



Improving Accessibility for Mobility-Limited Individuals in Public and Small Businesses

An IA Research Pinnacle Project - By: Zachary Mattace



Research Question: How can common lapses in accessibility be altered universally to serve the majority of small businesses in improving accessibility for individuals with mobility needs?

Purpose: Identify specific areas in public and small businesses that often lead to lapses in accessibility and find ways to improve and adjust them, enhancing accessibility for individuals with mobility limitations.

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Abstract:

The purpose of my study is to identify specific areas in public and small businesses that often lead to lapses in accessibility and to find ways to improve and adjust them, enhancing accessibility for individuals with mobility limitations. After identifying and pinpointing these common accessibility errors, I researched how to improve these areas through ethically sound empathy interviews and additional surveys. My goals and hopes for this study were to create a prototype/checklist that could serve as an outline to universally improve accessibility in small businesses, specifically by focusing on areas where accessibility is often lacking and commonly overlooked, so that I can hopefully improve the overall accessibility for mobility-limited individuals in these specific areas. My chosen research design and method consisted of an ethnographic approach to a mixed-method study leaning towards a qualitative approach. This research method and design allowed me to survey and interview mobility-limited individuals to ultimately determine common lapses in accessibility within small businesses and develop ethical solutions to address the identified problems. By conducting an additional survey, I resurveyed the participants who provided feedback in the previous survey to quantify the viability of the solutions I found for the individual factors identified as hindering accessibility in small businesses, as well as identify possible solutions for a prototype of my checklist. Utilizing my outlined methodology and goals, my research aims to improve the equality of accessibility in small businesses for mobility-limited individuals by implementing a prototype that includes the solutions I discovered. My prototype will incorporate a checklist of affordable solutions or a set of instructions on how a business should implement the suggestions, enabling them to seamlessly implement the recommendations that are outlined for them.

Background - Lit Review:

When researching my topic, I discovered that it has been widely studied, but primarily for reasons other than mine. I found that the only aspects identified in my research that aligned with my topic were related to the various rules and regulations outlined in the ADA (Americans with Disabilities Act), as well as limited information on common lapses in this accessibility. The ADA is well-known for protecting individuals with disabilities in public, yet this is not as straightforward as it appears, as the requirements of the ADA do not apply in all cases. For instance, the ADA protects all programs and services provided by local and state governments. Moreover, ADA requirements do not always apply in the same ways that they do for new buildings as they do for older buildings (Moseley-Braun et al., 1995). For example, the rules of the ADA (Under Title I) do not apply to private businesses with fewer than 15 employees (Gould et al., 2019). That said, the area I researched, in some instances, is influenced by these exceptions. To improve accessibility in small businesses, I researched how business owners could exceed ADA requirements in ways that are not mandated under the ADA to address common lapses within small businesses. I aimed to create a lasting impact on the experiences of mobility-limited individuals regarding accessibility. It is crucial to note that in doing so, some of these small businesses might not have been subject to ADA requirements that would facilitate the necessary modifications.

If I am successful in my research, I will hopefully increase equality in accessibility for mobility-limited individuals and be able to provide insight to improve accessibility for them all over. The impact that my study could have could be astronomical. It could not only physically increase accessibility but also promote acceptance and equality for mobility-limited individuals in the workplace as both employees and customers. This ultimately could improve the lives of families with mobility-limited members as well as the lives of their loved ones. I hope that with this study, I can improve accessibility in small businesses to promote equality and increase acceptance for all members of this community. With this, I hope to be able to give people the ability to worry less about not being able to do something because of their disability. When they go out in public, I want people with mobility limitations to receive the same respect and experience that anyone else would get. They deserve the same respect as any other individual and should be able to live their lives like everyone else.

Works Cited

Gould, R., Harris, S. P., Caldwell, K., & Mullin, C. (2019). Research Brief: Small business and the ADA. ADA National Network.
https://adata.org/research_brief/research-brief-small-business-and-ada
Moseley-Braun, C., Kennedy, E. M., Pell, C., Simon, P., Wellstone, P., & United States Senate. (1995, December 29). SCHOOL FACILITIES - Accessibility for the Disabled Still an Issue. Washington, D.C.; United States General Accounting Office.

Methodology and Processes:

The methodology outlined below aims to enhance accessibility for individuals with mobility limitations and promote their acceptance in society. The following research methods outlined below show how I planned to achieve this goal.

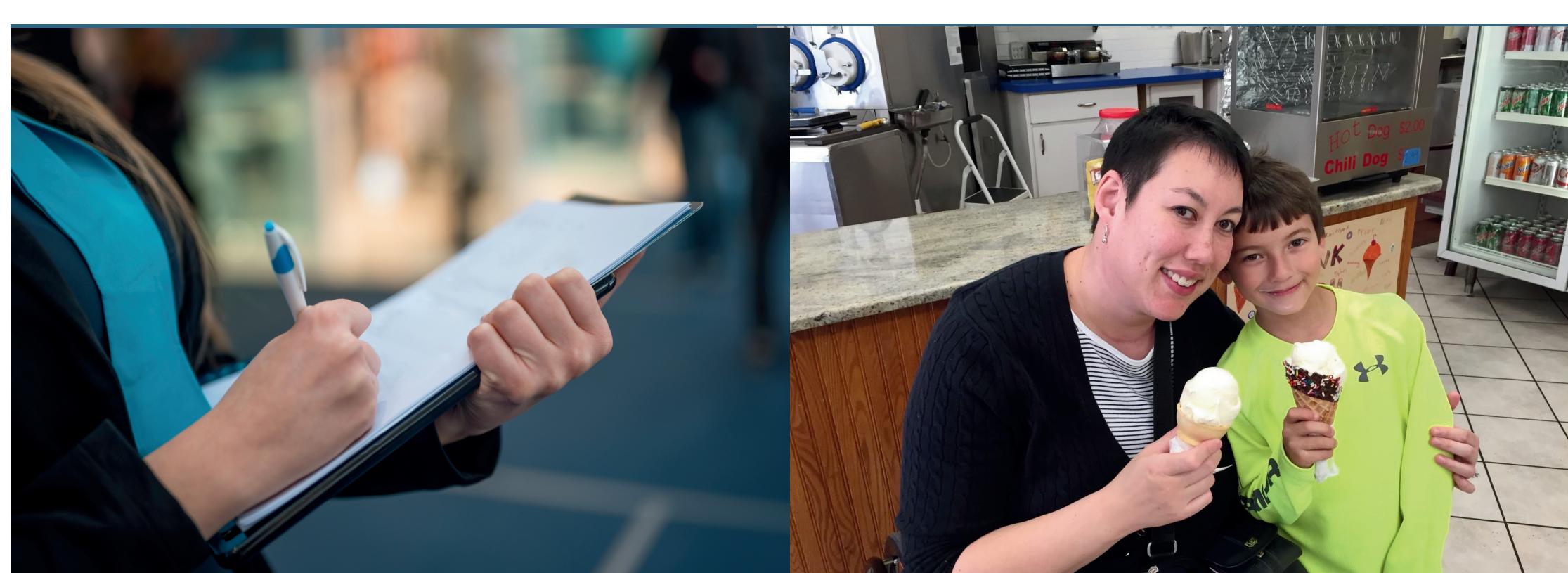
I used an ethnographic approach in a mixed-method study, favoring a qualitative approach. I collected data through multiple surveys, conducted one-on-one interviews with an empathetic approach, and analyzed survey results in combination with interview analysis to create a list of suggestions for small businesses.

Note: Going into this project, I was aware that due to the time constraints of the pinnacle project, a full ethnographic study would not be possible. However, I still incorporated the principles of an ethnographic study into my approach.

For my initial survey, I received just over 10 responses from individuals who had temporarily or permanently been mobility-limited to some degree, causing them to use mobility devices (i.e., Wheelchair-bound, scooter-bound, or using crutches). In this survey, mobility-limited individuals were asked whether they had ever experienced issues with accessibility in public spaces, as well as the common problems they had personally seen, heard of, or experienced regarding accessibility. After receiving these responses, I reached out to many of them to see if they would be willing to participate in interviews to assist me with my research. At this point, I conducted one-on-one interviews to further investigate the common problems experienced by mobility-limited individuals and/or their families. I used an empathetic approach to efficiently identify and resolve the problems highlighted in the first survey to continue and further support my research.

Furthermore, with the knowledge I gained from these interviews and my identification of common lapses in accessibility, I began to consider solutions and ways to address the identified problems that could be utilized in my prototype. I then conducted another survey specifically for individuals who indicated in the previous survey that they had experienced some form of mobility limitations in their lives. This survey included all the identified solutions from the prior survey and interviews at this stage of my research, and participants were asked how helpful each solution would be, as well as what other solutions they may have from the identified lapses in accessibility. With the results of this survey, I quantified the effectiveness of these solutions based on the responses received.

With all this data, I began to work on creating a checklist for ways small businesses can semi-universally improve their accessibility to the public, rather inexpensively. Additionally, I used design thinking to try to solve these problems in an inexpensive and feasible manner that I can recommend to small businesses. That said, I did not need to purchase anything other than the minimal materials required to present my project at the IA showcase. After completing the research phase of my project, I began creating a rough draft of my prototype and a checklist for implementation for small businesses. Finally, I uploaded all the data analysis and materials from my project into my digital portfolio, which is linked to the QR code at the top.



Acknowledgements:

I would like to thank everyone who filled out and shared my survey, as well as everyone I interviewed. Additionally, a special thanks to my 1st-grade teacher for being my inspiration and a fantastic resource throughout my research project. I couldn't have made this project possible without them!

Materials:

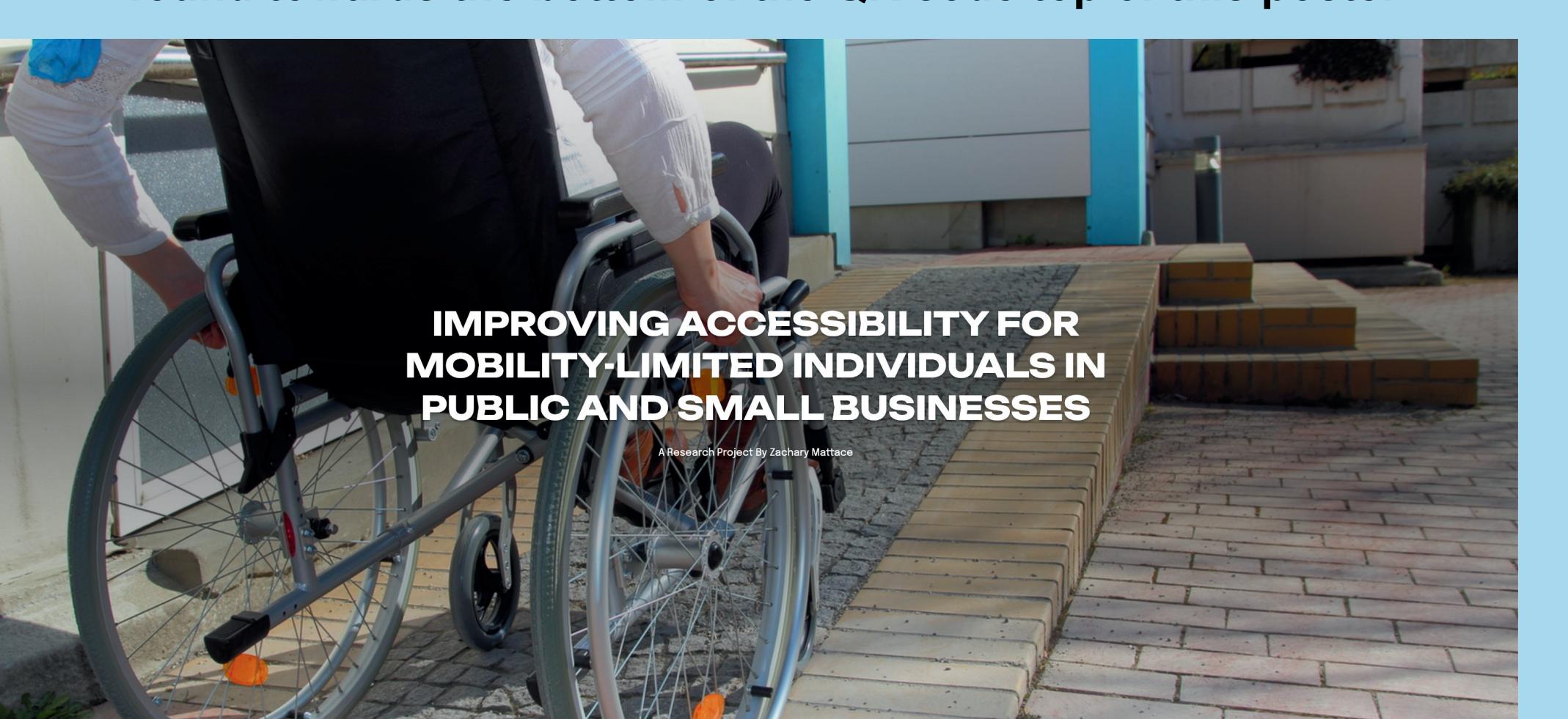
Throughout my research project, I utilized Microsoft Forms, Google Forms, Microsoft Excel, Microsoft Word, and Canva to distribute surveys and conduct data analysis. All collected data was thoughtfully organized into an Excel spreadsheet that housed the results from both surveys, as well as summaries from interviews and individual survey responses. I used my password-protected OneDrive to store all of these documents and any recordings of interviews. In the continuation of my project, I plan to utilize the data collected to create a checklist that small businesses can use to increase their accessibility, thus enhancing my research findings in a way that is beneficial to my target audience.



Findings / Results:

Through multiple stages of data collection and analysis involving the surveying and interviewing of individuals, I gained qualitative data that highlights the most common identified lapses in accessibility for small businesses, particularly for mobility-limited individuals. My interviews revealed the everyday struggles that mobility-limited individuals face when navigating their daily lives. Upon completing all data collection, I was able to identify potential solutions for the lapses in accessibility that were identified in the surveys. With this data, I created a checklist that small businesses can use to assess the accessibility of their business as it pertains to the results of my research. Below, you can see the checklist I created along with the results and data analysis from the surveys and interviews conducted throughout my project.

Links to both the Surveys and Prototyped Checklist can be found towards the bottom of the QR code top of this poster.



Link to Digital Portfolio (QR CODE AT TOP)

<https://newexpress.adobe.com/webpage/GwKr83H6teDZ1>

Link to Excel Sheet With Results

https://fultonk12-my.sharepoint.com/:x/g/personal/2000051928_fostu_0rg/EeAnls46ps1AjqkCzpbWln4B3KXg78we1QCUOi-3RX1V2w?e=52sdEt

Data:

Over the course of my project, I collected data by distributing two surveys and conducting interviews to better understand the issues that mobility-limited individuals often face when dealing with accessibility in small businesses. The first survey asked individuals about the issues they encounter regarding their accessibility, helping me identify the most common problems and find solutions from there. After analyzing the data from the first survey, I interviewed five of the respondents to gain deeper insights into their experiences and the solutions they envisioned. Following that, I compiled a list of the proposed solutions and asked the respondents from the first survey to evaluate the viability of these solutions and suggest any iterations. After collecting this last round of data, I analyzed the suggestions, and in the spreadsheet I created from all the data collected, I determined what to include in my final prototype.

Hypothesis / Criteria for Success:

My hypothesis is that lapses in accessibility within small businesses can lead to unsafe and undesirable customer experiences for individuals with mobility limitations. I anticipate that creating a checklist for small businesses with practical, cost-effective suggestions will make them more likely to implement changes that enhance their accessibility for mobility-limited individuals. To test this hypothesis, I interviewed many mobility-limited individuals and surveyed others to identify common lapses in accessibility and explore how these issues could be resolved. With the information gained from these interactions, I will create a checklist (prototype) that can be sent to small businesses so they can evaluate the accessibility of their business. I hope that this checklist, once sent out to businesses, can be used to improve accessibility for mobility-limited individuals in the community.

Conclusion:

From the surveys and interviews conducted, I determined that there are significant lapses in accessibility within small businesses that need to be addressed. Additionally, after interviewing and surveying several mobility-limited individuals, I found that a business's ability to accommodate them and suggest improvements can influence their likelihood of returning and recommending it to others. Furthermore, I discovered that many challenges they face are often due to employee and individual awareness rather than physical obstacles. However, surveys revealed that a number of physical barriers still exist that limit accessibility for mobility-limited individuals. These specific issues can be found in my Digital Portfolio linked in the above QR code.

Next Steps:

My next steps for this project would be to get actual feedback from small businesses regarding the checklist I created. Upon receiving this feedback, I would then finalize the prototype/checklist and send it out to as many small businesses as possible. This would hopefully increase the accessibility for mobility-limited individuals who visit these small businesses in the future.