Course Title: Qualitative Field Research for User-Centered Design of Technology
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Qualitative field research is an indispensable for user-centered design of technology, but it presents serious difficulties of scientific rigor.   Not all qualitative research is fieldwork and not all fieldwork is qualitative, but in this class we will focus on field research where both the raw data and analysis are qualitative, as an exemplar of these challenges to scientific rigor. The issue of rigor will be a theme throughout the class, as we discuss planning research, collection of data, analysis and interpretation. In addition, where appropriate, we will discuss differences in mindset and practice of field research between the academic and commercial worlds.

The challenges of fieldwork do not lend themselves to pat answers and canned techniques. Rather than teaching a set of how-to's this class will expose issues and a range of approaches for dealing with them. The goal is to help increase student's sophistication about explicitly identifying the challenges they face in their own projects and making considered, creative, and defensible choices about how to address them.

Class Project
Students will carry out a mini field research project, which will provide an opportunity to experience representative tasks.   Students will report on their activities in class. Because students will be at very different points in their own individual degree research (and may not all be doing field research), we will assign the topic for this project: "Family Communication, Management, and Coordination." Having the class work on the same general topic will have the benefit of allowing us to more usefully share experiences in class and pool data. For students who want to discuss their individual degree research, a modest amount of coaching will be available.

Class Outline

Session 1 (Sept 24)
These readings would be helpful in preparation for the first class:

Tony Salvador, Genevieve Bell, and Ken Anderson	Design Ethnography. Design Management Journal, Fall, 1999, pp 35 – 41
Cooper, Alan	About Face 3: The Essentials of Interaction Design. Wiley Publishing, Inc., Indianapolis, 2007. Chapter 4 (49-73)
Ron Weber	Editor's Comments: The Rhetoric of Positivism Versus Interpretivism: A personal view. MIS Quarterly, Vol. 28

	No. 1, pp. iii-xii, March 2004 (Available at: http://www.misq.org/archivist/vol/no28/issue1/EdCommentsV28N1.pdf)

Introducing the Challenges of Qualitative Field Research and Placing It in Its Intellectual Context
o Story of a fieldwork project, illustrating puzzles, dilemmas, key decisions, and insights
o Role of qualitative field research in product planning and design
o Positioning qualitative field research in terms of dimensions for describing approaches to understanding (without implying that qualitative field research necessarily represents one pole of each of these distinctions)
  o Etic versus Emic
  o Nomothetic versus Ideographic
  o Positivist versus Interpretivist (Constructionist)
  o Deductive versus Inductive
  o "What?" Versus "How and Why?"
  o Theoretical versus Strategic
o The spectrum of qualitative research
o Challenges to scientific rigor in qualitative field research elucidated by contrasting it with experimental research
o The challenge of bridging from research to design decisions
Part B: Planning the Research Strategy
o Issues in and approaches to defining and elaborating the research focus
o Issues in and approaches to developing the sampling strategy: people and contexts
o Planning the data elicitation

Assignment:
Begin recruiting 2 households for class project research
Develop focus structure for assigned research project

Session 2 (Oct 1)
Readings:

Roy Suddaby	What Grounded Theory is Not. Academy of Management Journal, 2006, Vol. 49, No. 4, 633-642.
Sally Jo Cunningham, Chrish Knowles, Nina Reeves	An Ethnographic Study of Technical Support Workers: Why we didn't build a tech support digital library. JCDL '01, June, 2001, Roanoake, Virginia (ACM 1-58113-345-6/01/0006).
Beth Kolko, Emma	Communication as Information-Seeking: The case for

Rose, Erica Johnson	mobile social software for developing regions. WWW 2007, Banff, Alberta, CA (ACM 978-1-59593-654-7/07/0005)
Recommended	
Michael Quinn Patton	Qualitative Research and Evaluation Methods, Sage Publications, Thousand Oaks, CA 2002. Chapter 2

Data Gathering: What Makes for Credible and Interpretable Field Data?
o Basic ingredients of scientific approach: what are their analogues in qualitative field research?
o Brief overview (and critique) of Grounded Theory as one approach to introducing "rigor" into qualitative field research
   o Induction
   o Strategic sampling
   o Constant comparison
   o Coding
   o Theoretical saturation
o The issue of researcher bias
o Importance of multiple data sources, and the concept of triangulation
o Role of and issues with various data types:
   o Self-report data
   o Direct versus indirect evidence
   o Behaviorally-grounded data
      ▪ Observational
      ▪ Behavioral Artifacts
   o Contextual data, e.g.:
      ▪ Historical
      ▪ Economic
      ▪ Physical
      ▪ Organizational
      ▪ Demographic
o Data capture and data quality
   o Distinguishing behavioral description from interpretation
   o Field notes and the concept of the "incident"
   o The role of video and audio
   o Debriefing
o Summary of practices for maintaining rigor and scientific accountability

Assignment:
o Finalize recruiting and schedule sessions
o Identify potential data types and develop draft protocol for data collection (that is, how you plan to elicit the data)

Session 3 (Oct 15)

Readings:

Hugh Beyer and Karen Holtzblatt	Contextual Design: Defining Customer Centered Systems, Morgan Kaufmann, San Francisco, 1998, Chapters 2-6 (pages 29-123)

Observation, Interviewing, Contextual Inquiry
o Basic interviewing skills, e.g.:
   o Open-ended questions
   o Verbal and non-verbal following behaviors
   o Reflections
   o Neutrality
   o Probing and progressive probing
o Mitigating the limitations of self report
o Contextual Inquiry (CI)
   o Core concepts: Context, apprenticeship
   o Use of the focus in guiding the inquiry
   o Key interviewing and probing skills for CI
   o Assembling a holistic picture
   o Differences between CI in the workplace and consumer contexts
o Artifact Walkthroughs
   o The challenge of rare or difficult-to-enact incidents
   o Artifacts: Grounding self-report data in evidence of behavior
   o "Lead User" and the adaptation of technology

Assignment:
Between now and November 7th, conduct data collection sessions, write visit reports.

Session 4 (Nov 5)

Readings

Susan Dray, David Siegel, Evan Feldman, Maria Potenza	Why do Version 1.0 and Not release it? Conducting field trials of the Tablet PC, interactions, 9(2), march/april 2002
TBD:	
David A. Siegel, Bill Reid, Susan M. Dray	IT security: Protecting organizations in spite of themselves. Interactions, 13(3), May-June 2006
Bonnie Nardi, Diane J. Schiano,	Blogging as Social Activity, or Would You Let 900 Million People Read Your Diary. CSCW 2004, Chicago,

Michelle Gumbrecht	IL, USA. (ACM 1-58113-810-5/04/0011)
Lisa Reichenbach & Amy Maish	Larger than life: Bodily and social transitions within type 2 diabetes. EPIC 2006, pp. 5-18 American Anthropology Association. (Available at http://www.anthrosource.net/doi/abs/10.1525/epic.2006.2006.1.4)
William S. Stubblefield and Karen S. Rogers	The Social Life of Engineering Organizations, DIS 2000, pp 9-19. (ACM 1-58113-219-0/00/0008)
Jesper Simonsen and Finn Kensing	Using Ethnography in Contextual Design, CACM, July 1997, Vol. 40, No. 7 (http://doi.acm.org/10.1145/256175.256190)
Melissa Cefkin, Jakita Owensby Thomas, and Jeanette Blomberg	The implications of Enterprise-wide pipeline management tools for organizational relations and exchanges *Group '07*, 2007, Sanibel Island, FL, USA (ACM 978-1-59593-845-9/07/0011)

Field Usability Evaluation
- o Relationship between Usability and Utility
- o Contrasting Field Evaluation, "Naturalistic" Usability Evaluation, and Structured Lab Evaluation
- o The spectrum of "naturalism:" Case examples of naturalistic evaluation
- o Longitudinal evaluation
- o Hybrid methodologies

Session 5 (Nov 12)
Readings:

Michael Quinn Patton	Qualitative Research and Evaluation Methods, Sage Publications, Thousand Oaks, CA 2002, Chapter 8
A Michael Huberman and Matthew B. Miles	The Qualitative Researcher's Companion, Sage Publications, Thousand Oaks, 2002. Chapters 2 (37-63), 6 (123-135), 12(305-329)

Debriefing of students' field data collection
Analysis: Coding
- o Coding as an indexing process
- o Coding as a process of extracting or discovering meaning
- o Code types
- o Memos and annotation

- o Coding tools
- o Coding reliability

Assignment: (Due November 21) Code and annotate visit reports, write short (one page) reflection on the process

Session 6 (Nov 26)
Readings:

Cooper, Alan	About Face 3: The essentials of Interaction Design. Wiley Publishing, Inc., Indianapolis, 2007. Chapters 5 (75-108), 6 (109-123), 7 (125-146).
TBD	
Robin Beers & Pamela Whitney	From Ethnographic Insight to User-centered design tools. EPIC 2006, pp. 144- 154 (available at: http://www.anthrosource.net/doi/abs/10.1525/epic.2006.2006.1.144?prevSearch=beers+whitney)
Rachel Jones	Experience models: Where ethnography and design meet. EPIC 2006, pp. 81-93 (Available at: http://www.anthrosource.net/doi/abs/10.1525/epic.2006.2006.1.82?prevSearch=rachel+jones+2006)
Suzanne Thomas and Tony Salvador	Skillful Strategy, Artful Navigation, and Necessary Wrangling, EPIC 2006, pp. 109-124. (Available at: http://www.anthrosource.net/doi/abs/10.1525/epic.2006.2006.1.109?prevSearch=thomas+salvador+epic+2006

Analysis: Affinities, Clustering, Dimensions
- o The challenge of data reduction: moving from particular case to general
- o Affinity diagramming to explore themes
- o Clustering
  - o The importance of typology
  - o Segmentation and its role in product planning and design
  - o Demographic, attitudinal, and behavioral segmentation
  - o Clustering to find "meaningful" typologies
  - o Validating clusters
- o Operationalizing dimensions
- o Matrices

Bridging to product planning and design
- o Requirements
- o Personas

o   Scenario

Assignment: Details will be determined, but will involve writing, e.g., a persona, a scenario, or an operational definition of a dimension or of criteria to define a user type

Session 7 (Dec 10)

Bob Gephart	
	Qualitative Research and the Academy of Management Journal. Academy of Management Journal 2004, Vol 47, No 4 454-462. (Available online at http://www.idi.ntnu.no/grupper/su/publ/ese/gephart-qualresearch-ednote04.pdf
A Michael Huberman and Matthew B. Miles	The Qualitative Researcher's Companion, Sage Publications, Thousand Oaks, 2002. Chapter 8 (171-203)

Wrap-up Topics
o   Survey of Issues And Strategies For Other Common Qualitative Methods
    o   Surveys, open-ended questionnaires
    o   Diary studies
    o   Focus groups
    o   Analysis of existing qualitative data archives, such as service call logs
o   Common interpretive Issues
    o   The small sample problem
    o   "Outliers"
    o   "Post hoc-ism"
    o   What does validation mean in relation to qualitative field research for design?
    o   Relating qualitative and quantitative
    o   Relating inductive and deductive