Ethnographers at Microsoft: A Review of Human-Computer Interaction: Development Process

Ronald J. Chenail
Nova Southeastern University, ronaldchenail@gmail.com

Ethnographers at Microsoft: A Review of Human-Computer Interaction: Development Process

Abstract

Qualitative researchers and those with qualitative inquiry skills are finding tremendous employment opportunities in the world of technology design and development. Because of their abilities to observe and understand the experiences of end users in human-computer interactions, these researchers are helping companies using Contextual Design to create the next generation of products with the users clearly in mind. In Human-Computer Interaction: Development Process, the new edited book by Andrew Sears and Julie Jacko, the authors describe an array of models and methods incorporating qualitative research concepts and procedures that are being used in technology today and can have great potential tomorrow for qualitative researchers working in fields and settings outside of business and technology.

Keywords

Human-Computer Interaction, HCI, Usability Studies, Ethnography, Qualitative Research

Creative Commons License

Ethnographers at Microsoft:
A Review of *Human-Computer Interaction: Development Process*

Ronald J. Chenail
Nova Southeastern University, Fort Lauderdale, Florida USA

*Qualitative researchers and those with qualitative inquiry skills are finding tremendous employment opportunities in the world of technology design and development. Because of their abilities to observe and understand the experiences of end users in human-computer interactions, these researchers are helping companies using Contextual Design to create the next generation of products with the users clearly in mind. In Human-Computer Interaction: Development Process, the new edited book by Andrew Sears and Julie Jacko, the authors describe an array of models and methods incorporating qualitative research concepts and procedures that are being used in technology today and can have great potential tomorrow for qualitative researchers working in fields and settings outside of business and technology. Key Words***:** *Human-Computer Interaction, HCI, Usability Studies, Ethnography, and Qualitative Research*

Ethnographers seem to be popping in very strange places these days. They work for the United States military's controversial Human Terrain System Project seeking to learn more about indigenous peoples in combat zones (American Anthropological Association, 2007). They work for companies like General Electric where they are asked to plan, design, and conduct high quality user research via methods such as ethnographic field studies, participatory design sessions, site visits, focus groups, benchmark studies, usability studies, heuristic evaluations. They also work for companies like Microsoft where they conduct usability studies to help software and hardware developers learn more about the user experience in Human-Computer Interaction or HCI.

I have become more aware of these emerging career paths since we started researching employment opportunities and posting the results in *The Weekly Qualitative Report* last year. Each week the majority of the jobs we post for those with qualitative research skills seem to fall outside of academic and social science research organizations. These positions with titles such as "Senior Account Planner," "Senior Research Analyst," "Branding Strategist," "Qualitative Project Director," "Senior Vice President - Consumer Insights," "Member Services Usability," "Manager - Interaction Design," and "Usability Testing Specialist" require candidates to have a variety of qualitative data collection and analysis skills. I was especially inquisitive in how technology companies such as Cisco Systems, IBM, and Microsoft were utilizing the skill sets of qualitative researchers. This search led me to the world of HCI and how qualitative researchers help companies design and refine a whole range of technologies. This interest also helped me to see how qualitative research innovations made in HCI could also have broader implications and utilization for qualitative researchers working in non-technology settings.

One source that really opened my eyes to the range of qualitative research utility in technology is the new edited book by Andrew Sears and Julie Jacko (2009) entitled *Human-Computer Interaction: Development Process*. It is a collection of chapters originally published in the second edition of their previous edited work, *The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies and Emerging Applications* (Sears & Jacko, 2007), which presents the methodologies applied and products produced by qualitative researchers and their colleagues. The book is also a great collection of ideas qualitative researchers could consider in their own work inside or outside of a technology context.

Sears and Jacko's book starts with a series of chapters that introduce readers to the role the experience of the end users plays in the development and improvement of technology products. Mike Kuniavsky (2009) defines the context the notion of user experience brings to human-computer interaction, "In other words, the user experience consists of all of the factors that influence the relationship between the end user and the organization, especially when a product mediates that relationship" (p. 4). When reading this quote I was struck how critical qualitative researchers' abilities to study and understand people, processes, and products within larger contexts are to this area of customer relationship and product development.

A critical model in this process is known as Contextual Design which is

> …a customer-centered design process that takes a cross-functional team from collecting data about users in the field, through interpretation and consolidation of that data, to the design of product concepts, and a tested product structure. Over the last 18 years, the industry has moved from using an engineering-driven requirements and design process to a more user-centered process. (Holtzblatt, 2009, p. 56)

From this description it becomes easy to see professionals with abilities to observe how people use products and systems and make sense of their whole experience are becoming indispensable to business and technology research and development.

In many of the other chapters, the authors outline different methodologies and design models used in the interface between user experience, HCI, and product development. Two that I found especially interesting were task analysis (Courage, Redish, & Wixon, 2009) and ethnographic approaches (Blomberg & Burrell, 2009).

In their chapter on task analysis, Courage, Redish, and Wixon (2009) explain that task analysis is the process by which researchers attempt to learn how users work. Task analysis researchers, usually conducting their work in concert with investigators studying users' environment and goals, can focus on a number of macro- to micro-granularity levels of analysis:

- Analysis of a person's typical day at work: Observing the user from the start of work to the end of their work-day
- Job analysis: Learning the user's goals and tasks while fulfilling a particular role
- Workflow analysis: Observing how work flows from one user to another
- High-level task analysis: Seeing the work entailed in accomplishing a major goal

- Procedural analysis: Learning the steps involved in accomplishing a particular task. (p. 39)

Courage, Redish, and Wixon (2009) also share some intriguing ways in which task analysis researchers present their results:

- Affinity diagrams: Hierarchical pictures of user data showing relationships between tasks (pp. 46-47)
- Personas: Composite archetypes depicting users' activities, knowledge, and tasks in depth (p. 47)
- Scenarios: Short stories of specific user situations (pp. 47-48)
- Sequence diagrams: Flow diagrams tracking the work through a system (p. 49)
- Culture capsules: Photographs that help to capture a visual sense of the user's site and space (p. 52)

In their ethnographic approaches chapter, Blomberg and Burrell (2009) explain ethnography is both a set of methods as well as a lens through which human activities are viewed and understood. They describe how ethnographers' comfort with conducting studies in natural settings; understanding behavior in context; ability to describe people, places, and processes; and appreciation of multiple points of view make them quite suitable for conducting user-informed design research (pp. 73-74).

As with the task analysis investigators, ethnographic researchers working in this field employ a variety of representational modes to share their findings. Besides the ones described above, these researcher also use mock-ups and prototypes consisting of representational artifacts depicting the observed practices and people in a visual manner (pp. 84-88).

Other approaches qualitative and action research would find interesting are Rosson and Carroll's (2009) scenario-based design chapter and Muller's (2009) chapter on participatory design. In these two models the authors outline how researchers actively involve users all throughout the study to enact a "learning by doing" situation that can produce new and different insights an "observe and interview" approach might miss.

Sears and Jacko's authors really helped me to see how this area of qualitative research has evolved from what I had read in early texts on this topic like Wixon and Ramey's fine 1996 edited collection. Central to this evolution is the imaginative ways user experience researchers re-present their findings. I was struck how scenarios, artifacts, photo displays, and the like allowed consumers of this research to use more of their senses then the typical text-based academic qualitative research can evoke. The best of these multi-sense provocations was "Culture Scapes" wherein researchers' representations of their findings engage observers' senses other than the visual and auditory. In one example the researchers felt it was important for the designers to know how warm it was in the users' environment so they presented their findings in a room with the thermostat turned up to 90 degrees Fahrenheit and with 85% humidity to re-create the physical context of the end user using the company's product. I can just imagine how re-presenting context in that matter can produce a dramatic response on the part of the audience.

I was also struck by how these researchers with their emphasis on culture and fieldwork and their use of artifacts and scenarios along with their data collection and analysis procedures really seemed to present themselves more like ethnographers than qualitative researchers using ethnographic methods and techniques. Along these lines I found their multi-sensual, thick descriptions of human-computer interactions, complete with richly detailed settings, reminiscent of classic ethnographies, while their appreciation of multiple perspectives gave the whole enterprise a contemporary feel as well. Overall to me, their work appears to be in definite contrast to the textual renderings of analyzed interviews that seem to dominate much of qualitative research today.

Sears and Jacko's (2009) book is full of innovative ways to conduct and present qualitative research. They and their authors present an array of interesting tales of ethnographers working in the wilds of business and technology that can help to transform how we can conceptualize and practice our own qualitative research regardless the settings in which we find ourselves.

References

American Anthropological Association. (2007). *American Anthropological Association Executive Board Statement on the Human Terrain System Project*. Retrieved from http://dev.aaanet.org/issues/policy-advocacy/Statement-on-HTS.cfm

Blomberg, J., & Burrell, M. (2009). An ethnographic approach to design. In A. Sears & J. A. Jacko (Eds.), *Human-computer interaction: Development process* (pp. 71-94). Boca Raton, FL: CRC Press.

Courgae, C., Redish, J., & Wixon, D. (2009). Task analysis. In A. Sears & J. A. Jacko (Eds.), *Human-computer interaction: Development process* (pp. 33-53). Boca Raton, FL: CRC Press.

Muller, M. J. (2009). Participatory design: The third space in HCI. In A. Sears & J. A. Jacko (Eds.), *Human-computer interaction: Development process* (pp. 165-185). Boca Raton, FL: CRC Press.

Rosson, M. B., & Carroll, J. M. (2009). Scenario-based design. In A. Sears & J. A. Jacko (Eds.), *Human-computer interaction: Development process* (pp. 145-164). Boca Raton, FL: CRC Press.

Sears, A., & Jacko, J. A. (Eds.). (2007). *The human-computer interaction handbook: Fundamentals, evolving technologies and emerging applications* (2nd ed.). London: Taylor & Francis.

Sears, A., & Jacko, J. A. (Eds.). (2009). *Human-computer interaction: Development process*. Boca Raton, FL: CRC Press.

Wixon, D., & Ramey, J. (Eds.). (1996). *Field methods casebook for software design*. New York: Wiley.

Author Note

Dr. Ronald J. Chenail is the Co-Editor of *The Qualitative Report* and *The Weekly Qualitative Report* at Nova Southeastern University (NSU). He also serves as the Vice President of Institutional Effectiveness and Director of NSU's Graduate Certificate in

Qualitative Research. He can be contacted at 3301 College Avenue, Fort Lauderdale, FL 33314-7796 USA; Telephone: 954.262.5389; Fax: 954.262.3970; E-mail: ron@nova.edu.

Article Citation

Chenail, R. J. (2009). Ethnographers at Microsoft: A review of *Human-Computer Interaction: Development Process*. *The Weekly Qualitative Report*, *2*(24), 145-149. Retrieved from http://www.nova.edu/ssss/QR/WQR/sears.pdf