Reflections on Design Methods for Underserved Communities

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Abstract

The goal of this workshop is to facilitate a discussion around the ways in which research and design methods can be better tailored to support and engage underserved communities. We aim to create a publicly accessible repository of tools to support research and design efforts with underserved communities and to facilitate critical conversations about appropriate methods and solutions in this space. At the workshop, participants will collaborate with one another to explore their own as well as past, present, and future research and design initiatives with underserved communities; discuss challenges and lessons learned from using methods to facilitate technological development and creation among such populations; and brainstorm methods and solutions to address these challenges. Discussion and ideas generated from this workshop will be archived online and made available to the larger research community.

Author Keywords

Research methods; underserved communities.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Misc.

Introduction

A plethora of HCI studies have emerged to account for the experiences and needs of low-income, gendered, ethnic, and racialized populations, including the unique needs of people with disabilities [1, 2, 4, 3, 6, 5, 7, 8, 10]. This has led to the use of participatory design methods, which engage these underserved users as equal partners in the design process [11]. However, we often find that traditional HCI design methods (e.g., focus groups, user testing, and surveys), and even those participatory in nature, at times do not match the needs and concerns of our participants and lead to questions regarding the effectiveness of these methods among certain populations. For example, these methods may assume an unproblematic relationship between the researcher and participants, particularly in communities that are systematically marginalized in technology design [13].

The primary goal of this workshop is to identify best practices and design methods that support and facilitate successful approaches to designing with underserved populations. Specifically, workshop participants will share their experiences and challenges when using HCI design methods with underserved populations. This workshop is timely given the social injustices that have surfaced as a result of technologies that appear to facilitate the needs of relatively affluent populations with very limited to no consideration of the needs of the underserved. In addition, there has been an increased reliance of "unintentionally biased" and discriminatory algorithms that support much of the technology that we use today [9, 12].

Workshop Goals and Themes

The goals and themes of our workshop are as follows:

- To explore how, when, and under what conditions design approaches can be used among underserved communities to support inclusive technology design.

- To collect, document, and analyze both successful and unsuccessful experiences with using design methods in underserved communities.

- To collaboratively develop new methods and guidelines for the design process used among underserved populations.

Workshop Logistics

We propose a one-day workshop, where we will recruit 15-20 researchers whose work focuses on addressing the needs of underserved populations. Specifically, we will recruit heavily from ICTD, HCI4D, and reach out to those researchers investigating and designing for underserved populations in developed regions. We will ask potential workshop participants to submit a 2-page position paper describing the populations with whom they have experience or intentions of working, a summary of their research questions, the methods that they have used, and results of their formative work if applicable. Interested participants should also note existing tensions that they see within the communities and as a result of their presence in these communities, proposed technologies created or explored within these communities and reflections about the methods used. Finally, authors of accepted papers will be expected to review accepted papers prior to attending the workshop to identify reoccurring themes.

Workshop Activities and Outcomes

Workshop activities include collecting, documenting, and analyzing all participants successful and unsuccessful experiences with using design methods in underserved communities. We will use the results to collaboratively develop new methods and guidelines for the design process.

Anticipated outcomes of this workshop include a publicly accessible repository of tools to support research and design efforts with underserved communities; documentation and results of critical conversations around past experiences with HCI methods and solutions to use in this space. This could translate into a rubric or set of principles that can be used by researchers, practitioners and/or designers working with or for underserved communities.

Organizers

Tawanna Dillahunt is an Assistant Professor at the University of Michigan's School of Information and holds a courtesy appointment with the Electrical Engineering and Computer Science Department. Dr. Dillahunt leads the Social Innovations Group at the School of Information and in collaboration with her colleagues uses participatory and human-centered design approaches and research from multiple disciplines (psychology, ubiquitous computing, law, sociology, economics, design, and health) to explore the ways in which technology can be used to solve real-world problems such as unemployment and climate change, particularly among disadvantaged communities.

Sheena Erete is an assistant professor in the College of Computing and Digital Media at DePaul University in Chicago, IL where she co-directs the Technology for Social Good Research and Design Lab. Dr. Erete's research focusing on understanding social issues faced by those in marginalized communities by considering social, cultural, and economic contexts and designing socio-culturally appropriate technologies that helps address such issues.

Her current projects explore how to design technologies that address social issues such as crime, education, political efficacy, and economic development.

Roxana Galusca is a Project Manager and UX specialist at Sassafras Tech Collective, a tech cooperative in Ann Arbor, MI where she uses a holistic view of the planning and design processes, from the initial stages of product planning and creative exploration to the final phase of product implementation. Dr. Galusca comes to the field of UX with a PhD in Media and Cultural Studies and has several years of experience in mentoring, research, and team management.

Aarti Israni is a user experience researcher, designer, and problem-solver and has a passion for conducting and drawing insights from user research and communicating rich stories about the user experience based on data gathered. Aarti has a personal interest in using user-centered methods to address social challenges and help users from underserved communities.

Denise Nacu is a designer and researcher working at the intersection of technology, learning, and design. Dr. Nacu co-directs the Technology for Social Good Research and Design Lab with Dr. Sheena Erete and works with researchers, designers, and educators in the Digital Youth Network. Dr. Nacu teaches user-centered design, prototyping, and evaluation methods in the Interaction and Social Media program at the College of Computing and Digital Media School of Design at DePaul University. Previously, she was Director of Design at the University of Chicago Urban Education Institute where she designed and developed tools for education.

Phoebe Sengers is a faculty member in Information Science and Science & Technology Studies at Cornell, where she leads the Culturally Embedded Computing group. Dr. Sengers is a computer scientist and a cultural theorist, working primarily in Human-Computer Interaction and cultural studies of technology. She develops culturally embedded systems; i.e., new kinds of interactive technology that respond to and encourage critical reflection on the place of technology in culture.

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