Wayfinding for Visually Impaired Pedestrians

Proposal

Movement from an origin to a destination within a city is an inevitable activity for all inhabitants, especially for those who are commuters. For the visually impaired, this movement task is a difficult activity, given inability to use visual properties and hence reliance on hearing and smell for navigation. This study seeks to determine the type of information that is acquired by the visually impaired to navigate from an origin to a destination. In essence the study is attempting to determine the wayfinding process in familiar environments among the visually impaired. This study underscores the relationships between visual impairment—being either blind or low-vision and reference points the target group utilizes in comparison with the visual cues used by people with sight. The sense of hearing was the principal sense they utilized and this is in contrast to our hypothesis that the sense of touch would be predominantly used. Further, smell emanating from particular shops such as the bakery and flower shop proved very practical in guiding them to understand their current position in relation to other elements in the area. The wayfinding aids for the visually impaired were based primarily on reference points that one can hear such as the cluster of people at a mall, and in some cases smell such as that emanating from a bakery. Our findings suggest enhancements to the quality of life of the target group in the selected study area regarding reference points they gain information from to continue their walking and wayfinding.

This paper serves to assist those who design aids for the visually impaired to understand their behavior in the simple case of a familiar environment. They can plan for methods to be utilized that make use of the dominant sense of hearing to assist the visually impaired in their daily trips and in experiencing new environments. Future study will need to focus on diverse tools the target group could use to support their movement in unfamiliar settings. More research is required on signage—size and characters—and considerations for the color-blind and various low-vision users. Urban Planners and designers should consider the needs of the target group in performing not only daily trips but also exploring new settings through facilitating walkways free from unexpected obstacles or barrels. Designers should consider the size and color of the signage for low-vision or color blind pedestrians.

Accessibility Summit Theme

Accessible communities

What length of time is required for your presentation? 20 minutes

Questions

1. What are the characteristics of these reference points such as the type and frequency of usage of them among the blind and low-vision users separately?
2. What sort of visual cues, if any, do low-vision students use? What are the other kinds of aids they may use?
3. How can street pattern influence the wayfinding process? And finally, how do blind students differ from low-vision students in their wayfinding process?

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This session would be interest to meeting participans, because we could discuss the needs of the target group in performing not only daily trips but also exploring new settings through
facilitating walkways free from unexpected obstacles or barrels. We should consider the size and color of the signage for low-vision or color blind pedestrians.

**What best describes the session's learning approach?** Problem Solving

- Future study will need to focus on diverse tools the target group could use to support their movement in unfamiliar settings. Urban Planners and designers should do more research on signage – size and characters – and considerations for the color-blind and various low-vision users.
- Our findings suggest enhancements to the quality of life of the target group in the selected study area regarding reference points they gain information from to continue their walking and wayfinding. One immediate outcome is the need to insulate walkways with green facilities to reduce the problem of noise. Sound-proof green facilities allow the target group to be relaxed as well as to feel safe while concentrating on their walking. In terms of street pattern, the target group indicated they were afraid of exploring curvilinear paths even though some of them, particularly among the low-vision student respondents- were inclined to experience different paths. Based on this finding, one suggestion is for city planning officials to avoid designing complicated curvilinear paths, especially in areas which are likely to be used by the visually impaired.

**What is the ideal subject matter knowledge level for this session topic?** Intermediate

**How will you engage the audience?** Case Study Exercise