

Engaging Youth to Develop Product Visual Prototypes for Travelers with Physical Challenges

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Introduction

- Critical Disability Theory has proposed disabilities do not stem from variations in people's abilities but rather from barriers within environments.
- Travelers with physical challenges may be aided in wayfinding, response to alerts and visual tasks via barrier-removing environmental design and assistive devices.

Purpose

- The objective of the study was to raise the awareness of the challenges some travelers face due to disabilities, developing product visual prototypes for travelers with physical challenges, exploring generated prototypes' commercial potential, and evaluating camp procedures and successes.

Methods

- An externally funded grant allowed interdisciplinary faculty members to create a special on-campus summer camp to raise youth's awareness of disabling environments and to solicit innovative design solutions.
- Participants of the summer camp interviewed community members with various special needs; evaluated existing products targeted towards persons with special needs; attended interactive demonstrations by product experts; and participated in intensive field trips while utilizing wheelchairs, canes, fogged glasses, gloves, walkers, etc.
- The youth developed journals, drawings and visual prototypes.
- A focus group of community experts was convened to examine the camp's activities and schedule, and the campers' outputs were displayed in a comprehensive exhibit.

- The focus group discussed these products' commercial potential, evaluated youth's interaction with community members, and provided input on the summer camp procedures and suggestions for future camps.

Results

- The resulting three prototypes included Light emitting diode (LED) luggage tags to improve luggage identification by persons with low vision; a container for a "bed shaker" device to wake a person with hearing impairment; and a "map glove" with lights in the fingertips to aid visibility.
- Focus group panelists perceived the youth had empathy for travelers, and cared about their design solutions. Panelist indicated the LED luggage tag had the most commercial potential. They suggested that if the camp grows, other considerations should include new technology, more community partnerships, and allowance for younger age participants.
- This project sought to solve the challenges some travelers face due to disabilities and thereby contribute to the public good. The summer camp linked the university and community through hands-on, experiential education that was transformative.

Conclusions

- This project explored and supported the needs of individuals with physical challenges in tourism-related endeavors.
- This project is expected to positively influence awareness of and design considerations for persons with physical challenges in the near term and in the immediate future.

