Hidden Margins: Developing New Ways of Designing for, and with, Older Adult Immigrants

Abstract
Older adult immigrants living in intergenerational families struggle to establish meaningful ways to connect with their grandchildren. In our research, we design technology mediated support for fostering this social connection, which we illustrate through one of our works in progress. We argue that there is a need for new ways of understanding populations at the intersection who fit neither the typical immigrant nor typical older adult profile. Our methodological approaches, which include community-driven participatory research that draws on frameworks of indigenous ways of knowing, will yield new models of cultural learning for better understanding such marginalized populations.

Older adult immigrants in Canada
A large number of immigrants move to Canada every year, with currently 20% of population being born outside the country [2]. While newcomers are supported by several community or (free) government programs, these overlook the needs of 1 in 5 immigrants -- those over the age of 65, who immigrate mostly for family reunification [5]. Lacking an urgent need for education or employment contributes to the unique challenges this group faces in adapting to a new culture, in contrast to younger immigrants. Less visible in the public space, older immigrants are often left out from efforts to design resources that support the acculturation process. Thus, older adult immigrants disproportionately face barriers when adjusting to a new culture.

In our research, we design for older adults in intergenerational immigrant families. Though many older adults migrate with the intention of maintaining social connection with their family, they face considerable barriers when they try to foster relationships with their grandchildren and are at high risk of social isolation [1, 10]. This social isolation is the result of both language and cultural barriers. Younger immigrant children learn language faster than their grandparents, who may not have as urgent a need for acquiring a new language [8]. Additionally, grandchildren living in Canada have grown up immersed in a different culture than their grandparents. Both
these barriers result in inter-generational divides, with grandparents feeling a loss of autonomy and uncertainty about their contributions to their family [9].

Though older immigrants face marginalization in many forms (limited social connections, access to formal support), there are opportunities for overcoming this. For example, immigrants are more active users of mobile technology than the general population, using it to stay in touch with geographically separated friends and family [12]. Additionally, grandchildren possess the cultural knowledge their grandparents require, although they may not know how to transfer it. Our work focuses on leveraging these two resources to design tools that empower grandparents to connect more meaningfully with their grandchildren.

**Designing for cultural exchange: Work in progress**

A major theme in our work is facilitating two-way exchange between grandparents and grandchildren. Immigrant grandparents express strong desire to pass down knowledge of their heritage and their stories [4]. However, grandchildren may not fully understand these stories due to language and culture differences. In this project, we aim to design a tool that helps create a shared family narrative around these stories by recording and preserving them, even when language and culture barriers exist. This project provides an illustrative example of the approaches we use when working with marginalized populations.

We begin by understanding how immigrant grandparent and grandchildren currently engage in storytelling. We will visit families in their homes to observe this process through Contextual Inquiry (CI), which is an observational method that allows users to demonstrate their processes in their natural setting [11]. We will also closely involve families in the design process through Participatory Design. Participatory design (PD) integrates users into the technology creation process through a variety of methods to elicit requirements from the early stages of the design process [6]. Like in CI, a key component of PD is the partnership between the researcher and participant where the researcher acts as apprentice to the participant who is a master of his/her process [11].

For analyzing the qualitative data generated, we draw on similar research with Indigenous populations in Canada. This research shows that when just the research team is involved in data
analysis of cross-cultural studies, crucial context may be lost. Methods should be developed within the community rather than relying on “Western ways of knowing” [3]. This inductive approach is crucial for contextualizing data from an insider’s perspective, and for generating knowledge that is relevant to the users [7]. Integrating the community throughout the study by employing methods such as CI and PD provides a better understanding of users, especially those that have traditionally been overlooked in research. While we do initially envision a tablet app that records stories, which family members can then further expand on through drawings and additional dialogue on each re-read, the actual design will be largely informed by the users themselves.

**Research contribution to HCI4D**

In addition to the common challenges faced by immigrants, the population we work with also faces barriers due to age. Designing at this intersection poses difficulties, but also presents unique opportunities. We aim to develop technology-mediated support for navigating new social contexts that leverages the skills and resources older immigrants already have. On the methodological side, we contribute to the HCI4D space by adapting broad methods such as CI and PD to develop new ways of understanding the needs of older adults in overcoming intergenerational gaps and to yield new models of cultural learning. We start with observations, and involve users throughout the design process. We believe this community-based approach will support the development of interventions that have been informed by the users, rather than imposing externally-developed solutions that lack the context for making meaningful impact.

**Reasons for attendance**

At HCIxB, we will present the preliminary findings from the current project and seek feedback on the next steps, particularly on strategies for designing community-centered approaches to data analysis. We are especially interested in discussing the methods other researchers use to engage with marginalized, vulnerable or intersectional populations and to develop methods that provide better ways of engaging with such populations.
References


