

# Deconstructing Design Ethnography through Critical Thinking: A Comprehensive Analysis

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**Abstract:** Design ethnography possesses a unique ability to uncover both overt and covert user needs and requirements. Its prowess in identifying latent problems and cultivating a deeper understanding of these challenges makes it an essential tool for informing initial design decisions and subsequent choices. The primary objective of this article is to delve into the core principles of design innovation, illuminate the intrinsic value of design ethnography, dissect its key methodologies, evaluate its merits and demerits, and address the ethical and practical complexities it entails.

**Keywords:** Methods; Value; Critical Thinking; Observation; Interview.

## 1. Introduction

Design ethnography belongs to a branch of anthropology, derived from ethnography, one of the leading research methods of anthropology. (Segelström and Holmlid, 2014)

It originated when anthropologists went deep into a particular ethnic group and was a practical means of direct observation and reporting on human lifestyles. The three main research methods used by ethnographers are participant observation, fieldwork writing, and ethnographic interviews. (Segelström and Holmlid, 2014)

Moreover, design ethnography is a fusion of human-centered design methods and ethnography, and it is no longer limited to ethnic groups. The late 1980s: began to be designed and used in human-computer interaction (HCI). Then he was widely used to study various social groups. (Gray, 2022)

## 2. Methodological Approach

Use design ethnography to achieve a descriptive understanding, do not make judgments, just simple explanations. One of the main differences between design ethnography and other user research methods is that design ethnography requires investigators to conduct research first and directly understand the users' thoughts and feelings. The essential methods are in-depth interviews and immersive observations.

(Anthony Kwame Harrison, 2018)

## 3. Methods-Observation

### 3.1. Ethnographic Observation Introduction

Observation is one of the methods of methodological design of ethnography. The observation method refers to how researchers use their sense organs and auxiliary tools to directly observe the researched Object according to a certain research purpose, research outline, or observation table to obtain information. (Gray, 2022) It needs researchers to carefully observe various phenomena and make systematic records, including characters, components, environments, events, behaviors, and interaction processes. (Universal Design Principles)

In design research, the observation method is usually carried out qualitatively at the initial design stage.

Observation can be divided into participation and non-participation, overt and covert. (Martin and Hanington, 2012)

### 3.2. Challenges & Observation Frameworks

According to Bailey, field notes are 'the backbone of collecting and analyzing field data'. (Bailey, 2018) They are absolutely essential to the success of fieldwork, and comprise everything the fieldworker believes to be of importance. (Gray, 2022) The observation method requires us to organize the data within one hour after the end of the observation. How to efficiently observe and quickly filter valuable information from the large amount of information produced provides fertile soil for later design and creativity. It is one of the challenges of the observation method. (Crabtree, 2014)

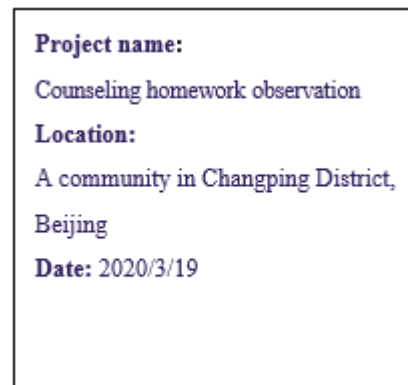


Figure 1. Record observation

PEOPLE	OBJECT	ENVIRONMENT	MESSAGE	SERVICE
WANG 34 Father	Exercise Book	Stay Room	Check Homework	Google
WANG 11 Student	Exercise Book, pen, BRD	Stay Room	Do Homework	Watch Video
WU 11 Student	Exercise Book, Cell phone	Bed Room	Play Games	Chat
ZHANG 36 Mother	English book, Paper towel, Cell phone	Living Room	Angry	Read English
JING 9 Student	Text paper, Teacher	Stay Room	Residence	Tutoring Service
XIAN 40 Father	Cell phone	Stay Room	Reading novels	Listen to the radio

Figure 2. Analysis with POEMS

The POEMS observation method is a framework used by the School of Design at Illinois Institute of Technology. The POEMS framework guides observers when designing observations, what to observe, how to record and consider

later analysis. (Martin and Hanington, 2012)

In the past projects, the observation method and the poem's framework were used in conjunction with the method I prefer to use when collecting data in the first-hand survey. It can help us fully understand and understand the groups or events we are concerned about.

### 3.3. Significance & Limitations of Observation

At the same time, the observation method also has its shortcomings. Observers' expressions of what they observe may be subjective. We usually "see" what we want to see while ignoring other vital phenomena. (Bakeman, 1991)

Second, the presence of observers may affect their observation results. For the observation method, the challenge we have to face is to stand in a neutral position as much as possible, express and convey all the content of the observation, and enable the observer to do things naturally. (Gray, 2022)

Observation methods are usually associated with ethnographic methodology because it studies people in the natural Environment or "field." However, ethnography may also require other methods, such as in-depth interviews and analysis of personal files. (Gray, 2022)

## 4. Methods- Interview

### 4.1. Interviews in Research Introduction

The interview is a primary research method to contact participants directly.

First-hand information can be collected, including the experiences described by the participants and their views, attitudes, and opinions.

There are two methods for investigation and research, one is the interview, and the other is a questionnaire survey. Unlike questionnaires, interviews are primarily face-to-face so that various details of personal expressions and body language can be observed in the conversation. However, remote interviews can also be conducted via telephone or social media. (Martin and Hanington, 2012)

### 4.2. Flexibility and Interaction

Like the observation method, we can design the interview process in advance and prepare a series of questions during the interview.

we can also choose relatively casual non-structured interviews to conduct flexible conversations. This form is more like ordinary conversations and makes participants feel more comfortable. However, suitable for exploratory research, however, even in unstructured interviews, researchers usually prepare the main content to guide the conversation process. In all forms of interviews, researchers need to have keen observation skills and adaptability, but they should also be conducted orderly following the basic procedures.

### 4.3. Insight and Design Impact

In the collaborative project with Nokia Research Center, Portugal Consulting employed interviews to gain insights into users' mental models. They inquired about users' perceptions of the ideal state of the product and the envisioned purchasing scenarios. Additionally, during the interviews, PowerPoint presentations were used as participatory tools to facilitate users' expressions. Ultimately, they established the prioritization of functionalities to proceed to the next phase. (Nova and Matteo, 2016)

Whether interviews or observations, as researchers, we

should maintain a neutral attitude and not guide the interviewee or the observed person to choose our tendency to ensure the effectiveness of data collection.

### 4.4. Application of Research Interviews

I While studying at Glasgow School of Art, we used gender and age as the classification standard and interviewed people around our food theme. The relationship between a breastfeeding mother and food gave us further design ideas in the interview. She said, Since the child is born, there is no time to cook seriously or eat. After a follow-up investigation, it was found that this is a problem that many breastfeeding mothers are experiencing. Therefore, this has become the subject of our project.

As a design tool with strong participation, the engagement tool can play a role in breaking ice and explaining and explaining in interviews. We can also make the questions we want to ask the interviewee into small card games and other forms, allowing interviewers to participate in the interview more interestingly, making the whole process more vivid.



Figure 3. Function



Figure 4. Testing

## 5. Conclusion

As a methodology that can directly understand users' thoughts and feelings, design ethnography can play an active role in the promotion of design. Observation method and interview are two more usual methods of obtaining information under the design of ethnography.

The observation method focuses on observing user behavior and Environment in life. In contrast, the interview focuses more on the conversation between the two parties and listening to the truth of the interviewee. Heartfelt. At the same time, researchers have to overcome their prejudices, put themselves in a neutral position throughout the research activities, and only be factual statement.

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