Ethnographic Methods for Human Factors Researchers: Collecting and Interweaving Threads of HCI

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ABSTRACT

This course offers an introduction to ethnography for Human Factors Research. It covers relevant topics along the research process from decision arguments for the method and study design, up to data collection, analysis and interpretation. Ethical questions will include the researcher's role(s) in the field and modes of data presentation. The collection of multi-dimensional sets of data – a trademark of high-quality ethnographic work – enables inter-weaving threads of HCI perspectives in complex human factors and user research contexts. To achieve this, a comprehensive toolbox of ethnographic methods is introduced along with practical hands-on sessions to familiarize with these methodological instruments.

CCS CONCEPTS

• Human-centered computing → HCI Design and evaluation methods

KEYWORDS

Ethnography; Human Factors; Qualitative Methods; Human-computer Interaction; User Research

1 COURSE DESCRIPTION

The course aims at introducing ethnography as a method for Human Factors research within HCI contexts. Starting on the origins of the method and its application in both academic and applied human factors and user research settings, a toolbox of ethnographic data collection techniques is provided along with numerous state-of-the-art literature examples and practical exercises for illustration.

1.1 Benefits

Attendees completing the course will gain an understanding of ethnography as a research method and will in particular

- be able to assess when and why the method is suitable for a specific issue or HCI research question
- have reflected on their role as a researcher and ethical considerations connected with ethnographic modes of data collection
- acquire a methodological toolbox enabling the collection of a diverse set of qualitative data for cohesive analysis
- be familiar with the process of analyzing qualitative data and tools available for analysis

1.2 Intended Audiences

PhD students, researchers and practitioners with limited or without previous experience in ethnographic research. No prerequisites required.

2 COURSE STRUCTURE

The course topics of the four sessions are structured along the research cycle from initial method decision criteria, to research design, data collection, data analysis and interpretation.

2.1 First Session: Ethnography – Myths and Facts

Introductory Talk (20 minutes)
The first session starts with a sketch of the method's historical background and why ethnographers value the idea of "walking a mile in the shoes of others" [6] to gain insights into complex practices in any thinkable setting.
Interactive Learning (30 minutes)
"But isn't this all subjective?!" We will discuss ten popular myths about ethnography and how to "defend" an ethnographic research design [2].
Practical Work (30 minutes) Toolbox Part I: Interview-Training
Asking relevant questions in the right moment is a key enabling skill during fieldwork. We will reflect on different interview situations encountered in the field and relevant techniques [8]. Course attendants will train their interview technique in an instructed partner interview exercise. Challenges and learnings will be collectively discussed.

Learning Objectives Session 1

Understand the origins and motivations of ethnographic research

Ability to convince a critical colleague of an ethnographic research design

Familiarity with central interview techniques

Learning Objectives Session 2

Understand key ethical principles of ethnographic research

Learn the process of taking field notes

Experience the challenge of observation and documentation

2.2 Second Session: Participant/Observation

Introductory Talk (20 minutes)
At the core of ethnographic research stands participant observation, as the in-situ practice of data collection. We will untangle the apparent oxymoron and review the application of the method for HCI and user research, including concepts such as shadowing [3].
Interactive Learning (30 minutes)
Based on previous thoughts on different levels of involvement and participation, we will discuss the role(s) of the researcher [5] and ethical considerations of ethnographic research [1].
Practical Work (30 minutes) Toolbox II: Writing Field Notes
How do I take field notes while observing? We will provide a set of practical guidelines and process steps on how to produce meaningful field notes [4]. Course attendants will then be asked to produce a short set of field notes during a focused observation period over lunch time.

2.3. Third Session: Extending the Toolbox

Introductory Talk (20 Minutes)
Field notes and interviews can form a meaningful base of ethnographic data, but participative methods are a fruitful way to engage users and other interlocutors actively into the research process and to collect additional threads of HCI perspectives.
Interactive Learning (30 minutes)
Participants will be asked to discuss in groups of 3-4 people their experience with writing field notes. We will collect the highlights, share learning outcomes and develop mitigation strategies for challenges in different HCI research settings.
Practical Work (30 Minutes) Toolbox III: Participative Methods
Building on the learnings from the field notes exercise, course attendants will be invited to perform a three-staged exercise to practice participative instruments of data collection, such as collective mapping.

Learning Objectives Session 3

Familiarize with participative approaches to ethnography

Reflect on techniques and challenges of taking field notes

Learn how data from observation can be enhanced by adding methods to extend the toolbox

Learning Objectives Session 4

Familiarize with the process of qualitative data analysis

Reflect on the potential and limits of data interpretation

Learn a concrete method to start with data analysis

2.4 Fourth Session: Analyzing qualitative data

Introductory Talk (20 Minutes)
Qualitative data analysis is not magic, but a structured approach to achieve meaningful insights from the different data collected. We will introduce a practical three-step process to analyze ethnographic data [4] and tools available for support at this phase of the research project.
Interactive Learning (30 minutes)
The overarching rule to interpreting the data is that there's only there what's there. For proving the reported results, we must rely on the data collected in the field and use quotes, vignettes, or stories for illustration. Based on state-of-the-art ethnographic studies we will collectively develop a set of basic guidelines on how to use ethnographic data for the presentation of project outcomes.

Practical Work (20 Minutes) Toolbox IV: Developing a Code Map
The first and central step to data analysis is to build a set of analytical key words that will be applied to the data set. After a brief instruction, participants will develop a code map based on the field notes they created previously. We will share learnings of the exercise collectively.
Course Wrap-up and Close (10 minutes)
For further methodological guidance we will present a literature overview and gather participant's feedback on the course.

BACKGROUND OF THE INSTRUCTOR

Frauke Mörike is a social anthropologist and postdoctoral fellow in the Division of Ergonomics at the Department of Psychology and Ergonomics of Technische Universität Berlin. Her research interests include the effects of labor transformation through digitalization in human-technology-interaction contexts, especially on collaboration processes. Her methodological focus lies on ethnographic in-situ instruments of data collection and their applicability to Human Factors Research.

She holds a PhD in Organizational Anthropology (Heidelberg University) and has conducted 11 months of full-time ethnographic fieldwork at a consulting firm looking at misunderstandings in digital and analogue project collaboration [7]. With a background in Business Information Systems Engineering (BA) and over a decade of experience as IT professional in the industry, Frauke is an ambassador for both interdisciplinary and applied research perspectives. She teaches seminars on ethnographic research methods in the Human Factors Master's Program at Technische Universität Berlin.

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