



The Online Apparel Shopping Experience of Blind Consumers

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Introduction. Online shopping is about experiences (Rose et al., 2012; Rose et al., 2011) which industry and academic literature now refer to as customer experience or user experience. Customer experience refers to the overall impression a customer receives from interacting with a company's touchpoints which include in-store, online website, products, customer service, and more according to the consumer behavior literature (Varshneya & Das, 2017). User experience focuses on the design of the experience itself, specifically on websites, computer, and mobile applications according to the computer science literature (Ritonummi, 2020; Sohaib et al., 2011). H&M, J. Crew, Urban Outfitters, Vera Wang, and several other apparel retailers were sued in the past because their ecommerce platform failed compliance due to navigation menus not granting equal opportunities to those with physical or mental impairments. This violated the Americans with Disabilities Act. The overall purpose of this study is to simultaneously address the online shopping customer experience and user experience of people with total blindness. The exploratory research question and sub-questions that guided the study are as follows: (1) What are the online apparel retail shopping experiences of individuals with total blindness? (1a) What are the unique experiences of blind consumers shopping online for apparel? (1b) What challenges do blind consumers experience when shopping online for apparel?

Methodology. Eleven semi-structured interviews were employed to understand the current online apparel shopping experience of totally blind consumers. I read the interview transcripts highlighting in different colors information about the data based on common ideas and experiences that emerged. Inductive coding, or highlighting, took place within interviews and across interviews. I compared and contrasted the groups of data retrieved from categorization to identify general conceptual classes. As a result of the analysis two concepts or themes were identified and used to structure the interpretation: From Our Heart to Yours and Behind the Scenes.

Results. From Our Heart to Yours participants shared what was on their heart regarding their online shopping experience for clothes, speaking to our heart and revealing the impact

website's attributes have on online shoppers with total blindness. Website features and challenges that assisted or hindered the online shopping experience for participants appeared within descriptions, reviews, live chats, return policies and the selection of words chosen to communicate to customers. Furthermore, external resources such as support from family, friends and third-party agents contributed to the kind of experience a participant would have. Behind the Scenes highlight interactions with the website infrastructure from finding the right browser that pairs well with their screen reader, to retrieving and correctly entering coupon codes during the checkout process, participants highlighted the opportunities for improvements in order for the totally blind community to have a positive, enjoyable online shopping experience.

Discussion and Implications. The findings from this study are similar to challenges addressed in previous studies. Like Liu et al.'s (2019) finding, customer service does not usually provide visually impaired customers with effective responses. A participant, Vickie, shared her experience when she reaches out to customer service for online shopping assistance:

Vickie: I wish companies were more accommodating when you're shopping online. Sometimes you call the customer service number to try to get a better description of something but when I've done that I've usually been blown off with "It's a top that has red on it" or "Don't you have someone who can describe it for you". Neither of which are helpful.

The challenge of recognizing and choosing colors of clothing was also mentioned in Kim et al. (2019) as the authors worked on a mobile application that would assist people with vision impairment shopping for clothing online. Another participant, Dylan, explained how confusing choosing a color can be for her:

Dylan: One time I was buying a pair of pajamas and one pair was purple and one pair was plum and plum is a very good description. There's nothing wrong with plum but when you put it right next to purple does that mean it's like lavender purple? Does that mean it's royal purple? I just don't know, I mean it even could be a dark purple but isn't quite plum. I mean there's just a lot of possibilities. The worst Amazon does, another time there was gray one and gray two was color options.

In the past, authors provided recommendations for alternative information for visual cues, navigation, and search functions (Buzzi et al., 2009; Francis et al., 2013; Kim, 2018; McGookin et al., 2008; Sohaib et al., 2011) but the findings in this study reveal that those same areas remain a challenge for today's visually impaired customers. Participants Teresa and Allen discussed

their experiences with a lack of alternative text to describe images and missing navigation cues that relate to product variant choice selection:

Teresa: "I love Charlie Brown. They have a Charlie Brown sweatshirt and a Charlie Brown t-shirt right now. And it says all the peanuts gang, you know from Charlie Brown and so I was like oh, that's cute, I want it. Do I know exactly what they're doing? No. Had it been described to me? No.

Allen: I've noticed with these online shopping platforms, you can go and choose um like the size that you need but as soon as you go to choose the color that you want what will happen sometimes is the actual site will divert back to the only colors they have in the size you're looking for and it doesn't announce that to you. So I have to be very careful when I go and look at my checkout cart to make sure that they didn't automatically make that switch for me because it doesn't give you any indication of that.

Peter Morville's (2004) UX honeycomb was used to help summarize the integration of customer and user experience to discuss the totally blind participants online shopping experience by the following seven facets: useful, valuable, credible, desirable, findable, usable, and accessible. An overview of future research study suggestions includes the following: (1) conduct research from a multidisciplinary approach, (2) market research, data collection and user testing sample should be representative of all online users, (3) conduct further qualitative and quantitative research on how totally blind customers navigate the website differently from sighter customers taking note of the device, browser and screen reader technology used and (4) quantitative research could measure the impact of surface elements on disabled customer's emotions. Industry recommendations to improve the totally blind customer's online shopping experience were organized by Jesse James Garrett's (2003) five elements of user experience used to address experience layer by layer: strategy, scope, structure, skeleton, and surface. An overview of those recommendations is as followed: (1) user experience, customer experience and market researchers in industry should conduct their research based on a representative sample of all users within their target audience or employ accessibility consultants if necessary and (2) ensure components of a website such as buttons, images, text, product variants, and filters, are useful, accessible, valuable, desirable, usable, and findable.

References

- Buzzi, M. C., Buzzi, M., Leporini, B., & Akhter, F. (2009). User trust in ecommerce services: Perception via screen reader. 2009 International Conference on New Trends in Information and Service Science, 1166–1171.
- Francis, H., Al-Jumeily, D., & Lund, T. O. (2013). A framework to support e-commerce development for people with visual impairment. 2013 Sixth International Conference on Developments in ESystems Engineering, 335–341.
- Garrett, J. J. (2000). The Elements of User Experience.
<http://www.jjg.net/elements/pdf/elements.pdf>
- Kim, H. N. (2018). User experience of mainstream and assistive technologies for people with visual impairments. *Technology & Disability*, 30(3), 127–133.
- Kim, J., Cho, Y. J., Choi, W., Shin, J., Tsyrenzhapova, D., Kim, J. Y., & Kang, Y. A. (2019). BEYES: A shopping solution for independent clothing experiences of the visually impaired. Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems, 1–6.
- Liu, G., Ding, X., Yu, C., Gao, L., Chi, X., & Shi, Y. (2019). “I bought this for me to look more ordinary”: A study of blind people doing online shopping. Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, 1–11.
- McGookin, D., Brewster, S., & Jiang, W. (2008). Investigating touchscreen accessibility for people with visual impairments. Proceedings of the 5th Nordic Conference on Human-Computer Interaction: Building Bridges, 298–307.
- Morville, P. (2004, June 21). User experience design. Semantic Studios.
- Ritonummi, S. (2020). User Experience on an ecommerce website—A case study. Jyväskylä University School of Business and Economics.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308–322.

Rose, S., Hair, N., & Clark, M. (2011). Online customer experience: A review of the business-to-consumer online purchase context. *International Journal of Management Reviews*, 13(1), 24–39.

Sohaib, O., Hussain, W., & Badini, M. K. (2011). User experience (UX) and the web accessibility standards. *International Journal of Computer Science*, 8(3), 584–587.

Varshneya, G., & Das, G. (2017). Experiential value: Multi-item scale development and validation. *Journal of Retailing and Consumer Services*, 34, 48–57.