Working on an Interdisciplinary Team to Address the Transportation Experiences of Environmental Justice Populations

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Abstract
This poster reports on student experiences working as part of an interdisciplinary (ID) team to design a mobile-device app, MyAmble, which qualitatively and quantitatively captures data regarding the impact of transportation disadvantage on the lived experiences of two environmental-justice (EJ) populations: older adults and mothers experiencing homelessness. A team of 6 students from Civil Engineering (CE), Social Work (SW), and Computer Science (CS) collaborated on the process of storyboarding the app development and then building it. Findings from this case study have important implications for interdisciplinary research, including challenging students and faculty to expand their knowledge base beyond the traditional confines of their respective disciplines, encouraging critical and creative thinking skills, and harnessing technology for the greater social good.

Introduction
This case study describes an innovative interdisciplinary collaboration among SW and engineering faculty and students. SW and Engineering may appear to be an unlikely partnership, but they share a mutual interest in improving the lives of others (Gilbert, 2014). Students assumed active roles in the development of the app, including design, layout, and content. SW team members developed the interview questions for study participants along the domains of social exclusion; CE team members embedded these ideas into an app flowchart (see below).

MyAmble Flowchart

Team Organization and Assignments
The team began meeting weekly in Aug. 2016, led by the Principal Investigator (PI) and co-PIs in SW and CE. CE and SW members collaborated on storyboarding the initial development of the app, including design, layout, and content. SW team members developed the interview questions for study participants along the domains of social exclusion; CE team members embedded these ideas into an app flowchart (see below).

Discussion

MyAmble Flowchart

Conclusions
SW and CE team members participating in this project were challenged to explore new methodologies and paradigms for research, working towards improving the lives for transportation disadvantaged older adults and mothers experiencing homelessness in Northeast Texas. Ongoing weekly student GRA work-meetings served as best practice while developing the mobile device app, and served as an opportunity to collaborate for preparation in ID work in our growing fields of profession, respectively. ID work allows us to meet students in varying disciplines, and has contributed to an expansion of our areas of interest and knowledge base. Finally, ID work allows us students to understand many ways of tackling issues of social justice, where working independently can present a barrier to helping EJ populations.

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References

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