Stepping Stones to Academia: Developing an Occupation-Based Specialty within Assistive Technology and Accessible Design

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Project Description & Sites

The purpose of the doctoral capstone project was to explore the role of occupational therapy within assistive technology and accessible design. The main focus of the capstone project was a total of eight subprojects: Two entrepreneurial programs (funded by the National Science Foundation and the University of Pittsburgh), submission of an oral conference presentation, lecture and grading in a graduate course, and participation as a core member in the submission of four grant proposals. Within one of the subprojects, I led a team to conduct 71 interviews with the target population successfully. Overall, I was successful in building upon my research skills within higher education by participating as a core team member at the Rehabilitation Research Design and Disability Center at the University of Wisconsin-Milwaukee. Through the project's execution, I yielded the acquisition of research and academic skills to prepare for the next steps in pursuing higher education.
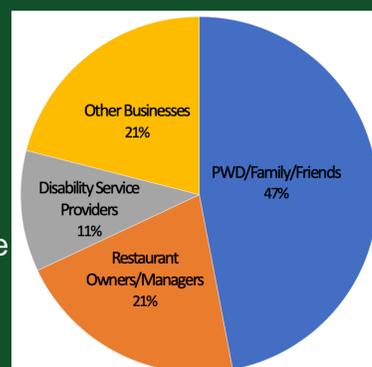
Needs Assessment | Literature Review

A needs assessment was performed to explore people with disabilities (PWD), building owners', and employees' perceptions of acquiring building accessibility information. The current needs assessment will address AccessRatings for Buildings (ARB), an app created by Dr. Roger O. Smith at the Rehabilitation Research Disability and Design Center at the University of Wisconsin-Milwaukee. ARB is a complex human-technology system developed by Dr. Roger O. Smith at the Rehabilitation Research Design and Disability Center at the University of Wisconsin-Milwaukee. ARB consists of two major apps, AccessPlace and AccessTools. The purpose of the apps is to disseminate accessibility information of buildings to persons with PWD. The information source aims to provide support for PWD participation within the community.

The needs assessment sought to test the following hypotheses:

1) Individuals with disabilities would find restaurant accessibility information valuable prior to visiting a restaurant, and 2) Restaurant owners and employees would be interested in accessibility information in order to engage in a new customer demographic.

A total of 71 conducted interviews were completed. Findings from the interviews suggest the increased prevalence of PWD constitutes the need for readily available building accessibility information. Environmental barriers PWD experience impedes daily participation within the community. Results of the study indicate PWD would find building accessibility information of value and restaurant employees who interacted with customers regularly were more inclined to receive accessibility information. Reviewal of the literature revealed PWD represents the third largest market behind baby boomers and the mature market. The comparison of the frequency PWD go out to eat and the average American frequency, poses the concern that PWD have the income to go out to eat. However, due to lack of information they choose to visit the same restaurants or opt out altogether. A diverse array of options and locations will provide opportunities for social engagement to improve PWD quality of life. Current evidence supports PWD are in need for accessibility information. More research is needed with the desired population to confirm results of the present study.

- Other Businesses 21%
- PWD/Family/Friends 47%
- Disability Service Providers 11%
- Restaurant Owners/Managers 21%

Second Literature Review: Faculty Need in Occupational Therapy

A second literature review was conducted to gain a better understanding of occupational therapy in higher education. The literature review helped the student understand current academia trends and the need for occupational therapists in academia.

- The occupational therapy profession has a career outlook estimated growth of 18% (3x the average rate).
- The increased job demands have resulted in exponential 88% increase of programs since 2007.
- A 2014 study revealed a faculty vacancy rate, at a staggering 23%, with over half of the vacancy rate occurring in doctoral-degree programs. Since 2014, the vacancy rate has increased by 3%.
- The faculty vacancy rate is projected to intensify, with a predicted 35% projected to retire by 2024.
- The 2018 ACOTE Standards mandate programs to have specific faculty education requirements to maintain accreditation (e.g., 50 % post professional degree for OTD programs).

Findings: The growth of the occupational therapy profession will not be maintainable without an increase in occupational therapy faculty.

Mission & Vision Statements

Mission Statement: To develop research skills within higher education specific to the specialty area of assistive technology.

Vision Statement: To serve as a leader in higher education committed to improving individuals' quality of life through the use of assistive technology.

Deliverables

- ❖ IMPACT Final Presentation.
- ❖ Summary of findings from conducted interviews.
- ❖ Two grant proposal submissions.
- ❖ Document of a scientific case report.
- ❖ Presentation to graduate course.
- ❖ Contributed to the grading of final project presentations in a graduate course.
- ❖ AOTA Education Summit proposal.
- ❖ Presentation to Huntington University's Assistive Technology club.
- ❖ Taxonomy for functional impairments related to novel AT device.

Project Completion and Outcomes

1. Participated as the entrepreneurial lead in the IMPACT Start Up Program.
2. Successfully led a team to conduct 71 interviews with the target consumer.
3. Participated as a core team member on a research team and contributed to the submission of four grant proposals.
4. Advocated the need for international assistive technology programs by articulating the outcomes of a specific program.

AR-B
Access Ratings for Buildings

Future Implications for OT

- ❖ Occupational therapy involvement in higher education.
- ❖ Future occupational therapy involvement in R&D.
- ❖ Need for public building accessibility information to PWD.
- ❖ Advocate the global need for assistive technology.
- ❖ Increased involvement of OT programs to shape students into future researchers and academicians.

KEY REFERENCES
*Full reference list and image reference list available upon request.