
Design Ethnography or Ethnographic Design Research?: How to Engage Youth and Communities

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Abstract

As IDC and HCI fields continue to grow and expand beyond the activity to include the communities and cultures in which youth learn, we must (re)consider and (re)evaluate current methodologies accordingly. In our own research agendas engaging youth and communities, we explore the affordances and constraints of design research and ethnography. As

part of this workshop, we hope to explore the possibilities and constraints of a more integrated methodology for incorporating a multiplicity of perspectives in research on child-computer interaction

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Introduction

As design researchers, we work with youth in complex community and cultural contexts, yet our present methodologies are often limited in that they typically only capture one slice of youths' experience — their engagement with a particular designed technology. In our own work, which examines youth makerspaces [7] and computing in an American Indian community school [11], we have bumped up against the boundaries of design and ethnographic methodologies. In this workshop, we hope to explore the possibilities and constraints of a more integrated methodology for incorporating a multiplicity of perspectives in research on child-computer interaction. Next, we highlight the primary tenets of each methodology and explore how we have deployed them in our own work.

Design Research

Design research [2, 4] is often a go-to methodology for those in the IDC community. These methodologies encourage “extended (iterative), interventionist (innovative and design-based), and theory-oriented enterprises whose ‘theories’ do real work in practical education contexts” [3]. Design research scholars emphasize five crosscutting features that highlight how and why these methodologies are valuable for IDC and HCI fields.

First, design research is one of the most functional methodologies to understand simultaneously the learning process and the design structures that support learning [3]. This type of utility is key for interaction researchers that seek to understand the intricacies of child-computer relationships. Second, design research is highly interventionist in nature and acts as a “test-bed for innovation” [3]. Innovation, especially in the form of tangible tools or technological supports for learning, is a core output of IDC and HCI research, and design methodologies afford an avenue through which scholars can conduct research and innovate practical outcomes.

The third (prospective) and fourth (reflective) features of design research result in a uniquely iterative methodology, which mirrors the necessarily iterative nature of design broadly, and affords both rigorous research and tangible tools. Additionally, these two characteristics permit scholars to use findings as they emerge to continuously inform inquiry; part of innovative research, like Litts’ [7] work around makerspaces in education, is that that we often do not have all the necessary information up front. This methodology allows us to empirically study child-computer interaction, while remaining open to new conjectures as they arise.

The fifth and most defining feature of design experiments is that they generate theories that “do real work” [3]. The goal is bigger than just providing sufficient evidence of learning or implications for design; design experiments offer an intermediate theory functionally demonstrated in specific circumstances while yielding universally applicable design principles. Leveraging these characteristics of design research legitimize and encourage the heart of what the IDC community is doing for education. The iterative nature of design research affords tangible outcomes for both researchers and practitioners. Not only can we develop functional theories, but we can also develop functional tools.

Through design methodologies, researchers design *conceptual corridors* (or designed learning experiences) through which learners navigate along *conceptual trajectories* (pathways of learning conceptual content), which are thoroughly *documented* [5, emphasis added]. This practice of documentation in design methodologies is one example of how we can leverage ethnography to inform and deepen what’s possible with design research.

In Litts’ [7] work in youth makerspaces, case study offered a window into the context of the sites and design experiments allowed a more specific understanding of youths’ making processes. Combining methods in this manner was necessary to document youths’ intricate design activity that happens in these community spaces, yet it did not capture deep ethnographic understanding of child-computer interactions.

Ethnography

Unlike design methodologies, which are explicitly interventionist and aim to produce universally applicable principles of design, ethnography operates on a premise of participation without significant intervention and specializes in understanding the multiple, competing, and often contested perspectives of participants within a given local context over an

extended period of time. As Jackson [9] writes, "Part of anthropologists job is to contextualize social behaviors for readers, behaviors that are never purely self-evident and that always reward more careful scrutiny" (p. 13). We want to suggest that design researchers would also benefit from better contextualization of user behaviors.

Wolcott [13] helpfully distinguishes between ethnography as a "way of looking" and ethnography as a "way of seeing." In describing ethnography as a "way of looking," Wolcott highlights the methods of doing ethnography (participant observation, interviews, document analysis) while ethnography as a "way of seeing" focuses on ethnography as a methodology ideally suited to answering broad questions about cultural context. While traditional conceptions of ethnography as requiring the researcher to remove herself to some faraway place with the goal of understanding how residents of that locale made sense of their world through "thick description" of the place and its inhabitants [6] might seem irrelevant to design researchers, more recent conceptions of "thin description" in doing ethnography [1; 9] and a growing field of anthropology of media [12; 8] will feel more familiar to design researchers interested in child-computer interaction.

Youth interaction with computers (or any other technology) does not occur in a vacuum, but rather is culturally situated and context dependent. While learning researchers have sought to understand how learning is culturally situated from a multiplicity of perspectives [10] and design researchers have integrated ethnographic methods into their analyses, we argue that an ethnographic methodology has the potential to add value to studies of child-computer interaction by contributing a sustained engagement in local cultural contexts. Specifically, we believe that design researchers would benefit from attending to how learning occurs in home and community settings, the overall culture of the school or organization where the

design research is happening, and connections (or lack thereof) between the technology being researched and other social structures. For instance, how do youth interact with parents and siblings at home? Are youth typically asked to collaborate with one another in school settings? Is learning typically project-based? How might the technology being introduced link to (or be disconnected from) community understandings of technology or other larger social structures?

In Searle's work in an American Indian community school, an ethnographic methodology provided for more sustained engagement with school and community life in ways that facilitated relationship building and a nuanced understanding of how individual and community identities were articulated and performed. This understanding was crucial for designing culturally responsive computing activities with electronic textiles, the goal of the study.

An integrative approach

As IDC and HCI fields continue to grow and expand beyond the activity to include the communities and cultures in which youth learn, we must (re)consider and (re)evaluate current methodologies accordingly. In our own research, we have begun to wonder what it looks like to leverage the iterative nature of design research and the engaged nature of contemporary ethnographic research to consider perspectives from multiple stakeholders. We believe that there is much to be gained from combining design based research and ethnography. Ethnography offers a holistic understanding of people, contexts, and the tools themselves that can only enrich design based efforts to create real change in learning environments, particularly as we hope to serve increasingly diverse communities through the tools and learning environments we design. In addition, we believe that the combination of relatively rapid iteration that

happens in design based research with the longer term commitment of ethnography provides for nuanced learning across timescales. In this workshop we hope to explore whether the methodology we are seeking is more accurately called design ethnography, ethnographic design research, or something else entirely. Further, what other possibilities might such a methodology hold for us as researchers and our future work in makerspaces and with non-dominant communities.

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