategies while dismantling physical, social, and cultural barriers’ (Murney Tower Museum Strategic Plan 2021) is one of the key institutional objectives that drives the Murney Tower Museum's initiatives.¹⁰ Despite the museum's desire to share the site's history with a broader range of audiences, its location in a military fortification prevents many groups (e.g. disabled people, the elderly, and individuals with special needs and conditions) from physically accessing the museum. The physical structure of the Murney Tower poses an inherent challenge to the museum's work in accessibility by limiting its ability to provide access to the museum and its cultural services.

The second point is that in addition to physical challenges, the site's national and international designations create additional constraints to the museum's accessibility objectives. The tower's national and international designations as a heritage site prevent the museum from making modifications to the physical structure (e.g. the addition of ramps and washrooms etc.) to improve the building's physical conditions, and to improve physical access to the site. Taken together, these issues pose fundamental barriers to accessibility, thereby limiting the Murney Tower Museum's ability to improve access to its cultural services,

welcome, and offer cultural experiences to groups such as disabled individuals, the elderly, and those with special needs.

Audio Tour Project: Background and Participatory Approach

The inherently inaccessible nature of the museum building creates an important dilemma which promoted our audio project: how can a museum based in a defensive military fortification which was built to “keep people away” become accessible and bring more people in? As Manager of the Murney Tower Museum, in 2021 I led the development of a new accessibility initiative aimed at addressing this question and improving access to both our physical space and to cultural services. My role involved coordinating the project from inception to implementation. This included stakeholder engagement, research, and content development. Our primary objective was to make the museum more accessible to four key groups – people with visual disabilities, people with physical disabilities, individuals with learning disabilities, and the elderly – who had limited or no access to the museum. My multiple roles as institutional leader, museum scholar, and accessibility advocate inform my assessment of the project's strengths and limitations, and this article reflects a critical yet constructive reflection upon both the participatory and design choices we made throughout the process.

To develop a more effective and useful initiative, we decided to implement a participatory approach and involve disabled people and potential “end users” in all aspects of the development and implementation of the new accessibility initiative. The first step of our participatory approach was to assess the needs and preferences of disabled communities and other individuals who have limited access to our spaces (e.g. people with special needs, people with medical conditions, and the elderly), as well as the general public to determine the right assistive tool and digital technology for their access and enjoyment. For this, we embarked on a journey of community consultation to determine the best assistive tool and digital technology that could be used to accommodate the needs of disabled individuals in Kingston.

First Step: Community Consultation

The first step of our project was community consultation, which began in early 2021. Over the course of five months between January and June 2021, we held five focus group conversations with various internal and external stakeholders (e.g. university students, museum and heritage professionals, disabled communities, the elderly, and family groups) to assess audience needs and preferences. In addition to focus groups, we also launched a comprehensive online survey to assess the needs of a broad range of audiences with different needs and abilities located in Kingston and the surrounding area.

Due to the outbreak of the global pandemic of COVID-19 in March 2020, and owing also to provincial and federal regulations, all focus group conversations were held virtually on Zoom. They were facilitated by the chair of the museum's board, Dr. Tabitha Renaud, and were also assisted by museum staff such as myself and other museum assistants. Each discussion was recorded, transcribed, and later analysed by the staff. The online survey was launched in April 2021 and circulated among Kingston communities and audiences through various methods and platforms including social media channels, professional networks, newspaper ads, and word-of-mouth marketing. The survey was active for two months, during which it was completed by 206 people.

For analytical purposes, we structured both focus groups and surveys around the same themes and qualitative questions. Both included important questions about accessibility and inclusion such as “what should we do to become more accessible?” and “how can we improve your access to the museum and its cultural services?”. They also included a set of questions about user needs and preferences such as “what would improve your access to the Murney Tower?”, and “what would make your museum visit more accessible and enjoyable?”. All data were analysed in the summer and fall of 2022. We used a comparative approach and SWOT analysis, which included the compilation of data relating to four categories: strengths, weaknesses, opportunities, and threats. Subsequent answers and themes were organized around these four categories, which allowed us to develop a strong awareness of the various internal and external factors that impact the museum's accessibility, and to determine the key

areas for improvement and development.

According to the focus group and survey data, the primary weakness of the museum was limited accessibility. The steepness and narrowness of the interior stairs leading to the gun platform and down to the basement were identified as the most common barriers to access by disabled individuals and the elderly (60 percent). The second most common issue identified by the focus group and survey participants (25 percent) was the lack of an onsite washroom or running water in the building. The top two responses to the question of how to improve access to the museum were the implementation of an immersive audio tour (34 percent) and the use of partnerships (25 percent). The vast majority of focus group and survey participants said that having an accessible and engaging audio tour would improve their access to the Murney Tower Museum and to the broader cultural heritage of the city. Others drew attention to community partnerships and collaborations. For instance, 25 percent of focus group and survey participants said that museums located in Kingston should work in close collaboration with disabled communities, as well as local groups and organisations, to create new tools and strategies to improve access to Kingston's heritage sector.

Second Step: Audio Tour Design

The community consultation revealed a need within our community for an engaging heritage audio tour to improve accessibility to the Murney Tower Museum and to the broader cultural heritage of Kingston. As a result we decided to develop an engaging audio tour to improve access to our site and to cultural activities. In order to implement a participatory approach, to involve users in all aspects of the project, and to incorporate the needs and preferences of disabled communities, we approached Two Canes Consulting, a local accessibility consultancy based in Kingston, to provide guidance and lead the design and implementation of the audio tour project. Two Canes Consulting was co-founded by two women living with disabilities; the company has been driven by principles shaped by their own lived experiences, needs, and expertise in improving disabled communities' access to the social and economic spaces of Kingston. From our early discussions with Two Canes Consulting, it became evident that the tour had to be developed professionally in order to offer an engaging cultural experience and to optimize effectiveness and user enjoyment. Based on this feedback, we approached a local audio and video production company called 45 Degrees Latitude to professionally develop the audio tour file. 45 Degrees Latitude oversaw the technical and digital aspects of the project, providing professional narration and recording in the production of the audio tour file.

The second step of the project commenced in the spring of 2022 and was entirely led by the accessibility consultants. Over the course of six months between April and September 2022, Two Canes Consulting conducted three site visits to the museum in order to assess its accessibility and observe its visitors. Two of these visits took place during the museum's operating hours and one of them took place on a day when the museum was closed to the public. This allowed Two Cane Consulting to understand visitor profiles, demographics, and engagements, and to identify accessibility barriers and areas for improvement. In addition, Two Canes Consulting reviewed key institutional documents and files such as our strategic plan, annual reports, guided tour script, and visitor demographics data to gain further insights into the museum's history, priorities, objectives, services, and audiences. To incorporate the needs and preferences of a diverse range of visitors and to create inclusive and multi-sensory visitor experiences, they also held conversations with accessibility experts across different areas of specialization and consulted with the representatives of disabled community groups based in Kingston. Experts consulted during this process included Dawn T. Maracle, an Indigenous activist and educator who offered insights into the knowledge of intersectionality between disability and Indigenous identity, a relaxed performance consultant named Rachel Marks who provided information about the best practice for engaging with audiences on the Autism Spectrum, and Kat Germain, a disability justice activist and advocate for increased diversity, who was consulted on the best practice for creating audio tours and developing audio descriptions.

After six months of research, consultation, analysis, and site visits, Two Canes Consulting developed a full accessibility report, which became the roadmap for the design

and implementation of the audio tour. Drawing upon consultants' lived experiences, research, and discussions with community members and experts, the report included full guidelines for developing an accessible and engaging audio tour for the Murney Tower Museum with best accessibility practices. Reflecting upon the ideal length of the audio tour, the pace of narration, the use of background sounds and music, as well as verbal and navigational descriptions and the production of a sample audio tour script, the report included detailed information about developing and designing an audio tour for the museum for disabled individuals.

Third Step: Implementation

The third and last step of the audio tour project began in November 2022. Over the course of two months, we worked closely with the consultants to revise the museum's existing guided tour script and to adapt it to an audio format. We developed a new audio tour script that included detailed visual cues and descriptions, used communicative language and action-focused words, and provided information about paces and distances between different rooms to meet the needs and preferences of disabled communities. Once the audio tour script was finalized, the local audio tour production company, 45 Degrees Latitude, began creating the audio tour file. Over the course of three months between January and March 2023 they worked in close collaboration with the museum staff and Two Canes Consulting to audition and select professional voice actors, record narrations, and develop the audio tour. During this time, several meetings were held between 45 Degrees Latitude and the museum to ensure best accessibility practices. One of the major points that the consultants raised during this process was the need to divide the narration into several sections, so as to maintain independence and equal opportunity, which are two of the four guiding principles of the Accessibility for Ontarians with Disabilities Act (AODA).¹¹ Based on this 45 Degrees Latitude created four separate files instead of one file with a linear route, each focusing on a different area of the tower (entrance, main level, basement, and top floor). After two years of consultation, design, and implementation, in April 2023 the museum's audio tour was finalized. Later in the fall of 2023 the French version of the tour was developed to address the needs of Francophone communities based in Canada. The audio tour consists of four sections: introduction to the tower, the barracks level, the basement, and the gun platform, each of which provides key information about the history and physical environment of the building. Each section offers detailed navigational instructions and visual cues for disabled communities. While the primary target audience of the audio tour is disabled individuals – especially visually impaired people and those with learning disabilities – and the elderly, the tour also includes sound effects to offer a more engaging visit for the general population, and those who prefer to take information in aurally. The tour is available both onsite at the Murney Tower and online at the museum's website free of charge. Onsite visitors have the option to use their equipment (phone and headphones) or borrow the museum's equipment.

Improving Access to Cultural Spaces: Institutional and Cultural Outcomes

It is the museum's aim to conduct onsite evaluation and focus groups in the next two operating seasons in order to assess the impact of the audio tour and identify the key areas of development and improvement for future accessibility initiatives. While the impact of the audio tour on users is yet to be determined, the project has already created important impacts on the museum and the broader museum and heritage sector in Kingston. Before concluding my discussion, I would like to turn attention to these outcomes so as to underline the significance of community participation and involvement, and to reveal the broader institutional and cultural potentials of participatory accessibility initiatives.

Institutional Outcomes

One of the major outcomes of the participatory accessibility practice has been skill exchange and development and increased institutional awareness of accessibility. The participatory approach allowed museum staff, the board, and volunteers to work closely with Two Canes Consulting and the representatives of disabled communities to develop key skills and competence in

accessibility and digital technologies. As widely emphasized in disability studies, one of the biggest contributions offered by participatory approaches is knowledge development and exchange between “end-users” and academic researchers and practitioners, whereby both parties exchange knowledge and skills, test one other’s knowledge contributions, and act to transform, tools, policies, personal ideas, and project direction when necessary (Seale et al. 2015; Star 2010). The involvement and contribution of our target audiences (individuals with visual and learning disabilities and the elderly) has allowed us to make important changes to the project to maximize its effectiveness and usability. For instance, during the early stages of the audio tour project, we possessed limited knowledge and experience relating to best accessibility practices. As the museum staff and core members of the project, we thought we would be able to adapt the museum’s existing guided tour script into an audio format with minor revisions. However, the consultants’ site visits, accessibility studies, and conversations with the representatives of disabled groups revealed a rather different picture. They brought to our attention how an engaging and effective audio tour, which addresses the needs of people living with disabilities, would contrast with our existing guided tour script. They demonstrated how it would need to include detailed visual cues, physical descriptions, and navigational instructions (e.g. the number of paces, number of steps, and relative size references instead of exact measurements). While we possessed professional knowledge and expertise in different aspects of project development and museum operations, the lack of lived experience and knowledge of accessibility posed a significant limitation to our ability to develop effective and useful assistive technology. This presented an enormous lesson for the museum and its staff – without the community’s involvement and participation, we would not have been able to realize these limitations and develop an audio tour that addresses the needs of audiences.

Why does this matter? As I mentioned earlier, according to the literature on accessibility in museums, the lack of staff knowledge and awareness of the needs, experiences, and preferences of communities living with disabilities represents one of the major issues confronting greater accessibility in museums. The involvement of Two Canes Consulting in the project allowed us to gain direct insights into the lived experiences of disabled people and to familiarize ourselves with the needs of these communities. Thus, the active participation of potential “end users” in all steps of project development and implementation improved our knowledge and awareness of best accessibility practices. At the same time, the community participation and involvement allowed us to develop an audio tour that incorporated the needs of disabled individuals and therefore offered a more effective, useful, and engaging cultural experience.

The participatory approach also had an important impact on the institution’s awareness of accessibility. The accessibility report provided by the consultants became a roadmap for the museum’s future accessibility initiatives. The report identified four areas of improvement for accessibility (e.g. development of a tactile model of the tower, improving lighting conditions of the space, using QR codes, and creating an Access Guide), which continue to guide the museum’s accessibility initiatives. For instance, soon after the completion of the audio tour, the museum started exploring options for new accessibility initiatives including the creation of a tactile model of the tower and an access guide for disabled visitors. Similarly, in 2023 the museum professionally translated the audio tour script to make it available to Francophone communities. These subsequent initiatives were made possible by the foundations laid during the participatory design process – without them, such forward-thinking accessibility strategies would likely not have emerged.

Cultural Outcomes

The museum’s audio tour also produced important outcomes in Kingston’s cultural sector. The city of Kingston represents an important cultural and historical centre known as “Canada’s museum capital”, which is currently home to 24 museums and historic sites.¹² It is also a key tourist attraction which attracts thousands of local and international tourists every year. Despite this however, the Murney Tower Museum is currently the only cultural institution in the city which offers an audio tour to Kingston communities and local and international visitors. From this perspective it can be said that the museum’s audio tour presents an important first

step towards improving disabled communities' access to the broader history and cultural heritage of Kingston, as well as an increasing awareness of their inclusion in cultural spaces.

The development of Kingston's first participatory audio tour with the active participation of disabled individuals, disability experts, museum audiences, and the elderly also paved the way for a growing awareness within Kingston's heritage and museum sector of the needs, lived experiences, and preferences of these groups that remain underrepresented in cultural spaces in Kingston. For example, taking inspiration from our audio tour, other museums and heritage sites in Kingston recently contacted the Murney Tower Museum to gain further insights into this project and started exploring options for developing similar tours to improve accessibility to their respective spaces. In this way, the project has positioned the Murney Tower Museum as a local leader in accessibility innovation. By building a local network of internal stakeholders, focus groups and survey participants, disabled communities, and organisations, the audio tour has improved the access of disabled communities' to Kingston's history and heritage, and created a growing awareness of accessibility in the cultural heritage sector in our city.

Yet the implications of this case extend beyond Kingston, Ontario – and even beyond Canada. This project underscores how museums, including those with limited resources, can embed participatory approaches into their accessibility initiatives to create assistive tools and technologies that reflect the needs and preferences of disabled communities. In doing so, the project contributes to a growing body of literature that emphasizes the transformative potential of participatory design in museums – not only as a tool for greater inclusion and accessibility but also as a means of challenging ableist assumptions embedded in institutional and societal structures (Seale et al. 2015; Carrizosa et al. 2020). The Murney Tower Museum's audio tour project offers a compelling example of how participatory accessibility practices can be implemented across museums of varying sizes, resources, and geographic contexts. Its success lies in its foundation: a participatory model grounded in collaboration and relationship-building.

The outcomes of this project also offer insights into how we understand community participation as a driver of institutional and societal change. While the tangible impacts of this project may be localized, the institutional and cultural outcomes offer a scalable approach to museums around the world. The outcomes of this participatory initiative – increased institutional knowledge, staff awareness, and sector-wide awareness of cultural accessibility – not only provide a practical roadmap for other museums but also a conceptual contribution to how we understand community participation as a form of institutional and societal change. As this example illustrates, accessibility is not a checklist of modifications, but an ongoing, relational process grounded in dialogue, responsiveness, and shared authority – one with the potential to generate lasting institutional and societal change.

Conclusion: Towards Participatory Accessibility in Museums

Participatory accessibility initiatives offer new perspectives that might facilitate greater access to museums. In utilizing a participatory approach, which requires all aspects of work to be 'designed with the needs of participants in mind' through ongoing dialogue, conversation and consultation (Rix et al. 2020: 1034), museums can take important steps toward developing effective tools and strategies which consider the needs and preferences of disabled individuals. As the example of the Murney Tower Museum's audio tour demonstrates, participatory accessibility initiatives offer significant potential for incorporating user needs and preferences, thereby offering a more engaging and effective cultural experience to groups who have traditionally been overlooked by museums. In addition, participatory approaches create an ongoing collaboration and mutuality between the museum, project partners, potential "end-users", and stakeholders, thereby developing staff knowledge and awareness of accessibility, as well as creating important cultural outcomes within the broader heritage and museum sector.

Despite growing recognition of accessibility in museums, there are still many barriers which inhibit full participation in such cultural spaces. Among these are a lack of usable assistive devices and technologies and a lack of institutional knowledge and awareness, which limits the ability of the museum staff to accommodate the needs and preferences of disabled communities. As I have highlighted here, participatory accessibility might offer a

solution to some of the major constraints which prevent disabled individuals from participating in cultural activities. While defining museums as fully accessible and inclusive institutions is not possible at the moment, the decision to include the voices and experiences of disabled communities and to incorporate their needs might allow museums to offer more meaningful and effective experiences that improve their access to cultural spaces. And this represents an important step towards a better and more equal future.

Notes

- 1 There is a close relationship between colonialism and ableism, which refers to the discrimination of and social prejudice against people with disabilities. Colonialism contributes to disability and creates systemic oppression of people living with disabilities. The belief that typical abilities are “superior” reinforces colonial hierarchies by privileging white settler ways of life – rooted in productivity, independence, and control – over other ways of being, such as Indigenous worldviews that value interdependence and relationality. This creates a pattern in which Indigenous and disabled experiences are simultaneously devalued and erased.
- 2 Current debates on accessibility and inclusion in museums build on the insights of new museology, which have not only drawn attention to the social and politicized nature of museums and offered new critical approaches to its study, but have at the same time exposed the colonial and exclusionary practices of museums.
- 3 The Convention describes people with disabilities as those who have long-term physical, mental, intellectual, or sensory impairments which inhibit their full and effective participation in society on an equal basis. It became a benchmark for the promotion and protection of the full and equal enjoyment of all human rights and fundamental freedoms by all people with disabilities, and to promote respect for their inherent dignity. United Nations, ‘Convention on the Rights of Persons with Disabilities, 13 December 2006. <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities#:~:text=The%20purpose%20of%20the%20present,respect%20for%20their%20inherent%20dignity>, accessed 15 April 2023.
- 4 The Universal Declaration of Human Rights by the newly established United Nations in 1948 became a benchmark in the rise of the idea of human rights globally. It paved the way for the global recognition of the idea of human rights as a set of values, norms, and beliefs to which all human beings are inherently entitled. This became important for disability rights and movements. Following these developments, new domestic and international acts, policies, and legislations were introduced to protect and promote the rights of people with disabilities and improve their participation in society, which were reflected in the museum’s world. United Nations, ‘Universal Declaration of Human Rights,’ n.d. <https://www.un.org/en/about-us/universal-declaration-of-human-rights>, accessed 20 May 2023. The Universal Declaration of Human Rights guaranteed the protection of the rights and dignity of people with disabilities and served as a major catalyst in growing global recognition of accessibility for disabled communities in social, economic, and cultural spheres of life.
- 5 For instance, in the context of museums of Canada, awareness of accessibility has grown considerably since 2010 when the government of Canada ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), and then later in 2019 introduced of The *Accessible Canada Act* (ACA), which regulates institutions such as museums to prepare and publish accessibility plans to achieve a “barrier-free” Canada by 2040. For more detail see The Government of Canada, ‘The Summary of Accessible Canada Act,’ n.d. <https://www.canada.ca/en/employment-social-development/programs/accessible-canada/act-summary.html>, accessed 14 March 2024.
- 6 Murney Tower Museum, ‘About Us,’ n.d. <https://www.murneytower.com/>, accessed 20

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- ⁷ Murney Tower Museum, 'Murney Tower,' n.d. <https://www.murneytower.com/murney-tower>, accessed 21 April 2023.
- ⁸ Ibid.
- ⁹ Government of Canada, 'About the Parks Canada Agency,' n.d. <https://parks.canada.ca/agence-agency>, accessed 20 April 2023.
- ¹⁰ Murney Tower museum, '2021-2026 Strategic Plan' 2021. <https://static1.squarespace.com/static/602d209dc643b55054f0eef8/t/6127f713d5dae90d21029d0e/1630009121142/Murney+Tower+Museum+National+Historic+Site+of+Canada+2021-2026+Strategic+Plan.pdf>, accessed 20 April 2023.
- ¹¹ The Accessibility for Ontarians with Disabilities Act was introduced in the province of Ontario in 2005. The legislation applied to all levels of government and both private sectors and non-profit companies and organisations. The Act mandated that organisations must follow standards to become more accessible to people with disabilities. The ultimate goal for the province was to be fully accessible by 2025. See Government of Ontario, 'About Accessibility Laws,' n.d. [https://www.ontario.ca/page/about-accessibility-laws#:~:text=The%20Accessibility%20for%20Ontarians%20with%20Disabilities%20Act%20\(AODA\)%20is%20a,government%20to%20develop%20the%20standards](https://www.ontario.ca/page/about-accessibility-laws#:~:text=The%20Accessibility%20for%20Ontarians%20with%20Disabilities%20Act%20(AODA)%20is%20a,government%20to%20develop%20the%20standards), accessed 1 June 2023.
- ¹² The phrase "Canada's Museum Capital" is derived from the City of Kingston and is widely used within the heritage sector. According to the city, Kingston is currently home to 24 museums and historic sites, as well as three art galleries. These include two city-owned museums and many independent museums operated by local charities, non-profit entities, and universities. City of Kingston, 'Museums,' n.d. <https://www.cityofkingston.ca/explore/culture-history/history/museums>, accessed 22 April 2023.

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