HCDE 519
Qualitative Research Methods

Spring 2024

University of Washington
Human Centered Design & Engineering

Quick links

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Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10

Week 1

Alainna

Alainna Brennan Brown

"Atlanta" without the ts || she/they

Contact via Slack or email (alainnab@uw.edu)

4th-year PhD candidate, HCDE (MD/PhD)

MS, HCDE

BA, Neuroscience & Biomedical Physics

Related interests

Ethnography, phenomenology, design probes

Science & technology studies

Feminist, queer, and crip methods

Slow theory, theories of humor, mental health

Wilderness, remote, and emergency medicine; rehab medicine and psychiatry

Jennifer

Jennifer Turns
She/her
315 Sieg

Who are you? Background, etc.
Professor, HCDE
Joined UW in 2000
So many interests, qualitative research as a key part!

Related interests
Traveling (Glacier National Park on left)
Spending time with family
Solving puzzles..

Negin

Have a question? You can send me a message over Slack or email me (negin@uw.edu)

5th year PhD student - My field of research is the future of distributed work and I'm interested in understanding the ways that people collaborate asynchronously.

Related interests
Ethnography, Science & technology studies, Feminist ethics of care

Course Essentials

Essential Course Structure

6:00 - 9:50 pm Thursdays, Bagley Hall 108 (Husky Night Walk/Ride, UW Alerts)

4-units ~~ 4 hours in-class + 2x4 hours out of class

Essential Course Structure

This course, like industry design work, is **project-based** and strongly dependent on team interactions – **engagement is critical**

- ...in class (coworking, hands-on instruction, peer education experiences)
- ...out of class (readings, group experience preparation, and conduct of research)

Hybrid participation is available when needed

- Please let instructors know early if you will have significant conflicts
- Be a decent teammate – keep folks in the loop about engagement and distribution of effort

Please feel free to reach out to course instructors regarding accommodations

Practical Things

VERIFY: Do you have access to...

- ➔ Canvas
  - *This slide deck will be linked on the course Canvas front page*
- ➔ Slack
- ➔ Miro (sign-in via Google with UW NetID recommended)
- ➔ Zoom (with UW credentials, via Canvas)

OPTIONAL: Do you have access to...

- ➔ Sharepoint, OneDrive, or Google Drive (with UW credentials)
- ➔ Otter.ai [+/- free], MS Word (with UW credentials)
- ➔ Atlas.ti or other coding software [not free]

Policy Things

These policies are available in full on Canvas under the Course Policies section

- ➔ University policies
- ➔ HCDE 519 policies/expectations
  - Engagement, interactions, and accessibility
  - Support and ownership
  - Attributions and transparency
  - Benchmarks and feedback (FKA “grades”)
  - When in doubt, reach out!

And we're off!

What are we doing this quarter?

Qualitative **research** *methods*

Lived experience > project content > satisfying academic requirements

Peers as sites of learning

Purpose and practice of reflection

Connections to design work/practice

And we're off!

What are we doing this quarter?

Qualitative

Qualia—what X is like

Lived experience <> human experience

Salience: beyond "quality versus quantity"

- Salience <> valence

And we're off!

What are we doing this quarter?

Research

Rechercher — cherchier — circus — κίρκος

Observation… seeking… Inquiry *for…*

Design: whose experience?

And we're off!

What are we doing this quarter?

Methods

...Methodologies

- practical methods and their cultural/historical traces and baggage
- theories/motivating ethos

A word about words

Words are useful

Words are fundamentally incomplete

Words are barriers

Words are a means of exercising power

Words are a means of denoting community

Words are rad and playful

Words are porous and flexible

Words are free and curious

Words ultimately belong to you

Epistemology

Ontology

Theory

Position, positioning, positionality

Reflection, reflexivity, reflexive work

Standpoint

...and many more!

Project Group Milestones

(60%)

Week 1
Pre-class survey (0%)

Week 2
Group norms (5%)

Week 3
Project proposal (10%)

Week 4
Sociotechnical space analysis (10%)

Week 5
Research protocol (15%)

Week 7
Submit data (10%)

Week 8
Submit codebook (10%)

Week 9
Submit memos (10%)

Week 10
Presentation of findings (10%)

Week 11 (no class)
Final report/portfolio (20%)

Peer Education Experiences

(30%)

Each of you will work with a group (not your project group) to present important topics to your **peers** through **a hands-on experience** (i.e. not ~~just~~ a lecture)

Readings/other prep for these topics are **assigned to everyone** in class

Sign up for groups/topics on Canvas

The learning experiences you design should be ***inspired* by the readings**/other prep material – goal is *meaning-making*

Current topics: choosing methods, changing questions and scopes, ways of knowing, standpoint and power, analyses and trustworthiness

Peer Education Experiences

(30%)

Prepare and present a hands-on/experiential learning opportunity for your peers based on assigned reading/prep material (40%)

Reflect and respond to discussion prompts for each peer education experience (10% x 6 experiences)

Individual Reflections

(10%)

[Beginning-of-Quarter Reflection]
In pre-course survey
(0%)

Mid-Quarter Reflection
(50%)

End-of-Quarter Reflection
(50%)

Data Collection

Our first HCDE 519 interview

Protocol development

Data collection and synthesis

Presentation of findings

Reflection

You will **interview** one of your peers in class and then **introduce** them based on what you learn in your interview process

Our first HCDE 519 interview

Protocol development

Data collection and synthesis

Presentation of findings

Reflection

You will **interview** one of your peers in class and then **introduce** them based on what you learn in your interview process

You will be randomly-paired with another person based on the color card in front of you

Our first HCDE 519 interview

Protocol development

Data collection and synthesis

Presentation of findings

Reflection

Research question: Who is this person in my HCDE 519 class?

Our first HCDE 519 interview

Protocol development

Data collection and synthesis

Presentation of findings

Reflection

Research question: Who is this person in my HCDE 519 class?

Your protocol must:

- ➔ Framework a **semi-structured interview**
- ➔ Include three (3) **open-ended questions**
- ➔ Allow you a **scope** that is appropriate s.t. you can present your findings to your peers in a **20s time window**
- ➔ Include your **paraphrasing** of ONE (1) of the following questions:
  - What is your smallest fear?
  - Can you tell me about the most boring detail on your resume?
  - What is your 3rd-favorite color and why does it hold this rank?

Our first HCDE 519 interview

Protocol development

Data collection and synthesis

Presentation of findings

Reflection

Tips for semi-structured interviewing

Ask open-ended questions

Try rephrasing questions

Follow the curious things and maintain perspective on rapport<>question

Slowness... playfulness... porosity...

Tips for analyzing your data

Capture both sides of the interaction

Reflect on what has transpired beyond the words themselves

Play with visualizing your data

Our first HCDE 519 interview

Protocol development

Data collection and synthesis

Presentation of findings

Reflection

Please **introduce** your randomly-assigned partner to the class!

Our first HCDE 519 interview

Protocol development

Data collection and synthesis

Presentation of findings

Reflection

On the class Miro board, **capture your reflections** on the following prompts:

Reflect on the acts of interviewing and representing another person

How did the representation of you compare to how you might have represented yourself?

Describe 1-2 aspects of this reflection you'd like to learn more about and/or understand better

Closure?

Break

[10 minutes]

If you have not filled out the class survey, please do so now

The Nature of [Research]

If you know the answer to the question on the next slide, **don’t say it!**

Nota bene: The image of the artifact on the next slide contains alt-text which describes the artifact but does not name it

What is this?

Reflection

On Miro, explore the prompts to the right

What do you know?
How do you know this?

What don't you know? Why?

What do you need to know?
Why do you need this info?
How do you know you need this info?
How can you find this info?
Can you find this info?

Can you know what this is?

Reflection

On Miro, explore the prompt to the right

Revisit your response to the survey questions about the nature of research

Did the experience of discovering this artifact influence your thoughts about these questions?

Closure?

Break

[10 minutes]

Data Analysis

Our first HCDE 519 data analysis

Data familiarization

Coding

Clustering

Memoing

Now you will analyze an **existing dataset**: your responses from the pre-class survey about topics which interest you for class projects this quarter.

Our first HCDE 519 data analysis

Data familiarization

Coding

Clustering

Memoing

Your survey responses are on the Miro board and grouped into two sets:

- Raw data (names and responses)
- Responses only

Spend ~5 minutes looking over the responses-only dataset, making note of things that catch your attention

Our first HCDE 519 data analysis

Data familiarization

Coding

Clustering

Memoing

Coding is the process of labeling data to capture recurrent events, outliers (“curiosities”), and other points of interest

[Demo]

Use **sticky notes** on the Miro board to code the responses-only column (your first-pass coding)

Our first HCDE 519 data analysis

Data familiarization

Coding

Clustering

Memoing

Discuss your codes with 1-2 peers

Use **sticky notes** to conduct a second round of coding — make sure that your system allows you to **distinguish** between your first and second rounds

Our first HCDE 519 data analysis

Data familiarization

Coding

Clustering

Memoing

Discuss your codes and others' codes with 1-2 peers

- How do your rounds of coding compare to each other?
- Do you see any emergent patterns? Oddities or curiosities? Anything unexpected? Anything entirely boring?

Our first HCDE 519 data analysis

Data familiarization

Coding

Clustering

Memoing

Copy your sticky notes over to the next section on the Miro board (labeled “Clustering”)

Look over the codes that you’ve assembled and explore how they might relate — i.e. construct clusters

- You can sort a particular code into more than one cluster — just make a copy of the sticky note

Give a short, descriptive name to each cluster

Our first HCDE 519 data analysis

Data familiarization

Coding

Clustering

Memoing

A **memo** is a short written summary of a particular pattern that emerges from a qualitative dataset, citing information from the dataset

For each cluster, write a 2-3 sentence memo describing the cluster and additional thoughts/questions you have about that cluster

- Use quotes from the dataset to support your assertions in your memo

Types of projects

Discuss topics of interest with your peers that have emerged from this analysis

Before the end of class, please submit your 2-4 person team on the Team Formation Discussion thread on Canvas

Closure?

For Next Week

Before next week's class

Lived experiences of **qualitative researchers**

- Read 3 assigned readings (available on Canvas) and open code them

Course project topics

- Identify clusters (--> topics) that you would like to INFORMALLY "pitch" to your peers as project DOMAINS (not specific projects yet)
  - Include 2-3 potential questions that you could explore

Week 2

Ways of Knowing

Epistemology

—or—

How we know what we know, and how

(Very straightforward, yes? ...?)

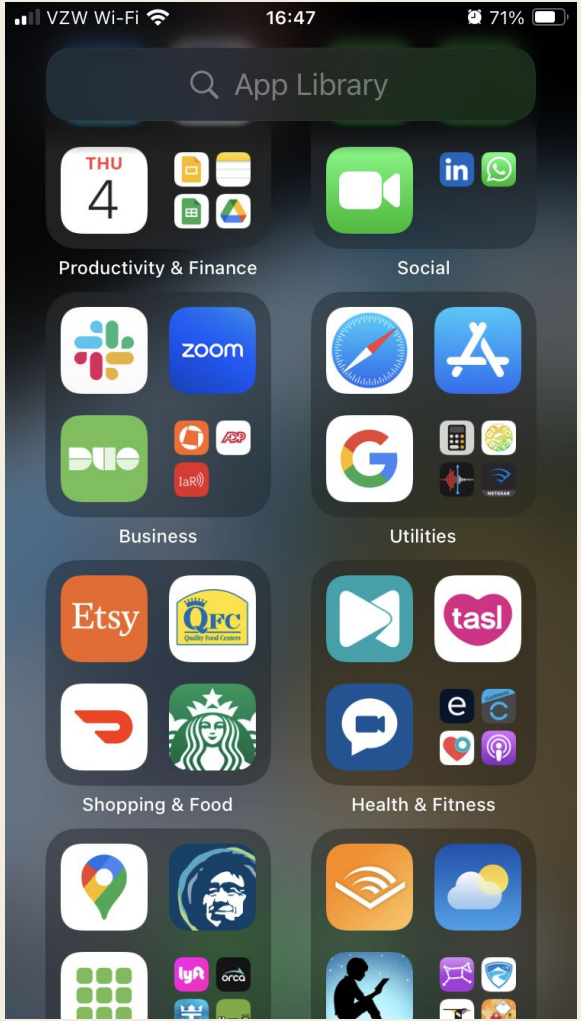
What can/can't known?

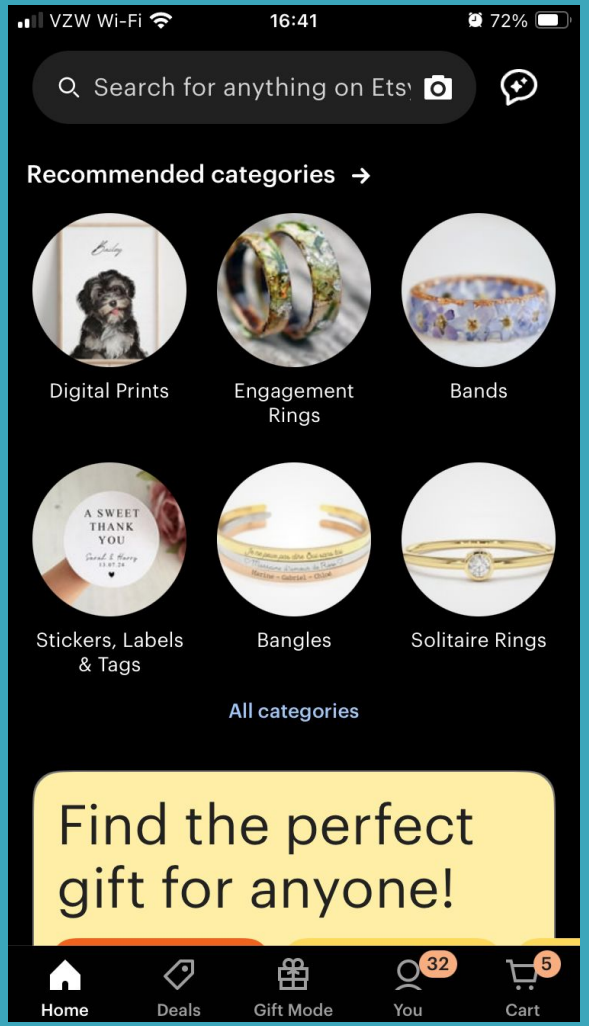
How can we arrive at "knowing"?

How do our systems of knowing compare to others?

Closure?

How might we support continued engagement by repeat shoppers on our mobile app?

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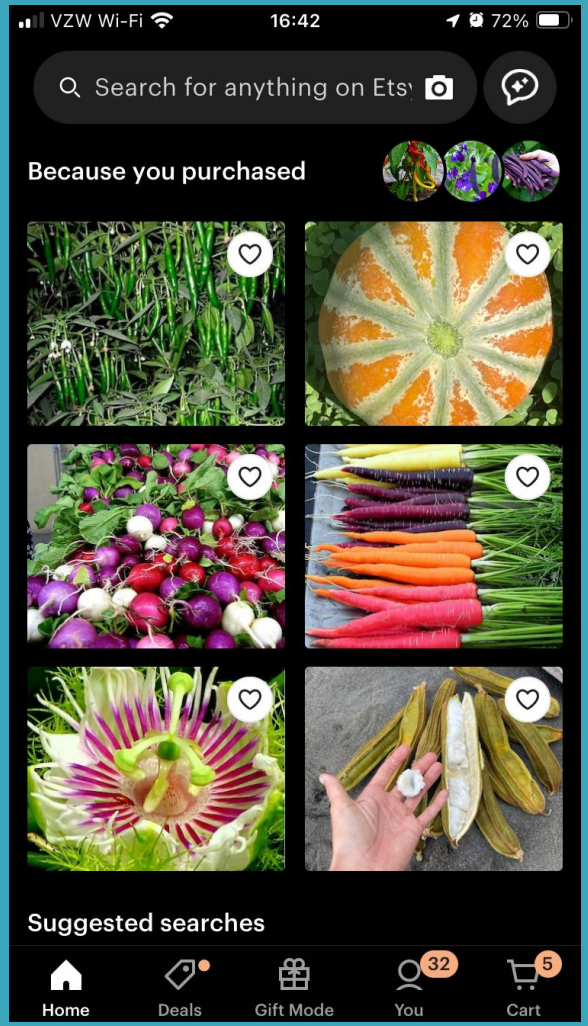
72%
Search for anything on Etsy
Recommended categories →
Digital Prints
Engagement Rings
Bands
Stickers, Labels & Tags
Bangles
Solitaire Rings
All categories
Find the perfect gift for anyone!
Home
Deals
Gift Mode
You
32
Cart
5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Home
Deals
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Cart
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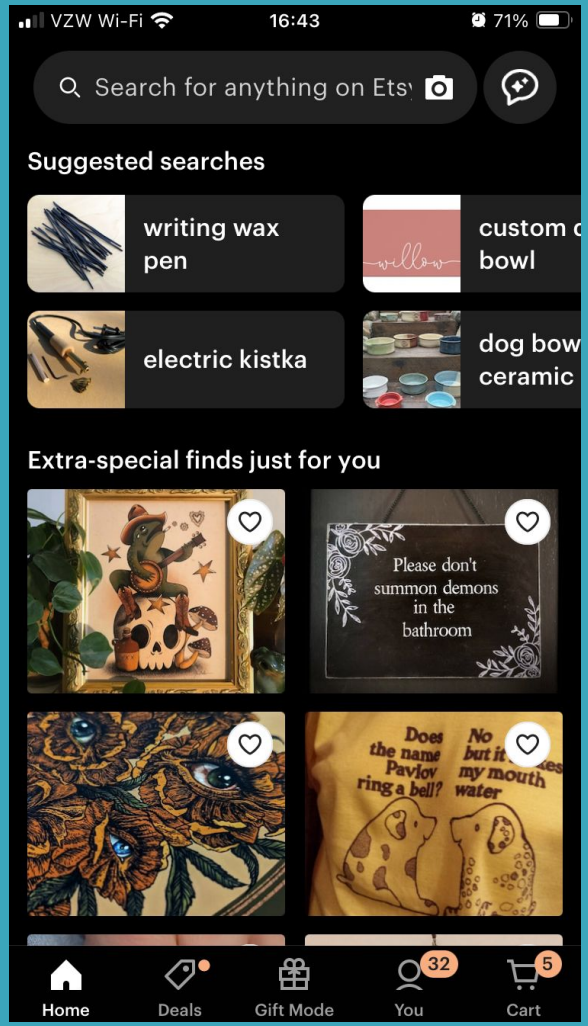
VZW Wi-Fi
16:43
71%
Search for anything on Etsy
Suggested searches
writing wax pen
custom c bowl
electric kistka
dog bow ceramic
Extra-special finds just for you
Please don't summon demons in the bathroom
Does the name Pavlov ring a bell?
No but it makes my mouth water
Home
Deals
Gift Mode
You
32
Cart
5

More information

Purchases in last thirty days

- Mushroom log
- Humorous bumper sticker (sent as gift)
- Pride keychain

Repeat purchases

- 240-count silver leaf charms (same seller)
- various types of stickers (same seller)

Ten most recent purchases

- Mushroom log
- Humorous bumper sticker (sent as gift)
- Pride keychain
- Minimalist constellation ring (not sent as gift, but messaged seller about correction to order mentions the word “gift”)
- Lehenga choli (clearance sale)
- Kistka wax pen set
- Brush tipper for bodhran
- Resin phone case
- Glass Indian wedding bangles (clearance sale)
- Three lehenga choli sets and two sherwani sets (bespoke purchase)

Types of questions

WHAT (who, etc.)

Descriptive

WHY (how, etc.)

Explanatory

A few methods...

Observations (where? how?)

Interviews

Diary studies

Focus groups

Archival/historical research

Others?

A few statements...

Many people have an affinity for remote work.

The average work-“lifespan” of an EMT is four years.

Northeastern China has a very large ethnic Korean population.

Colorado is home to a large number of ski resorts.

Peer Education Experiences

BEFORE YOU PRESENT YOUR EXPERIENCE TO YOUR PEERS:

1. Send any materials/info to instructors if needed (e.g. if you need projection, physical materials, etc.)
2. Send reflection prompt(s) to instructors – discussion threads are already set up and we will update them with your prompts

Week 3

Peer Educational Experience:

Choosing Methods

April 11th, 2024

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Methods

Qualitative methods & when to use them

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Scenarios

Practice makes perfect

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Reflection

What did you learn?

01

Methods

How do you choose the right method?

How do you choose a method?

Step 1: Define your research goals, objectives, and question.

- Who is your target audience?
- What are you looking to learn?

Step 2: Determine your constraints.

- What are your limiting factors?
  - E.g., time, cost, remote/in-person, digital/physical, etc

Evaluate these variables and pick methods that will best fulfill your research needs.

Interviews

What is it?

- A research method used to gain insights into how users think, act, and feel
- Researchers can ask participants questions in a few ways:
  - Structured: pre-written, ordered list
  - Unstructured: general plan
  - Semi-structured: predetermined thematic framework with room for improvisation

Best Use Cases:

- Wide and varied
- Customer interviews, stakeholder interviews, market research, following up on observations, etc

Interviews

Pros	Cons
Provides detailed attitudinal information	Time-consuming to conduct and analyze data
Enables researchers to build rapport with participants, which can lead to better data collection	May be subject to interviewer bias
Allows researchers to follow up on and clarify participant responses	Respondents might want to give the “right” answer rather than a true answer
	Informs researchers about attitudes rather than behaviors

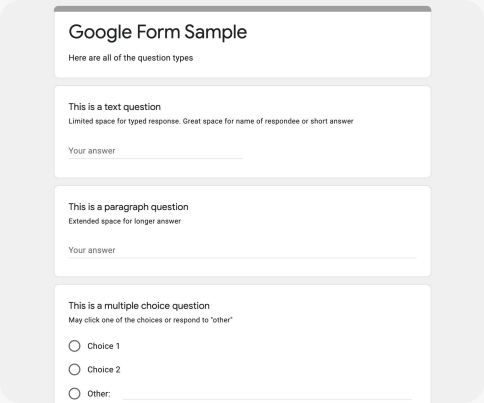
Surveys

What is it?

- A method to collect data from a set of respondents through a series of questions to gain insights on various topics

Best Use Cases:

- Market research for a new product
- Gathering potential customers' opinions to refine product design and develop marketing strategies



Surveys

Pros	Cons
Broad reach	Potential for response bias
Cost-effective	Potentially low response rates
	Limited depth
	Possible interpretation issues with the questions

Diary Studies

What is it?

- A research method where participants record their activities, thoughts, and feelings over a period of time to provide insights into their behaviors and experiences

Best Use Cases:

- For understanding how users interact with a new feature throughout their day
- For identifying usage patterns and potential friction points to inform design improvements

Diary Studies

Pros	Cons
Cost-effective	Relies on participant commitment and accurate self-reporting
Rich qualitative data on user behavior over time	Time-consuming data analysis process
Insights into the context and emotional aspects of user experiences	

Observational Studies

What is it?

- A non-experimental technique where you directly observe the phenomena you are studying in its natural situation
- Three types:
  - Naturalistic
  - Participant
  - Structured

Best Use Cases:

- When you need to see how participants behave in a natural setting
- When you want to know how real world factors influence behavior
- When self-reporting from participants is unreliable or impossible

Observational Studies

Pros	Cons
Highly accurate data about natural behaviors and interactions	Existence of outside factors that may impact the study
Simple technique, requires no technical skills	Potential personal bias from researchers
Useful when there are ethical concerns with performing an experiment	Can't make any causal conclusions
	Can be time-intensive and costly

Focus Groups

What is it?

- A qualitative method where a small group of participants discuss a specific topic under the guidance of a trained moderator

Best Use Cases:

- Market research
- Product development
- Decision-making processes

Focus Groups

Pros	Cons
Useful for in-depth insights into participants' opinions, attitudes, and perceptions	Limited generalizability
Group diversity can spur more creativity	Time and resource intensive
Flexibility	Vulnerable to moderator influence
	Subject to group dynamics

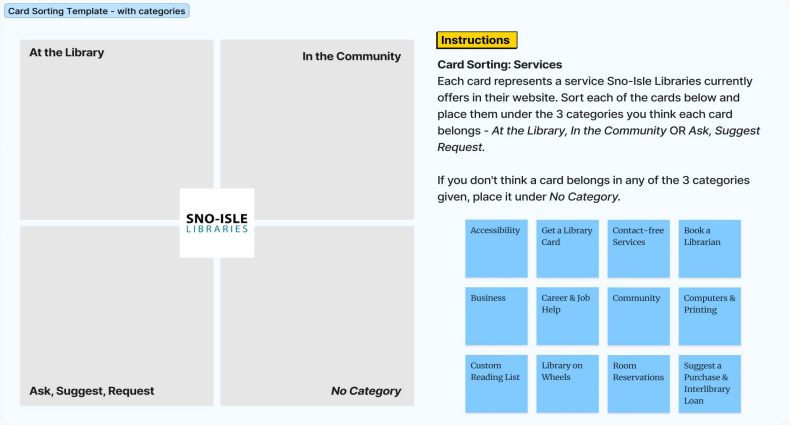
Card Sorting

What is it?

- A method to used to understand how users categorize and organize information
- Involves participants sorting predefined cards representing content, features, or concepts into groups that make sense to them

Best Use Cases:

- Information architecture design
- Content organization
- Market research



Card Sorting

Pros	Cons
Cost-effective	Challenges with interpretation
Good for identifying patterns	Potential biases
User-centric design	Time-consuming

Archival/Historical Research

What is it?

- A method that systematically examines and analyzes past design artifacts, user data, and records
- For gaining insights into how user experiences, technologies, and design patterns have evolved over time

Best Use Cases:

- Redesigning legacy products
- Understanding industry evolutions
- Preserving institutional knowledge

Archival/Historical Research

Pros	Cons
Provides crucial context and background	Potential limitations in data availability, validity, and relevance
Uncovers forgotten insights and patterns	Time-consuming process
Promotes learning from past mistakes	Challenges in interpreting data without proper context

02

Scenarios

Which methods should we choose?

Scenario 1

Investigate the dining experiences of people with dietary restrictions (e.g., vegan, gluten-free, nut allergies) when eating out at restaurants. The study aims to uncover the challenges they face, the availability and quality of menu options, and suggestions for improvement from the perspective of these diners.

Target Audience	Individuals with dietary restrictions who frequently dine out.
Existing Resources	Access to social media and online forums for recruiting participants
Time Frame	Within 4 weeks
Budget	$ 300

Scenario 2

You are part of a team of UX Researchers at an apparel company. The company is looking to redo the categories for their online shopping platform in order to better reflect their customers' expectations. What methodologies would you use in a research study, and why?

Target Audience	Online shoppers looking to buy clothing
Existing Resources	Access to existing shopping platform, as well as a database of previous customers for recruiting participants
Time Frame	Within 4 weeks
Budget	$5,000

Scenario 3

You are an external consultant for the International Olympic Committee and have been tasked with researching potential venues for an Olympic event in the distant future. What methodologies would you use for conducting this research, and why?

Target Audience	The International Olympic Committee
Existing Resources	Public databases, the internet
Time Frame	5 years
Budget	Unlimited

Scenario 4

You are a researcher hired by a local hobby shop that sells board games, trading cards, etc. The shop is asking you to help find out what they could do to increase the number of people that come to their store to shop and participate in events. What methodologies would you use for conducting this research, and why?

Target Audience	Board game/card game Hobbyists
Existing Resources	Hobby store sales data, event calendar
Time Frame	2 months
Budget	$1500

03

Reflection

What did you learn?

Reflection Prompt

What research methods do you think will be useful for your project this quarter? Why?

Thank you!

Any questions?

Review and expand

Last week, we explored WHAT versus WHY questions

Recall

WHAT questions are descriptive – researchers can observe behaviors/patterns without [seriously] influencing the inquiry space

- Do researchers ever NOT influence the space?

WHY questions are explanatory – researchers must interact with (--> influence) the inquiry space to interrogate behaviors/patterns

- I.e. you cannot know what is in someone's head unless you ask

Review and expand

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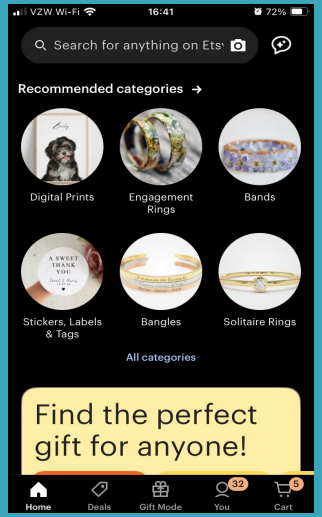
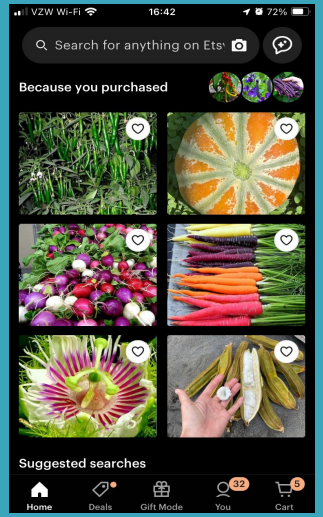
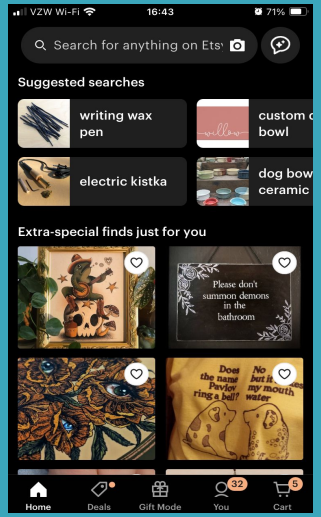
Design question

How might we support continued engagement by repeat shoppers on our mobile app?







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Design question

How might we support continued engagement by repeat shoppers on our mobile app?

WHAT questions (e.g.)

- *What do shoppers repeatedly purchase?*
- *How often do repeat shoppers open the app?*
- *How do repeat shoppers use the "like" button?*
- *How much time do shoppers spend on engaging x, y, z sections/functions?*

Review and expand

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- *How much time do shoppers spend on engaging x, y, z sections/functions?*

WHY questions (e.g.)

- *What motivates shoppers to open the app?*
- *How do shoppers use the "like" button?*
- *What are shoppers' experiences with the "Suggested Searches" function?*

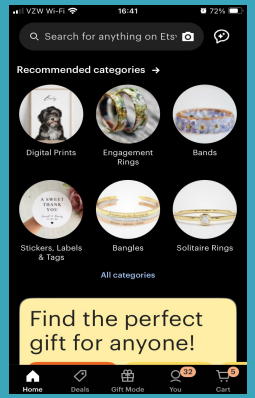
Review and expand

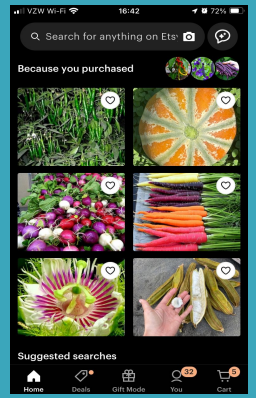
Un/familiar heuristics

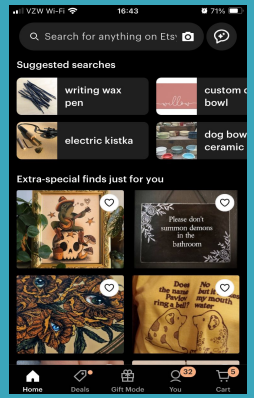
Descriptive versus explanatory

How often do repeat shoppers make multiple purchases from the same seller?

What motivates repeat shoppers to make multiple purchases from the same seller?







Review and expand

Un/familiar heuristics

Descriptive versus explanatory

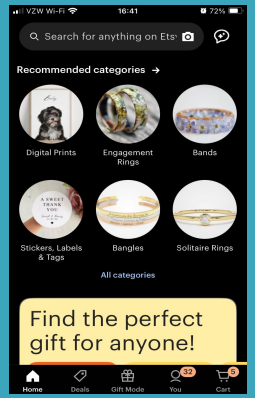
Qualitative versus quantitative

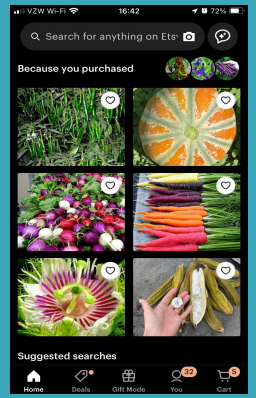
Why do repeat shoppers open the app?

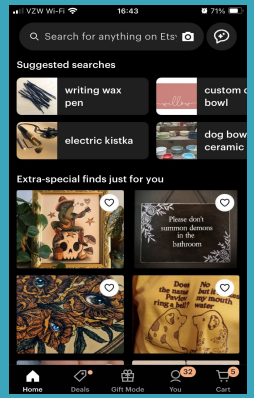
How often do repeat shoppers make multiple purchases from the same seller?

How often do repeat shoppers make a purchase relative to how often they open the app?

What motivates repeat shoppers to make multiple purchases from the same seller?







Review and expand

Un/familiar heuristics

Descriptive versus explanatory

Qualitative versus quantitative

Top-down versus bottom-up

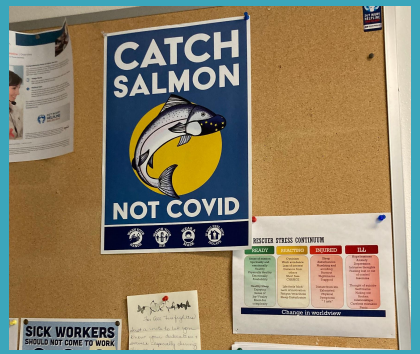
What is the average length of an EMT career in Southeast Alaska? Why do they leave?

What motivates people to work as EMTs in SE AK?

What are the requirements to be an EMT in SE AK?

What does EMT work in SE AK involve?

How might we ensure that SE AK communities have sufficient EMT staffing?



Review and expand

Un/familiar heuristics

Descriptive versus explanatory

Qualitative versus quantitative

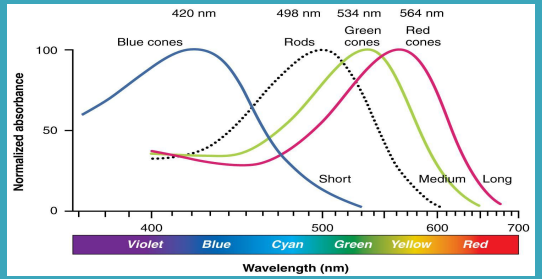
Top-down versus bottom-up

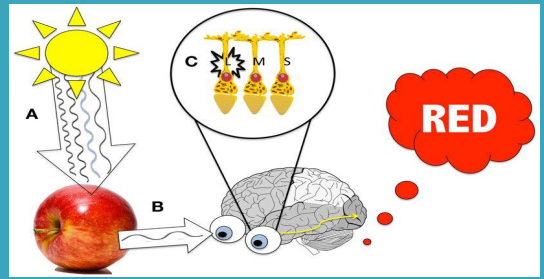
Inductive/abductive versus deductive

How might we use color to influence user attention?

Why is red a perceptually-sticky color?

How does experiencing the color red impact observers?





Review and expand

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Top-down versus bottom-up

Inductive/abductive versus deductive

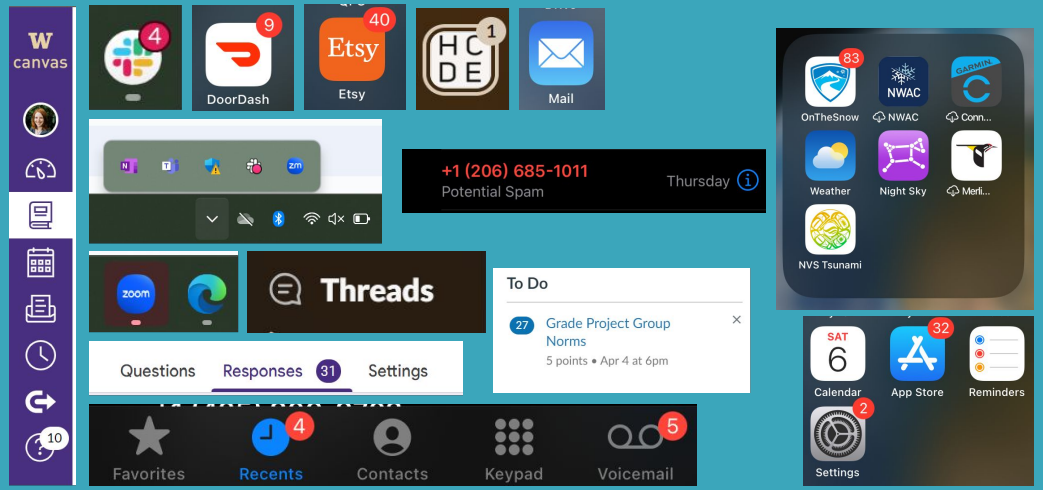
Phenomena versus trends

What color should app notification badges be?

What colors of notification badge are effective in capturing app user attention?

Is red an attention-grabbing color for all populations?

What is it like to experience a red notification badge?



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Local versus global

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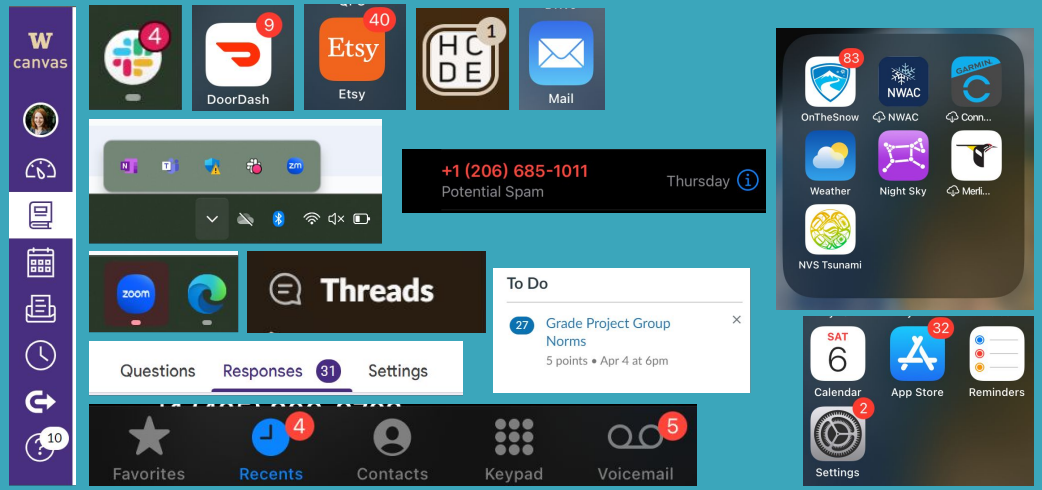


Review and expand

Un/familiar heuristics

Descriptive versus explanatory

Qualitative versus quantitative

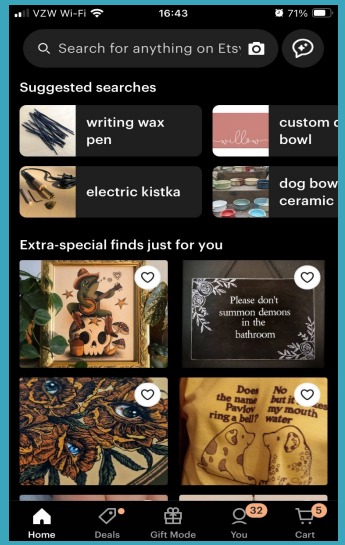
Top-down versus bottom-up

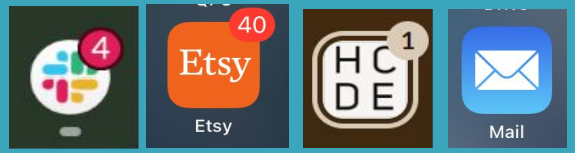
Inductive/abductive versus deductive

Phenomena versus trends

Local versus global

Others?





CITATION

HONORING SITKA'S HEALTHCARE PROFESSIONALS, FIRST RESPONDERS, AND FRONTLINE WORKERS

WHEREAS, our nation, state and city are in the midst of one of the worst global health pandemics in history, as a result of COVID-19; and

WHEREAS, healthcare professionals, first responders and frontline workers put their lives on the line every day to provide support and lifesaving care to the residents and visitors of Sitka; and

WHEREAS, physicians, nurses, technicians, other healthcare professionals, hospital support staff, as well as first responders including emergency rescue personnel, firefighters and law enforcement officers and other frontline workers who provide essential services, have faced the challenge of providing care for patients with COVID-19, often risking their own safety to provide critical care to others; and

WHEREAS, during a time when the sick in our community cannot have their loved ones by their side, these dedicated men and women surround and support our friends and neighbors with care and compassion; and

WHEREAS, the SoutheEast Alaska Regional Health Consortium, the State of Alaska Public Health, Harry Race and White's Pharmacies, the Sitka Fire Department and EMTS and many other frontline workers have exhibited compassion, understanding, and professionalism during long hours and through challenging circumstances, and we are grateful for their service.

NOW, THEREFORE, the Assembly of the City and Borough of Sitka, does hereby express appreciation for Healthcare Professionals, First Responders and Frontline Workers during this time of COVID-19 case surge and urge all citizens to join in recognizing and honoring the devotion of these individuals to the health and well-being of our city.

Signed and sealed this 10th day of August, 2021.

Steven Eisenbeisz, Mayor

ATTEST:

Sara Peterson, MMC
Municipal Clerk

Review and expand

Epistemology

Do we know X?

What assumptions underlie X?

What traditions underlie X?

Can we know X?

How can we know X?

Why can we know X?

When can we know X?

Who is “we”? Who gets to be “we”? Does this matter? Why/not?

What color should app notification badges be?

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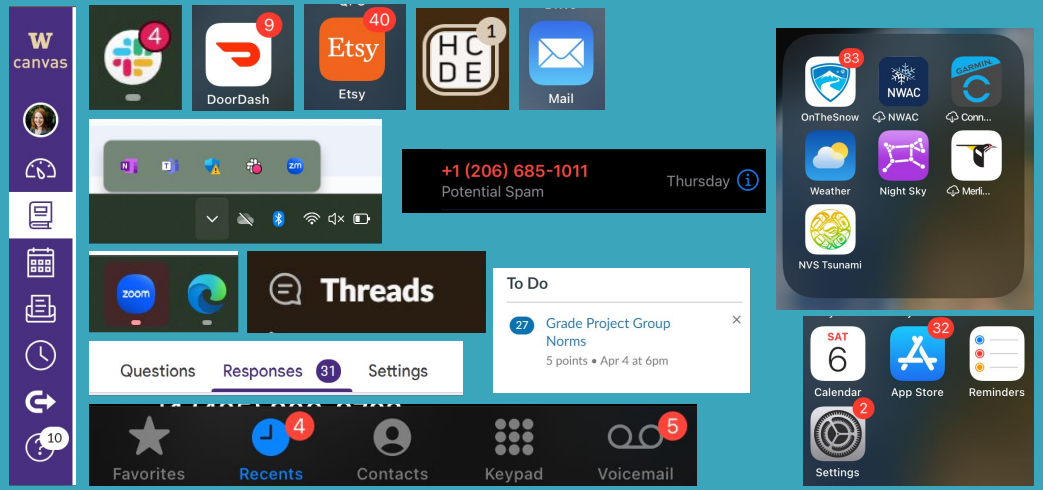
What is it like to experience a red notification badge?



Readings

What’s ethnography?

More on this in coming weeks!

Method from anthropology and sociology

Observational, phenomenological, contingent, ?subjective?

Researcher **embeds** in research space → **experiences/observes** space → **asks others in space** about their **perspectives** about space and nuances (cultural, sociotechnical, etc.)

→ **describes** space → **engages participants** in validation/critique

→ **describes** space for broader audience/targeted purpose

What's phenomenology?

More on this in coming weeks!

...As philosophy

What can we know about the world when our interactions with it are contingent on pre-existing relationships?
Can we disengage from a space/event/concept to study it objectively?

...As method

Temporality, spatiality, materiality, sociality, embodiment, subject formation...
*Bracketing, intuiting, analyzing, describing...**

Blurs the distinction between WHAT versus WHY questions...

What is the color red like?
"What is it like to be a bat?" –Nagel
What is it like to work here? –HBR
What is it like to have a colostomy bag?

Readings

What types of inquiry were present?

Descriptive versus explanatory

Qualitative versus quantitative

Top-down versus bottom-up

Inductive/abductive versus deductive

Phenomena versus trends

Local versus global

Others?

Readings

What types of inquiry were present?

Descriptive versus explanatory

Qualitative versus quantitative

Top-down versus bottom-up

Inductive/abductive versus deductive

Phenomena versus trends

Local versus global

Others?

Phenomenology

Grounded theory method (stay tuned)

Readings

What epistemic lenses were in play?

Readings

What epistemic lenses were in play?

Commercial

Psychological (social? perceptual?)

Sociocultural

Utilitarian

Sociotechnical

Scientific

Educational

...Others?

Closure?

Break

[10 minutes]

Research into Design Space

Observational research
Secondary research
Competitive analysis

To borrow your peers' structure...

Naturalistic, participant, structured

Access, rapport/permission, documentation

Your interpretation capacity is LIMITED (does it exist?) —> critique your own perspective

Research into Design Space

Observational research
Secondary research
Competitive analysis

What have others uncovered about a topic (even if only somewhat related)? Has this question come up before (is it still the “same” question now)?

Trustworthiness

Transparency, citations

Google Scholar! UX forums! What other resources?

Research into Design Space

Observational research
Secondary research
Competitive analysis

Who else is in this space?

What do/n't they offer? Why?

Who do/n't they serve? Why?

Historical, other contexts?

Break

[20 minutes]

Peer Feedback

Research Proposals

Present your current research proposal to your peers

One-sentence summary of your topic

Your current research questions

Your motivations for focusing on these questions, incorporating your secondary research

Your researcher assumptions

Your stakeholders, access to them, and considerations for engagement

Your projected plans for observations and competitive analyses (what are these? stay tuned...)

Peer Feedback

Research Proposals

Give feedback to your peers about their proposals

Including but not limited to:

Strong points and gaps in

- *secondary research*
- *rationales for decisions*
- *scoping logic*
- *access to stakeholder populations*

Potential for impact (what impacts? for whom? according to whom?)

Peer Feedback

Research Proposals

Discuss the feedback you've received with your team members and the instructors

Including but not limited to:

What are the current strengths of your research proposal?

What are gaps you want to address? How might you do this?

What seems to be more relevant than you previously thought? Less relevant?

How has your scoping changed, if at all?

Provocation

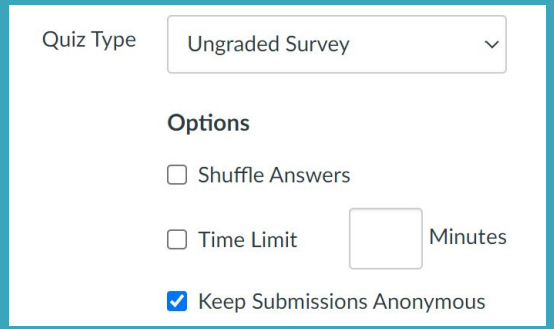
Research Proposals

Discuss the following prompt with your peers:

Who will you be after conducting this research?

Provocation

Research Proposals



Discuss the following prompt with your peers:

Who will you be after conducting this research?

Reflect individually on the same question and then detail your thoughts in the Canvas survey

- *Personal reflection space*
- *Learn from peers' thoughts*
- *Lay groundwork for positionality and reflexive work*

We will share an anonymized visualization of these responses with the intention of building a feeling of connection and curiosity around this self-reflection

Reflecting on Reflection

For Next Week

Before next week's class

Individual Sociotechnical Space Analysis

Group assignment submission incorporating individual efforts

Components

- Guiding research topic or statement (Group)
- Research into design space (Individual → synthesis → group)
  - Observations
  - Secondary research
  - Competitive analysis of design space
- Revised study specs (Group)
  - Up-to-date RQ(s)
  - Participants
- Appendices (Compiled individual/group)

Week 4

In your group

Create 5 shareable points

In 5 minutes, creatively manifest:

- 3 talking points about your design space and research question(s)... **INFORM**
- 2 questions, curiosities, things to celebrate... **CONNECT**

Then put your 5 points on a slide and add it to this deck after the slide following this one.

Put 2 copies of your slide HERE

(right after this slide, not ON this slide...)

In your group - AI Group ARKNL

Create 5 shareable points

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In your group - AI Group ARKNL

Create 5 shareable points

Talking points:

- Trust isn't as much as a concern as we initially thought.
  - There is a general level of skepticism (which grows over time)
- People find value in such different use cases (use in different ways - some more rigorous, some more casual)

Questions: Current state of research qs? –Jennifer

Trust vs skepticism –Jennifer

‘Cozy Gaming’ Communities

Examples: Animal Crossing New Horizons, Stardew Valley, etc.

Talking Points

- Interactions within ‘Cozy Gaming’ communities are largely wholesome, positive and welcoming.
- Conversations and connections go beyond the game, and branch into people’s lifestyles, lived experiences and other cozy hobbies
- It is intriguing that these conversations take place across people of different age groups, occupations, etc.

Questions

- How do demographic factors such as age, occupation, and lifestyle influence the nature of interactions within cozy gaming communities?
- How do cozy gaming communities foster positive and wholesome interactions?

‘Cozy Gaming’ Communities

Examples: Animal Crossing New Horizons, Stardew Valley, etc.

Who defines terms?
[ppts tell you <> you est.]
Origins and

Talking Points

- Interactions within ‘Cozy Gaming’ communities are largely wholesome, positive and welcoming.
- Conversations and connections go beyond the game, and branch into people’s lifestyles, lived experiences and other cozy hobbies
- It is intriguing that these conversations take place across people of different age groups, occupations, etc.

Questions

- Qual/quant: How do demographic factors such as age, occupation, and lifestyle influence the nature of interactions within cozy gaming communities?
- Qual: How do cozy gaming communities foster positive and wholesome interactions?

Health AI

Create 5 shareable points

```
“Autonomous” wakeup
“Out of technology into the world”
via smaller screen
Define “receptive”?
```

In 5 minutes, creatively manifest:

- 3 talking points about your design space and research question(s)... **INFORM**
  - Different AI affordances: Fitbit: Wake up
  - Behavioral Effects
    - Negative vs Positive
  - Battery Life
- 2 questions, curiosities, things to celebrate...
  - 1.How receptive to AI?
  - 2.Personalization, AI?

In your group

Create 5 shareable points

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DesignScout.Ai

Create 5 shareable points

- **INFORM**
  - It's unclear if design managers are truly unhappy with recruiters.
  - Portfolio evaluation is time consuming as hell.
  - Design challenges could be perceived to be exploitative.
- **CONNECT**
  - How can the product overcome some of the perceived limitations of design challenges?
  - How can we make design challenges useful and not exploitative?

Then put your 5 points on a slide and add it to this deck after the slide following this

Causality

Autonomous Vehicles

Perception study on trust and reliability of autonomous vehicles in high-risk situations among young adults

Why is the perception in the driver's seat different compared to other autonomous vehicles (e.g. airplanes)?
Perception of control (new/not new, stick/automatic, etc.)
Is there a moment when trust changes? If trust is lost, is it gone for good? How do you recover trust if it's lost?

- Media content is largely responsible for shaping the perception around trust for self driving cars.
- Mixed reaction of people on autonomous vehicles specifically in high risk situations.
- Trust progressively gets better for people since first usage.

- Curious to see how new drivers are thinking about the future of driving.
- Does the vehicle's brand affect the level of trust?

Group Catalyst

(Meeting)

Goal alignment <> conflict <> perceptions of power/influence

“What is inconvenient?” <> “Is it inconvenient?” <> “What is it like to jump between platforms?” <> etc.

Assumptions about hierarchies - how do you know who is where in a hierarchy, what the structure is, how that structure works?

Knowing faces online! (Or not?) Online vs. in-person - how does the online environment impact the experience of collab vs in-person vs shifting?

Talking Points

- Disconnected collaborative platforms (google, figjam), and people are not aware of embedded features in zoom such as whiteboard
- Professional vs. Student meetings: main differences relate to objective and participants. Students usually have similar roles and positions, professional meetings have different hierarchy and levels of experience with more diverse goals
- Team dynamics cause time management disconnections during meetings

Questions

- What kind of tools would groups feel like is appropriate for creative collaboration
- Is it inconveniencing to have to jump between multiple platforms when meeting (zoom, miro figjam, slack)?

AI in the workplace

Effects on Individual Contributors

- The disruption in the workplace has happened before some examples are printing press, internet...
- Knowledge and creative industries are seeing opposing effects from AI; UX somewhere in middle
- AI is making work more efficient leaving room for the employee to work on creative work and less on monotonous tasks.
- ICs still don't fully trust the accuracy of AI-created work.
- There is a lot of ambiguity around AI regulation.

- **Research Questions**:
  What is the sentiment of individual contributors (ICs) around using AI at work?
- How do individual contributors (ICs) navigate ambiguity in a time where AI adoption is highly encouraged, if not mandatory at some companies?
- What power dynamics exist within AI development ecosystems and how does that influence the development, direction, and perception of AI for the masses?

Curiosities:

- Might AI affect and nudge people's preferences for the type of work they pursue?
- Would people want to collectively reverse some effects of AI?
- What does an AI-mature workplace look and feel like for the individual creator? AI in the post-hype phase

AI in the workplace

Effects on Individual Contributors

Reverse vs resist?

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Put 2 copies of your slides
BEFORE this slide

Everyone...

Reflect and illuminate

Respond to your peers' 5 points

- Share aloud
- Annotate slide #2
- Other ways?

In your group

Engage again with your space/RQs/etc.

How do your 5 points looks?

Have they changed? How?

Are there new ones?

What other prompt could be on this slide that you want to cover with your team? Go for it!

Peer-led education

01

Reading Background

Changing Questions / Scope

Scientific Research

How do you know what you say is true?

- Structured Process
- Experiments
- Generalizable
- Explain
- Predict
- Replicable
- Protocols

Accountability

- Single judgement
- Epistemological
- Requirement to explain & defend

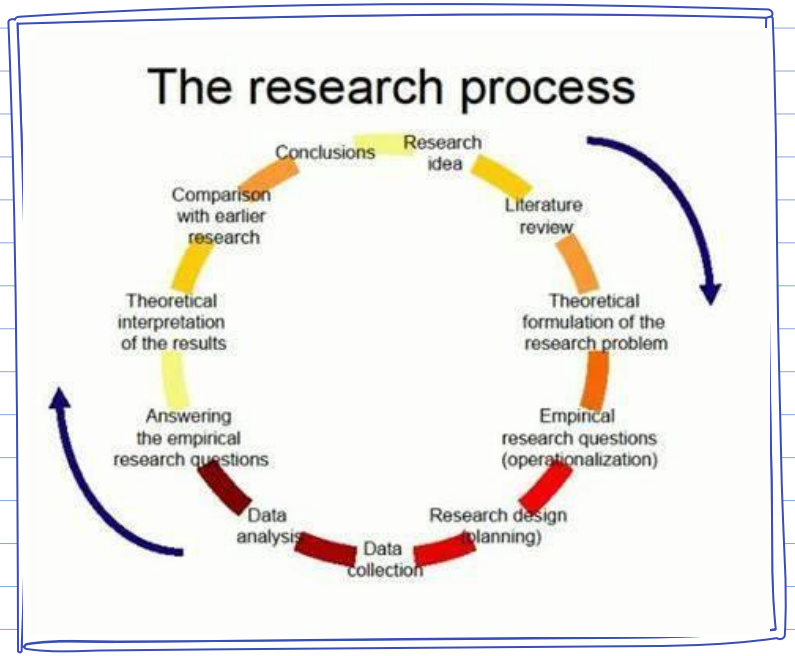

Image: Research Process as Circular – Prof Paresh Shah

Design Research

Does it work?

- Messy
- Ambiguity
- Lack scientific validity
- Motivated by possibilities
- Use many tactics to gather multiple accounts
- Grounded on curiosity, empathy, conjecture

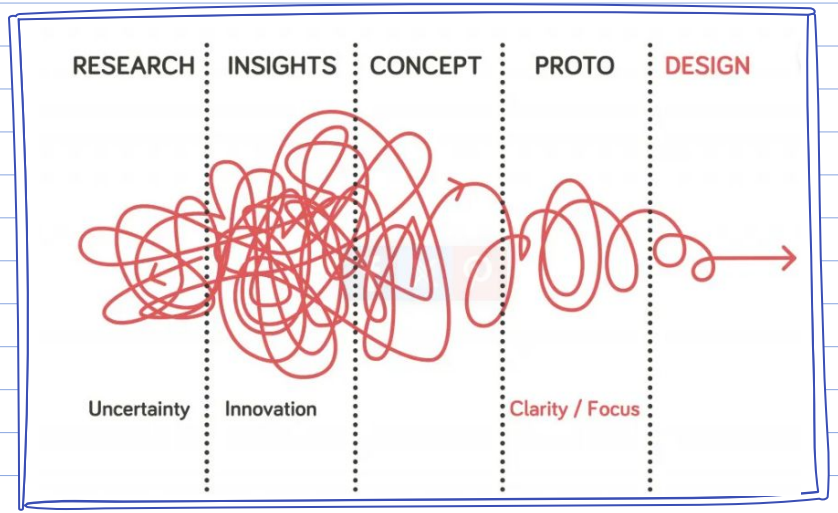

Image: A Journey into Design Thinking to Tackle Classroom Challenges - Judy Imamudeen

Accountability

- Aesthetic
- Demonstrate the design works

02

Activity

Amazon Prime - But Even faster

Scenario:

Your role: UX researcher on the Amazon Prime team.

Team goal: devising a new service for Amazon Prime users in Seattle that would allow them to get hyper fast (<30 mins) product deliveries on selected products.

Budget: $10,000

amazon

+

SEATTLE

Research question:

What products would Prime users want this hyper fast delivery service to cover?

Amazon Prime - But Even Faster and more Business-y

Plot Twist!

- The Amazon Business Prime (ABP) team next door unintentionally eavesdropped on your team's research project meeting.
- ABP loved this hyper fast delivery service idea so much that they want to explore it as an option for their enterprise users across the United States.
- So ABP kindly asked you to help them uncover what products their users would want to see included in the hyper fast delivery service.

Budget: Your budget went up to $60,000

what just happened?

- How did the new constraints influence your revised and new research plan? Were you able to scale your research up?

- Have you had to change design research questions / scope in your past projects (school or work)? If so, how was that like and how did you navigate the sudden change(s)?

03

Reflection

Reflection

During our in-class activity, we thought a lot about the frequency and importance of adapting the scope of a research/design project due to new findings and external constraints.

Are there any scenarios in which the project **scope should not be adapted** and the team should instead work to eliminate any external factors that might be curtailing the planned scope of the project?

THANKS!

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Please keep this slide for attribution

WAYS OF KNOWING IN SCIENCE AND DESIGN

Ways of Knowing in HCI, William Gaver

Anushka, Maza, Natasha, Raghav, Sara, Shrushti

Overview

- Both science and design play pivotal roles within Human-Computer Interaction (HCI), each with its own set of principles and objectives.

- Focus:
  - Science and Design
  - Scientific Methods
  - Design Methods
  - Accountability
  - Conclusion

- Exercise and Reflection

Science

Science uncovers what exists , figuring out how the world works

Uncovering in science refers to the process of systematically **discovering the underlying truths of the natural world.**

This is done through **observation and experimentation.**

This approach focuses on the **truth, accuracy, and reproducibility of knowledge.**

Design

Design creates the new , the goal of design is to make the world work in new ways and **produce new artifacts that work.**

Creating in design involves generating new ideas and tangible outcomes that integrate functionality with user experience.

This is done through a more flexible, iterative approach

This approach focuses on the **impact, functionality, and emotional resonance of the outcome**

Scientific Methods

THEORIES/ HYPOTHESIS

We use them to understand observations of the world

OBSERVATIONS

Repeated observations can test,extend or modify existing theories

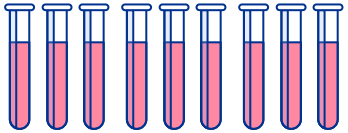
EXPERIMENTS

Testing through a set of experiments or observations in context

DATA

Data collection and analysis that can yield consistent results

Good Science is characterized by:

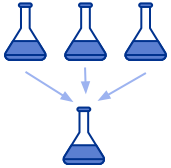


REPLICABILITY

Able to be produced by others.

OBJECTIVITY

True independent of individual experimenters

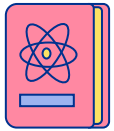


GENERALITY

Found in a wide variety of circumstances

CAUSAL

Explaining connections as a matter of necessity rather than coincidence



DEFINITENESS

Ability to explain what we know and how you know

CAN PREDICT

Ability to not only explain phenomena but predict new ones

Design Methods

Productive indiscipline: design methods aren't bound to a particular theory or method – they borrow from all disciplines or none.

Despite this, design projects usually go through **four stages** (more or less):

CONTEXT

A starting point

PROPOSALS

Multiple ideas are created

PROTOTYPE

A specific idea is chosen and tested

CONCLUSION

Through tests, a conclusion is reached

Good Design is characterized by:

WORKING

It's efficient, effective, solves problems, etc.

INDIVIDUALITY

It's original.

RESONATES

It's relevant to what's going on in the world.

EVOCATIVE

Stimulates new ideas.

ILLUMINATING

Inspires new ways of seeing the world.

Accountability

Science

- **Science** is epistemologically accountable (the need to be able to defend one's knowledge)
- **Science** relies on epistemological accountability

Design

- **Design** is aesthetically accountable (the need to be able to defend that one's production works)
- **Design** relies on epistemological ambiguity

Avoid misconceptions!

CRITIQUE + THOUGHTS

Both can be creative acts

Both have origin stories and have evolved drastically from what they looked like earlier

Neither is necessarily more ‘qualitative’ than the other

Exercise

How might you build this telephone from a:
scientific lens vs. design lens?

Exercise

What might you enquire about this object?

Exercise

How might you build this object from a:
scientific lens vs. design lens?

Reflection Question

What may be some project research questions that design methods can’t answer?

Expansion

Making an account of knowledge

“Validity”, or “Is it true?” <> “Does it do [x, e.g. “work”]?”

- Generalizability, prediction <> validity, interest, and impact
- Objectivity <> framing
- Replicability <> reliability <> trustworthiness

Context, space, and a researcher’s role in understanding

Learning and evaluating: “true/logical/positive” (scientific accountability) vs. “desirable” (aesthetic accountability)

For next week...

Situated knowledge

Strong objectivity

View from margin<>center

Interlocking forces [of oppression]

Photo by Sara Cervera on Unsplash

Photo by Sven Brandsma on Unsplash

In your group

Reengage again!

After learning more about standpoints and lenses...

How do your 5 points looks?

Have they changed? How?

Are there new ones?

What other prompt could be on this slide that you want to cover with your team? Go for it!

Use this time to transition these thoughts into working on your protocols...

Week 5

Peer Education

+reflection

STANDPOINT AND POWER

Khristine Cancio, Wilson Chen,
Travis West Hancock, Candelaria Herrera,
Karlton Lattimore, Lakshmi Narayana

RETHINKING OBJECTIVITY

THE "GOD TRICK"

A mythical position of seeing everything from nowhere.

Flawed; knowledge from this perspective is accountable to no one.

Situated knowledge is a product of

POSITIONAL PERSPECTIVES:

Who produces the knowledge?

Under what conditions is this knowledge produced?

Situated knowledge is

FEMINIST OBJECTIVITY:

By understanding knowledge as emerging from our positional perspectives, we can understand objectivity as **pluralist** - partial theories from different perspectives can coexist.

"Feminist objectivity makes room for surprises and ironies at the heart of all knowledge production; we are not in charge of the world." *~ Donna Haraway*

STANDARDS FOR MAXIMIZING OBJECTIVITY

STRONG OBJECTIVITY

Requires that the subject of knowledge be in place on the same critical, casual plane as the objects of knowledge

Strong objectivity requires “strong reflexivity” because culture wide beliefs function as scientific evidence

STANDARDS FOR MAXIMIZING OBJECTIVITY

STRONG REFLEXIVITY

Subject of knowledge refers to the individual and the historically located social community whose unexamined beliefs its members are likely to hold “unknowingly”

All of the kinds of objectivity-maximizing procedures focused the direct object of observation must also be focused on the observers and reflectors, the subject of knowledge

- A maximally critical study of scientists and their communities can be done only from the perspective of those whose lives have been marginalized by such communities

Not all social values and interests have the same bad effects upon research results, such as democracy-advancing values which have generated less partial or distorted beliefs

STANDARDS FOR MAXIMIZING OBJECTIVITY

Strong Objectivity requires the subject of knowledge understand themselves and the world around them. They must understand what others think of their beliefs and actions, not just what the subject of knowledge thinks of themselves and the object of knowledge

POWER IN THE MARGINS

The *"margins"* as a place of imagining new possibilities, instead of only seeing pain

Rather than starting at the "center" (white/western dominant knowledge)

Perspectives from historically marginalized communities enriches our understanding of the world; as radical creative spaces

POWER IN THE MARGINS

Underground Railroad Quilt Codes, Smithsonian

HOW CAN THIS HELP US AS RESEARCHERS?

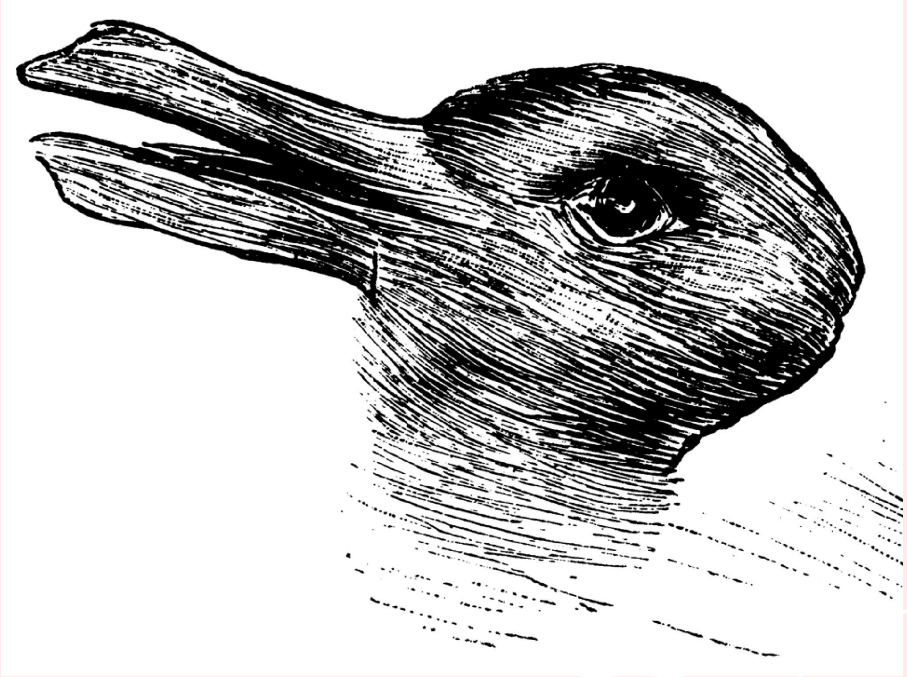
Community Based Participatory Research (CBPR) - collaborating with communities affected by the issues being researched, rather than seeing them only as subjects

Indigenous Research Methodologies - 5Rs

- Respect
- Relevance
- Responsibility
- Reciprocity
- Relationship

INTERACTIVE ACTIVITY

WHAT DO YOU SEE?



COMMUTING TO BAGLEY HALL FOR HCDE 519

COMMUTING TO BAGLEY HALL FOR HCDE 519

1

STANDPOINT / POSITIONALITY:

Reflect on your own values/beliefs/experiences (3 min.)

- Full-time/part-time?
- Time you leave?
- Leaving work/home?
- Car/carpool/transit/walk?
- First year at UW?
- Familiarity with campus?
- Familiarity with the US?

COMMUTING TO BAGLEY HALL FOR HCDE 519

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- Car/carpool/transit/walk?
- First year at UW?
- Familiarity with campus?
- Familiarity with the US?

2

REFLEXIVE WORK:

Discuss what it means to commute to 519 with 2-3 other people and incorporate their individual standpoints (7 min.)

- Are we expressing all of the individual standpoints?
- What standpoints are we centering or prioritizing?
- Are we overlooking any standpoints?

COMMUTING TO BAGLEY HALL FOR HCDE 519

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STANDPOINT / POSITIONALITY:

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- Familiarity with the US?

2

REFLEXIVE WORK:

Discuss what it means to commute to 519 with 2-3 other people and incorporate their individual standpoints (7 min.)

- Are we expressing all of the individual standpoints?
- What standpoints are we centering or prioritizing?
- Are we overlooking any standpoints?

3

KNOWLEDGE CREATION:

(open class discussion) (5 min.)

- How did you discuss your individual standpoints?
- What types of experiences did you hear?
- What things did you center on?
- How do you frame this knowledge, based on your individual standpoints?
- Marginalized perspectives? Power and prioritization?

PERSPECTIVE...

OUR LIFE EXPERIENCES GIVE US EACH UNIQUE PERSPECTIVES

IF WE DON'T TALK & EXPLAIN OUR VANTAGE POINTS, WE NEVER UNDERSTAND ONE ANOTHER

FINAL THOUGHTS & REFLECTION QUESTION

REFLEXIVE WORK IN UX PRACTICE

WHAT STAKEHOLDER STANDPOINTS TO CONSIDER

- Tenure (history with the organization)
- Job function (e.g., UX, finance, security)
- Seniority (e.g., CEO, leadership, manager)
- Experience with user research
- Demographics (race, age, gender identity)
- Background (nationality, lived experiences)

HOW/WHEN TO REFLECT

- Stakeholders (who you invite to the research)
- Research plan (values, beliefs, histories)
- Data collection (what notes, observations)
- Data analysis (key findings you center on)
- Debriefs (reflexive work, how you discuss others' standpoints in relation to the findings)

REFLECTION QUESTION

How do we as UX Researchers/UX Designers navigate/prioritize other stakeholders standpoints throughout the different stages of research (planning, methods selection, data collection, analysis, reporting)?

Standpoint and Power

What defines a researcher's relationship to a research space?

How does that relationship impact the process and products of research?

Are the end results of research “products”?

Standpoint and Power

Is it possible to be "objective" when studying human/lived experiences?

Most sociologists today argue that **knowledge is situated**—that is, that an individual will understand the world through the lenses they have, and have had, available to them.

Many (though not all*) cognitive scientists agree: as an individual human, you can only know the world through the means you have available for learning about it, namely sensory and social mechanisms.

* Those who disagree tend to focus on sensory, motor, cognitive, developmental, and sociobehavioral commonalities between individuals while foregoing considerations of complexities such as culture, history, identity, and life experiences typically relegated to "psychopathology" or "mental health." In my (ABB's) view, this is more of a reflection on the political history of siloed academic inquiry than productive grounds for inquiry and conversation about lived experience.

Standpoint and Power

Knowledge is situated

Knowledge is situated

We can know the world through our own individual experiences.

We can also learn indirectly through the experiences of others.

What we each can know through these mechanisms defines our individual **standpoints**. Standpoints represent individually-accessible perspectives.

Standpoint and Power

Knowledge is situated

Standpoints represent individually-accessible perspectives

"What is know(n/able)?" is by definition determined by those answering that question.

Entities that hold power tend to be the ones who answer that question, and the implications of those answers feed into power infrastructures accordingly.

Standpoint and Power

Knowledge is situated

Standpoints represent individually-accessible perspectives

Dominant entities/institutions define valid knowledge (--> determine infrastructures) within their spheres of influence

Entities who are subject to that infrastrcture but who don't hold key power within it experience both the infra (knowledge) and where that infra breaks down—i.e. viewpoints from marginal/ized standpoints tend to encompass broader perspectives on a particular space.

Entities who are subject to power (infra) tend to be so in plural, interrelated ways, termed "interlocking forces of oppression" in sociology.

"Centering" within a space involves selecting (intentionally or not) standpoints to prioritize.

Standpoint and Power

Knowledge is situated

Standpoints represent individually-accessible perspectives

Dominant entities/institutions define valid knowledge (--> determine infrastructures) within their spheres of influence

Knowledge from the margins tends to

So, is it possible to be “objective”? Is it possible to be “lens-free”? Is it possible to have a “view from nowhere”? Most sociologists today believe knowledge to be contingent by definition.

However, progressively “truer” knowledge of/for a particular space, as defined by those who inhabit it, is possible to obtain by combining multiple viewpoints—called “strong objectivity.”

This is not a mixing together of “known facts,” but is rather an active and dynamic process of reflecting on the origins of one’s own knowledge (positionality) and approaching knowledge creation and evaluation by reaching beyond one’s own standpoint to incorporate those of others (reflexive work).

Standpoint and Power

Knowledge is situated

Standpoints represent individually-accessible perspectives

Dominant entities/institutions define valid knowledge (--> determine infrastructures) within their spheres of influence

Knowledge from the margins tends to

bias. Research and its products instead continuously evolve as insights about knowledge and its applications emerge.

What about science? In scientific research, study spaces are meant to be scoped such that it does not matter who undertakes the manual or intellectual labor. Questions are articulated such that logic defines what can be known. The scope of a study space remains tightly focused.

What about design? In design research, study spaces are generative in scope: scopes can broaden, shrink, shift direction, remain static, newly emerge, become obsolete, or become newly relevant over time, between different places/spaces/populations, etc. Study spaces can (and do) respond to imposed questions/specifications that limit study space scopes. Design research ranges from very unconstrained (e.g. design probes,

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Week 6

Grounded Theory Method

Curiosity, Creativity, and Surprise as Analytical Tools

Dayton K., Divya M., Natasha A., Niharthi M, Saksham S., Yanlin F., Yunqi C.

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01 Introduction

02 Grounded Theory Practices

03 Theoretical Sampling

04 Grounded Theory Method in HCI and CSCW

05 Group Activity

06 Reflection

What Grounded Theory Is

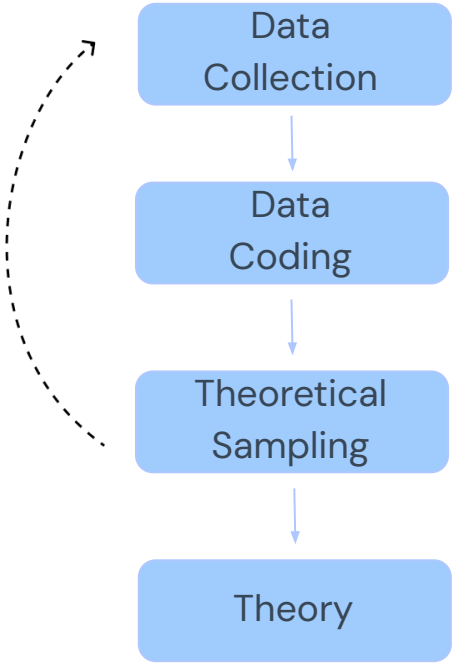
GTM is a systematic qualitative research method/ framework **that collects empirical data first, and then creates a** theory 'grounded' in the results.

Grounded Theory is NOT

Grounded Theory is **not** a pre-defined theory like Activity Theory

About Grounded Theory Method

- **A Human Centric Approach** that focuses on generating new theories about the world.
- **An Iterative and Reflexive Process** of data collection, analysis, and theory development.
- **GTM emphasizes the practical application of theories** and their ability to function effectively in real-world scenarios.
- **GTM has Rigor in its Flexibility** with the scrutiny of data through constant comparison and theoretical sampling- Enhancing validity and applicability .



The Iterative Process

Data Coding

Data is broken down into manageable pieces, which are **coded** to identify and **categorize key elements** within the data

Constant Comparison

Throughout the research, newly collected data is continuously compared with existing data- **refining categories and identifying emerging patterns**

Theoretical Sampling

Decisions about where to collect additional data are guided by the developing theory. This targeted data aims to fill gaps in the theory

What are codes?

In the Grounded Theory Method, a code is a label or tag that researchers put on parts of data to group and summarize specific elements or themes they see in the data. It describes some part of the data, like what a participant did or how the conversation turned.

Why coding?

Coding plays a crucial role in qualitative research by offering a structured method to arrange, classify, and evaluate data, enabling researchers to recognize patterns, themes, and connections present in the collected information.

How are codes recorded?

Memos- informal notes, are used to record codes. Memos consist lists of codes, informal rules, heuristics for apply those codes to the data.

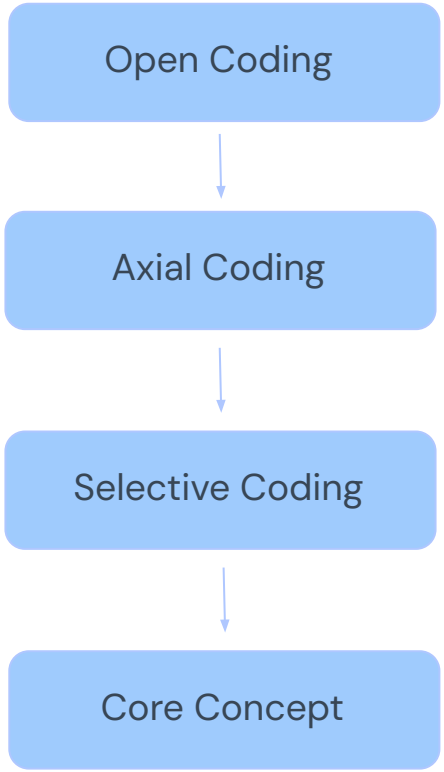
Coding Process

Open Coding: This is the initial phase of the situation. Here the codes are more descriptive, “open-minded” (not governed by formal knowledge) and unconstrained.

Example:

Raw data: "I like coming up with ideas in small groups instead of big meetings", "I often look forward to one-on-one meetings with my boss".

Codes: "small group preference", "one-on-one preference."

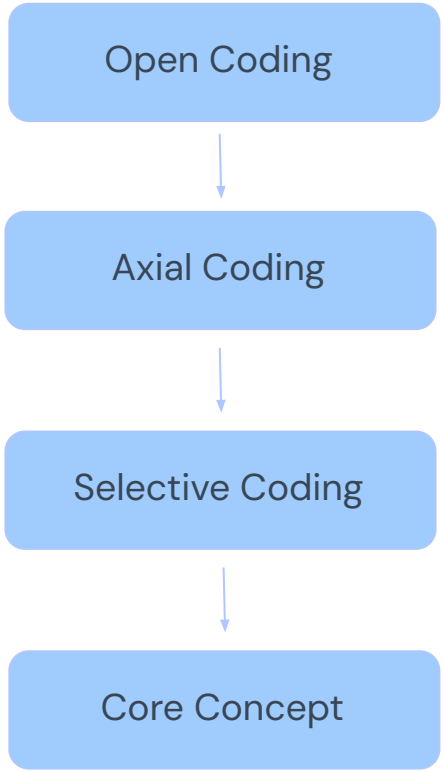


Coding Process

Axial Coding: In this step, codes are grouped into categories based on broader and similar abstractions.

Example:

The open codes "small group preference" and "one-on-one preference" may be considered "interaction preferences." This category may show how employees prefer to collaborate at work.

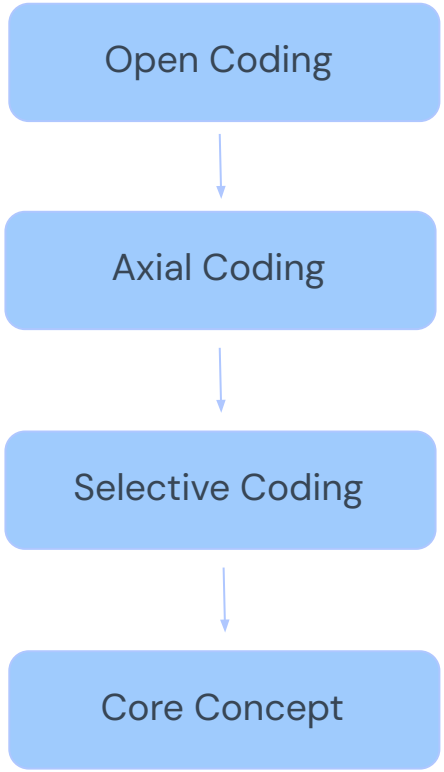


Coding Process

Selective Coding: Through selective coding, you try to refine and integrate the categories you formed during axial coding stage. Here you can identify central themes of the codes.

Example:

If "collaboration-preference" is a central theme, selective coding would link "small group preference" and "one-on-one preference" to it, as well as "formal meeting aversion" and "informal catch-up favoring". It shows how each interaction preference affects collaboration-preference.

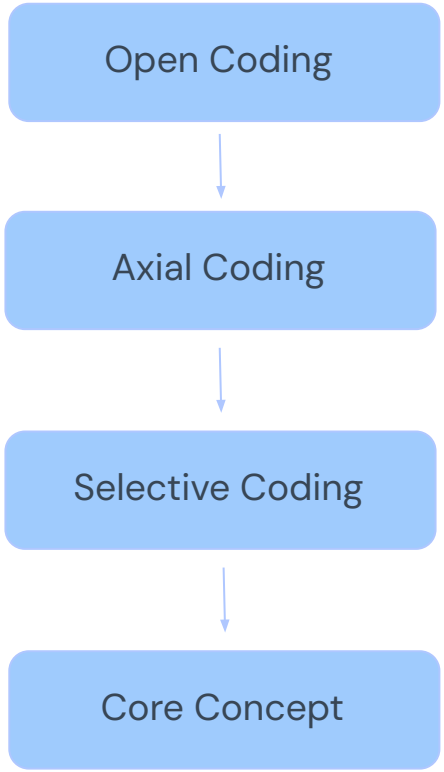


Coding Process

Core Concept: In this step, you will be able to identify and finalize the core concept or main theme for your research focus.

Example:

The concept of "collaboration-preference" would be fully defined and detailed, including all the categories and how they describe workplace collaboration preferences. Collaboration-preference may affect workplace satisfaction, productivity, and culture, according to the theory.



Theories

This coding process can now lead to 2 outcomes.

1. Substantive Theory
2. Formal Theory

Substantive Theory: Researchers can focus on detailed substantive theory in which the data is derived solely from GTM and has many details about the core concept.

Formal Theory: Researchers can focus on broader themes and outcomes that have been derived from not just GTM but through other methods like Ethnography, Case studies, Narrative Inquiry etc.

Memo-Writing

Memos are written documents that researchers use to record their thoughts, reflections, interpretations, and insights as they engage with the data collected during the study.

- Documents the evolution of researchers' understanding and analysis of data.
- Promotes deep engagement with data, encouraging analysis beyond initial observations, leading to new insights and deeper understanding.
- Involves continuous memo-writing throughout the research process, allowing for ongoing refinement of theories.
- Memos evolve from simple notes to complex documents with detailed analyses and visual aids.
- Helps clarify and communicate complex ideas, ensuring clear understanding of emerging theories.

GTM in HCI and CSCW

Glaser and Strauss distinguished that data should approached without bias from researched literature. However in HCI and CSCW, Researched literature can be used to compare collected data as a part of grounded theory investigation.

Three usage patterns include:

- Structuring Data Collection and Analysis - constant comparison to develop theory during data collection
- Analyzing a Completed Dataset - deep iterative coding to build theory from data collected
- As a descriptor for coding data with supporting specific questions (maybe problematic)

Summary

Grounded theory reports should be reflective of that process and provide transparency.

GTM takes advantage of the tendency that people think about what they are learning while they are learning it.

Goal: remain faithful to the data, and draw conclusions that are grounded in data.

People (not procedures or methods) construct meaning and knowledge.

05

Class Activity

Understanding the Decision-Making Process of UW Students in Spring Quarter Course Selection

Step 1: Interview

- Form pairs.
- Take 4 minutes to interview the person seated next to you.
- Ask your partner: “What was your approach for selecting courses for this spring quarter?”
- Take notes.
- Rotate roles and continue for another 4 minutes.

Step 2&3: Open and Axial Coding

We have hired a researcher from OpenAI to conduct **4 interviews** for us! With these additional transcripts, please start to code them along with the one you just completed. You can do this individually or with your partner from last activity.

Go to Miro board for coding activity

P1: Emily is a full-time domestic student in her first year, preparing for a summer internship in user experience design.

P2: Ankit is a first-year, full-time international student transitioning from software engineering to UX design.

P3: Sarah is a second-year, full-time U.S. student specializing in accessibility design.

P4: Mark is a full-time student in his second year, balancing his studies with a full-time job in tech. He chooses courses that can be directly applied to his current job and that fit into his schedule.

Note: all interview transcripts provided were generated by ChatGPT.

Step 4&5: Categories and Core Concepts

With your interview partner, review your codings together and collaboratively identify categories and themes emerging from the codes. From there, develop the core concept to answer the research question.

Go to Miro board for coding activity

Discussion

Outcomes: Substantive vs Formal Theory

Substantive Theory: key data points derived that directly relate to core concepts

Formal Theory: broader themes, ideas, etc derived that can be focused on and combined with broader themes from other research methods.

06

Reflection

Reflecting on your experience using grounded theory in our group activity to analyze and process data...

In what ways was grounded theory similar or different to how you would usually approach the research process?

If you could time travel and go back to 1967 when Glaser and Strauss were pioneering grounded theory...

Would you propose any additions or changes to grounded theory?

Thank you

Demo

Collecting, visualizing, and analyzing data

Grounded theory method

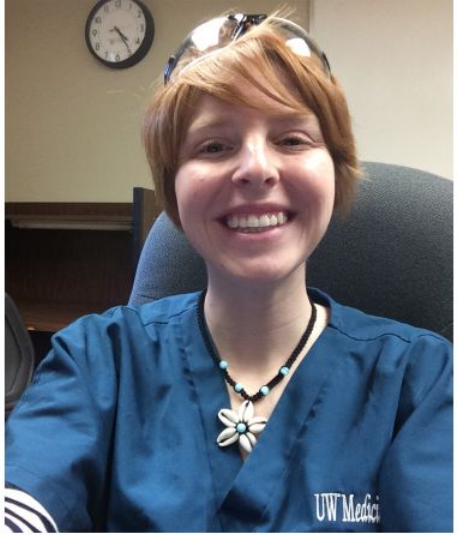
Positionality + reflexive work

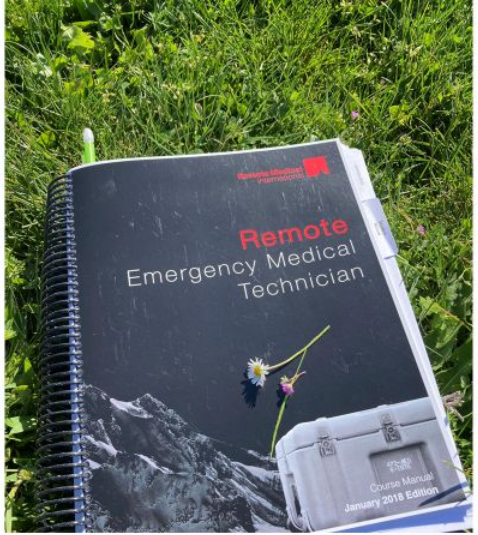
Autoethnography of an Emergency Medical Technician

Alainna Brennan Brown

Preliminary Exam, Human Centered Design & Engineering

November 19th, 2021





"How might I use autoethnography about clinical practice to inform future study designs as well as inform my statements of positionality and reflexivity?"

First-Person Research

- Autobiographical writing
- Autobiographical design
- **Autoethnography**
  - **Inductive: thematic analysis**
    - **Retrospective digital traces (text messages, tweets)** (After Jain et al 2018)
    - **Self-interview, field notes, reflections**
  - Deductive: critical reflection

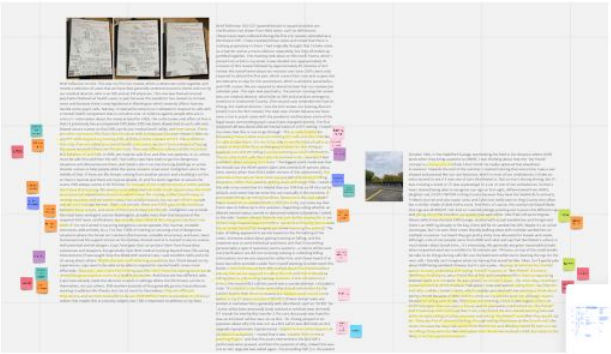
First-Person Research

Positionality
Newer EMS practitioner (<1 year), trained during pandemic – *few peers with pre-pandemic experiences due to mass resignations/illnesses*

Long-time wilderness first responder, midstream medical student w/ early training based on rural medicine, grew up in rural/remote/wilderness area in continental US – *influences my views on "low resource" medicine, view emergencies within very large ecosystems and on non-specific timelines*

Reflexive work
Code w/ non-medical colleague, continuously reflect on insights/questions with medical and non-medical peers to seek perspectives outside my own

Twitter: Tweets, retweets, replies, etc.
Texts, partner
Group text, Best friend (resident physician) and close friend (non-medical)
Text, close friend, non-medical
Texts, Best friend, resident physician
Group text, parents
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

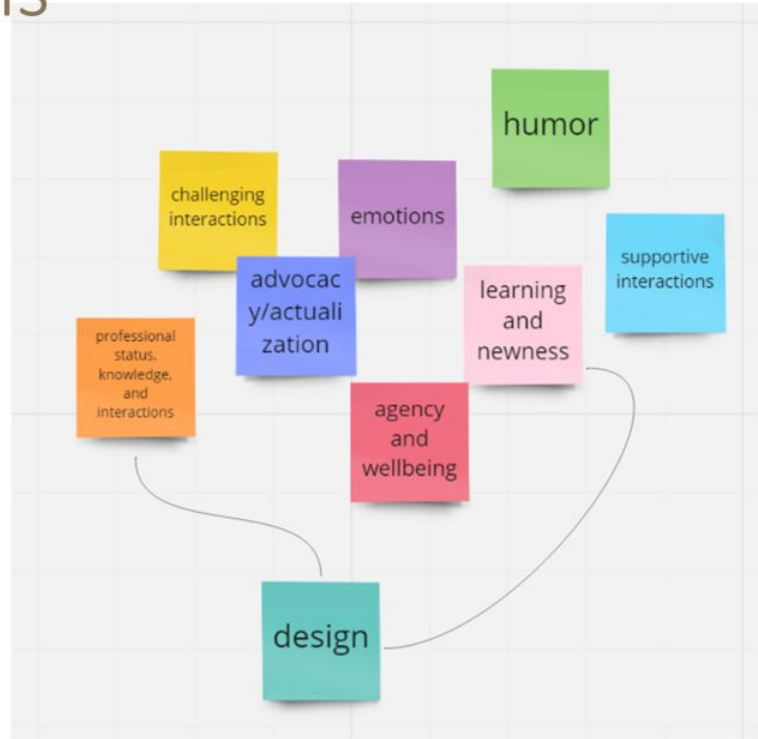


“And there came a point where the medics were getting set up to do their exams, our patient said, “Are you going to leave me?” and I was like, “No, you trying to get rid of me? I pinky promise I won’t leave.” And so we pinky promised and one of the medics goes, “Hey, your patient doesn’t look sick, they’re in the back there pinky promising.” It wasn't just me, it was the whole team that was doing that space-making and that rapport-building. This person was having the worst day of their life. We use dark humor and we use really stupid humor sometimes and sometimes we look for those silly moments and those giggly moments or those really touching moments, just whatever is going to let us get into our patients’ heads in the ways that they need us to be there and not outside of that. You know, whatever space we can make for our patients to step into so that they can invite us into their space.” (self-interview, lines 467-477)

[Warning: Graphic] *“And the two EMTs on this call were not comfortable with this injury. It was very uncomfortable for them, like it was painfully clear to me that they were uncomfortable with this injury [swollen, red, weeping infected genitalia with the Foley still in place]. And they dealt with it with pretty inappropriate humor. Humor as a defense mechanism is very healthy, but it has to be in the right place and time. If your patient has an in-dwelling catheter that is infected and you’re [you now referencing the patient] wearing a gown that lets you [others] see everything, because you [patient] have Covid and it's taken everything away from you… [Becomes visibly angry] Don't [expletive] laugh at your patients. Just don’t.”* (self-interview, lines 559-566)

Findings: Thematic Analysis

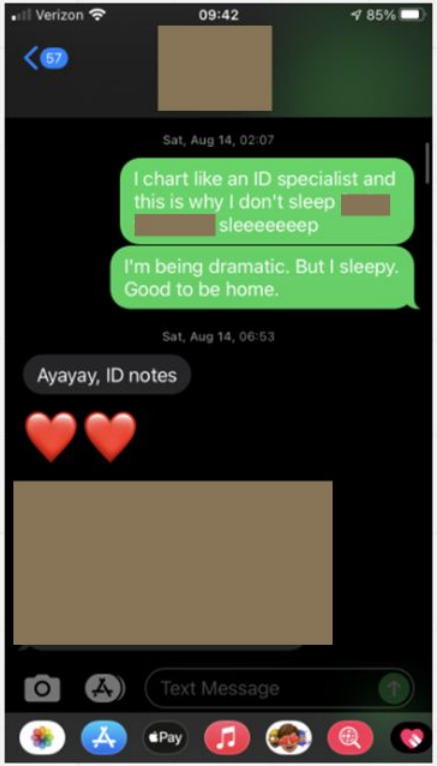
- Open, axial, selective coding
  - 709 non-unique codes
  - 9 code clusters
  - 3 emergent themes
  - 1 theme analyzed in-depth
- “Humor is common in both practice and non-practice spaces to process difficult emotions and experiences.”



Example of Humor

pride

humor



humor

I had arrived home very late after my previous shift because I was finishing my notes, which are long enough that I generally hadn't finished them on-shift.

self-care

long work schedule

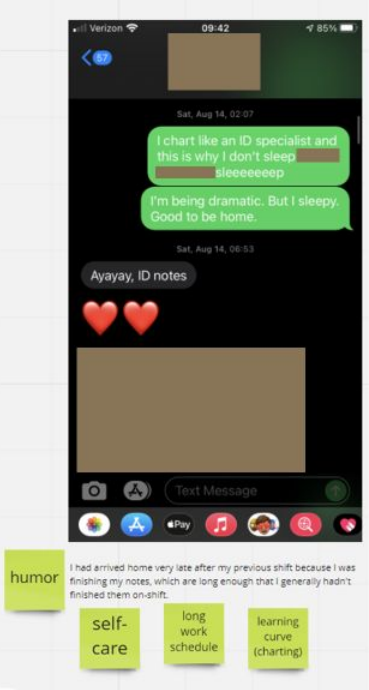
learning curve (charting)

Findings: Critical Reflections

- Examples of humor analyzed w.r.t:
  - Theories of humor
    - Superiority: based on position within power structure (“punching up,” “punching down”)
    - Incongruity: based on mismatch between setting and event/belief/action
    - Relief: release of energy/power mustered for motive which is no longer present
  - Seams
  - Power dynamics via matrices of domination

Findings: Critical Reflections

- Examples of humor analyzed w.r.t:
  - Theories of humor
    - Superiority
    - Incongruity
    - Relief
  - Seams
  - Power dynamics via matrices of domination



"How might I use autoethnography about clinical practice to inform future study designs as well as inform my statements of positionality and reflexivity?"

- Studies with healthcare workers
  - Uncovering seams in trauma-sensitive way
  - Agency to dwell safely in hostile spaces, enter PD spaces

Positionality
Newer EMS practitioner (<1 year), trained during pandemic – *few peers with pre-pandemic experiences due to mass resignations/illnesses*

Long-time wilderness first responder, midstream medical student w/ early training based on rural medicine, grew up in rural/remote/wilderness area in continental US – *influences my views on "low resource" medicine, view emergencies within very large ecosystems and on non-specific timelines*

Foundational care work experiences in "slow" and palliative spaces – *comfortable with non-emergency work, enjoy developing rapports*

Reflexive work
Code w/ non-medical colleague, continuously reflect on insights/questions with medical and non-medical peers to seek perspectives outside my own

Self-care – avoid research as therapy [HCDE 519: DISCUSS!!!]

You have data!

Now what?

Organize

Familiarize

Analyze

Reflect

Describe

...and repeat!

Organize and Familiarize

Organize

- Timeline, participant, etc.

Familiarize

- EXPERIENCE the data
- Ask colleagues about collecting the data if you were not part of the process or present for the participant

Analyze

Many options...

For this class, I recommend each group use a *grounded theory method* approach for at least one study component (e.g. interview)

A few notes...

- Inductive coding (substantive theory building)
- Definitive coding (formal theory contributions/building)
- Transition to design practice: Scoping of RQs, use of predefined codes, memos as powerful translation vehicle
- Coding software/tools: Miro, Atlas.ti, etc.

Reflect

In fact, this should happen throughout your research process

...And *definitely* at this point

- What is driving the insights you've identified?
- What has emerged that has surprised you or otherwise created a moment of noticing/friction?
- Many other questions to ask yourself (and colleagues)
- —> this is where positionality often surfaces the most tangibly
- —> reflexive work is what you *do* with your reflections
  - Additional analysis passes
  - Bringing in additional coders, commentators, experts, participants, etc.
  - Others...

Describe

GTM: Memos

- Paragraph-level description of insight
- Uses evidence (quotes, inc. line references etc.) to support statements
- Straightforward means of sharing insights to support conversation, design work, etc.

Week 7

Today...

6:05 – 6:10: Announcements

6:10 – 7:00: Positionality exercise

7:00 – 7:05 Break

7:05 – 9:50: Guided data analysis (breaks included)

Positionality Exercise

This exercise includes source material that contains strong language.

This exercise may touch on sensitive or upsetting topics. Please take care. *These topics may include: Covid, family illness (cancer), a law enforcement encounter, passing references to sex, substance use (alcohol, tobacco, marijuana, methamphetamine)*

SCENARIO

Super Cool Hot Dog Company Inc. is a small chain of hot dog restaurants based in Columbus, Ohio.

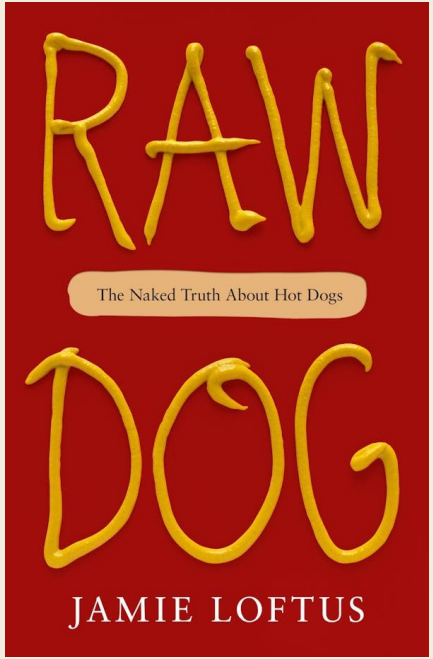
They are ready to expand nationwide and have hired you to **conduct research into how they should approach expanding into different parts of the United States**.

> *"We don't mean market research. We understand that you research what things are* like *for the people who might buy our hot dogs. We'd like you to do that—help us understand the people and places where we want to expand."*

Because you have some serious qualitative street cred, Super Cool Hot Dog Company Inc. is giving you free reign (within budget) over how to do this investigative work.

During your first meeting, your new manager hands you a copy of a book, noting that pretty much everyone has been reading it. (The implication is that you should too.)

Your research budget hasn't dropped yet so this is in part the best use of your time, at least according to your new boss. So you do.



Est.
2024

Your task now is to reflect on your experience reading a portion of this book.

Think about who you are and how your perspectives overlap or differ from the author's.

Also think about how that might influence your research strategy.

Miro

Alainna and Negin will discuss their **experiences** with this excerpt, how they are **positioned** as they experience it, and how that **positioning shifts** (or not) as they **talk with each other.**

We are not answering any questions about how to expand Super Cool Hot Dog Company Inc.!

We are reflecting on our perspectives as researchers as we take in information that is broadly relevant to our work.

Your turn!

Guided Data Analysis

Please assemble your data such that you can quickly reference it and interact with it individually and as a group

5 minutes

Guided Data Analysis

Choose one artifact (e.g. cleaned-up interview transcript) to analyze as a group

- Arrange yourselves and your data so that you can access it individually and discuss it as a group

5 minutes max

Guided Data Analysis

Familiarize yourself with your data

- Individually and/or in consultation with each other
- Were you present when the data was collected? What context do you need/can you give?
- Do you have any questions to cover that impact your ability to follow the narrative in your transcript (or other artifact)?

10 minutes

Guided Data Analysis

Open code your data individually

- *Notice simple/mundane events/details*
- *Notice words, language, non-verbal/non-language cues*
- *Notice actions, beliefs, and stories*
- *What is participant communicating? Experiencing?*

We are not categorizing or analyzing in this step. We are noticing. We name things (i.e. attach codes/labels) in order to *notice together*. THEN we will *abstract* from data.

- Categorizing, prioritizing, investigating, and querying the data at this stage → loss of richness and detail that is not recoverable at later stages → lose ability to abstract meaningfully

10 minutes

Guided Data Analysis

Discuss your codes with your group

- Focus on a small number of codes (1-3) rather than trying to address every code
- Explain your definitions of each code → does your group have a shared understanding of each code?
- Definitions and codes' significance/applicability often change at this stage – this is okay!

15 minutes

Guided Data Analysis

Do a second pass of open coding of your data individually

- *Notice simple/mundane events/details*
- *Notice words, language, non-verbal/non-language cues*
- *Notice actions, beliefs, and stories*
- *What is participant communicating? Experiencing?*

We are not categorizing or analyzing in this step. We are noticing. We name things (i.e. attach codes/labels) in order to *notice together*. THEN we will *abstract* from data.

- Categorizing, prioritizing, investigating, and querying the data at this stage → loss of richness and detail that is not recoverable at later stages → lose ability to abstract meaningfully

*20 minutes - **take a break as needed***

Guided Data Analysis

Discuss your codes (old, new, evolving) with your group

Identify 3-5 **emergent** topics

- Name these threads
- Write a short blurb or a few bullet points to capture the nature and origin of each thread (NOT a deep dive)
- As a group, discuss 3-5 positionality experiences and implications for your interpretations

20 minutes

Guided Data Analysis

As a group:

- Examine the data relevant to each thread
- Discuss how to support/challenge the naming/description of each thread with citations from the data
- Write an informal blurb or bullet points to capture this info for each thread

20 minutes

Guided Data Analysis

Choose one thread of interest to your group

- **Curiosity, importance to / salience for participants** > product
- May be challenging to you, your group, and/or your research focus

5 minutes

Guided Data Analysis

Continue to discuss your identified thread

- As a group, discuss 3-5 positionality experiences and implications for your interpretations
- Describe/articulate the insights from your data and your positioning reflection
- Cite data from your analyzed artifact to support your statements (e.g. quotations, participant IDs, line numbers)

The result should be a 3-5 sentence summary of your emergent insight with supporting citations from your data

EXAMPLE MEMO

20 minutes

Guided Data Analysis

10 minute break

Share out your memo with the class (w/ Q&A)

TIME LIMIT PER GROUP:

- 1 minutes to share memo and context
- 3 minutes discussion with peers

Week 8

Notes from Week 7

Positionality and reflexive work

- **(!)** When discussing positioning in research, the objective is to discuss YOUR positioning as a researcher, not those of your participants or studied populations (YOU = individual, group)
- We've used the term *positionality* so far to refer to two actually distinct but connected concepts:
  - *Positionality* is your awareness of how your background influences how you perceive and understand things in the world
    - Positionality statements are public-facing and are a mechanism for transparency
    - Positionality statements can be formally presented (e.g. dedicated section in study documentation) or organically integrated into public-facing materials – ideally both
  - *Reflexivity* (or *reflexive work*, from "reflection") is the process of examining, expanding, and challenging aspects of your awareness, both individually and in collaboration with others
    - This work is undertaken "under the hood" (i.e. is generally not public-facing)
    - This can take the form of ongoing personal reflection, intentional conversations with colleagues, and formal/informal ongoing education and exploration that stretches how you view and understand the world and yourself
- The next slide includes several resources for doing positionality and reflexive work as a designer, including how to integrate it into both your work processes (and sometimes products, depending on the product!)

Notes from Week 7

Key resources: Positionality and Reflexivity

"Just Tell Me What I Need to Know" (Lacy): Intro guide for developing a personal process for examining and expressing positionality (Medium)

"Reflexivity, Positionality, and Disclosure in HCI" (Liang): Excellent guide/Q&A about designers' responsibilities and vulnerabilities with respect to reflexive work. Includes examples of positionality statements from multiple design practice/research spaces. **A must-read.** (Medium)

"Embracing Four Tensions in Human-Computer Interaction Research with Marginalized People" (Liang et al): Academic paper references in Liang essay above. (Full text linked on Canvas Week 8)

Additional resources

"Resources for a more inclusive UX research practice" (de Bouwmeester): Entry-level list of tools for expanding perspectives (Medium)

"The Role Positionality Plays in Critical Design Thinking" (Nguyen-Phuong): Reflection on the relationship between design thinking and positionality work (Medium) *Instructor's note: This is a relatively surface-level, generally incomplete explanation of positionality; in particular, it limits positioning to less mutable aspects of personal identity (e.g. age) while omitting the importance of personal experiences not necessarily tied to identity. I've included it here in part as a contrast to other examples of positionality work.*

Coworking/Independent Work

Submit codebook before class

In class, work towards the following:

- 2-3 memos that incorporate both inductive and deductive analysis (as appropriate - some may lean more strongly in one direction - seek to strike a balance)
- A brief summary of your positionality and reflexive work you undertook (or would undertake in the future) - individual and group

Remember...

- The outcome of this course isn't a design artifact!
- The outcome is a polished description of your inquiry space, your research approach and rationales for scoping decisions, your data, and the insights about your inquiry space you gained through this process

Week 9

Today

6:05 – 6:15: Announcements and presentation/write-up details

6:15 – 6:50: Guest speaker (Naomi Johnson, UXR, GreatSchools)

6:50 – 7:30: Codebooks and memoing with colleagues (semi-guided)

- *Take break as needed*

7:30 – 9:20: Exploring terminology (Jennifer), expanding concepts (Alainna), connecting to practice (Negin)

9:20 – 9:50: Coworking/continued discussion

- *Take break as needed*

End-of-quarter info

- Week 9 (this week): End-of-quarter reflections (due 5/31 EOD PT)
- Week 10: “~~Presentations~~ Demos and discussions,” signups
- Week 11: no class, write-ups due
- Course evaluations

Demos and discussions

Week 10 (5/30)

- 20 minutes per group (indicate any time/order preference here)
- Groups choose how to balance sharing projects and discussing with colleagues
  - If linear format (present → Q&A), consider ~12 minutes and ~8 minutes respectively
  - Can use slide deck, consider walk-through of materials themselves, create whatever experience makes sense for your group
- Live; Zoom available if unable to attend in-person
  - If absolutely not able to present alongside group, consider pre-recording – but we STRONGLY encourage you to join live if at all possible – the primary learning site of this class session is in participating in discussions of ALL projects

Question for class: broadcasting, recording?

“Write-ups”

Written presentation, optional portfolio entry

- Can be formal document (e.g. in style of internal document, white paper, etc.), social (e.g. Medium post, LinkedIn post), etc. *Should be a format that supports the other requirements of this assignment*.
- What to include:
  - *Your roles in the team*
  - *Motivation*
  - *Research questions (FINAL RQs)*
  - *Methods (including limitations, ethical considerations)*
  - *Results*
  - *Key takeaways*
  - *Reflection*
  - Where does positionality live? *(e.g. roles, motivation > reflections, methods, etc.)*

Naomi Johnson

User Experience Researcher,
GreatSchools.org

LinkedIn

Terminology – Jennifer

Semi-guided memo discussion

Share: Exchange memos with someone unfamiliar with your project, and you theirs. (<5 mins)

Notice: What do you understand about this project through the memo(s)? What do you need to know to understand the information? What questions do you have for the author? (~15 minutes)

Relate: Discuss your impressions, thoughts, and questions with your partner. (~15 minutes)

Synthesize: Discuss what you've garnered from this exchange with your groups. Can (should?) include more memoing! (15+ minutes)

Reference Codebooks

Terminology Reference

Grounded theory method – *originates from sociology; stems from movement in ~1960s to introduce element of empiricism to sociology*

GTM terms appear in white – other terms we've used appear in black

Coding

- Open/substantive coding: labeling items in raw data as of interest; *naming* involves element of characterization, but ideally minimal → creates categories of information that are shareable
- Axial coding: detecting and naming patterns in / connections between categories/types/groups of codes, sometimes called theoretical coding
- Selective coding: grouping/characterizing of data (codes) and articulating as a theory such that it can be used as a lens in a deductive analysis (i.e. it is a reliable framing/theory – called theoretical sampling in GTM)

Memoing

- Articulating theory emerging from coding; iterative process = constantly compare* emergent theory (**from coding and memoing**); "final memos" can serve as "final" findings for practical applications (liek design processes!) *GTM originated from an earlier method called constant comparison analysis

Expanded Topics

Inductive analysis vs. content analysis

Content analysis assesses existing textual data/artifacts for presence or frequency of specific (+related) terms; conceptual (explicit/implicit terms, moderately semi-automatable) or relational (affect extraction, proximity analysis, cognitive mapping; not automatable); texts can be elicited directly and actively from participants (e.g. interviews, survey responses – participant has agency to validate own data) or not (e.g. documentation, survey responses – participant does NOT have agency to validate own responses)

Vs. Inductive analysis – method for developing theories based on holistic understanding of data artifacts (not just text)

Expanded Topics

Predefined codes/tags

CAN be a part of [which? inductive/deductive?] analysis

Can be used in content analysis

Not generally considered part of GTM approach *because* predefined codes do not necessarily emerge from the data itself

- Messy caveat: what if predefined codes originate from *other* data inductively? Is *theoretical sampling* based on *other data*, +/- robustness via inductive analysis of original data? (But then... is it truly an inductive analysis?) →Constant comparison

Contents lists available at ScienceDirect

The American Journal of Surgery

journal homepage: www.americanjournalofsurgery.com

Assessing gender bias in qualitative evaluations of surgical residents

Katherine M. Gerull [a, 1], Maren Loe [a, 1], Kristen Seiler [a], Jared McAllister [a], Arghavan Salles [b, *, 2]

[a] Washington University School of Medicine, St. Louis, MO, United States
[b] Stanford University, Stanford, CA, United States

Table3. Themes identified with representative comments.

Theme	Representative Comment
Job Domains	"Excellent bedside manners, clinical acumen and surgical skills."
Professional Competency	"X was always punctual, well prepared for the surgical cases"
Team Dynamic	"Would find creative ways for residents on the team to all obtain productive experiences. Would stay till the TEAM's work was done, not just when X's case was done."
Work Efficacy	"Works hard and sees all tasks to completion. Outstanding in initiating activity and taking care of problems."
Disposition and Humanism	"Very personable and establishes rapport with patients easily, compassionate in his/her care for ophthalmic patients"
Growth	"Accepts feedback well and works to assimilate it to patient care. X is mature and reflective."
Insight	"appropriately self-aware and self-critical"
Overall Performance	"Outstanding resident. One of the top two this year."
Reference to Future	"X will do fine in his/her future practice"

Table 4
Content analysis.

Word Category	Word	Unadjusted Word Counts		Adjusted Relative Use[+] *(men/women)*	p-value
		Men	*Women*		
Communal	**Total**	**49**	**27**	**1.00**	**1.00**
Grindstone	**Total**	**71**	**34**	**1.15**	**0.54**
Ability	**Total**	**54**	**21**	**1.42**	**0.19**
Standout	Excellent	169	72	1.29	0.07
	Outstanding	69	25	1.52	0.08
	Leader	28	5	3.09	0.02
	Best	15	11	0.75	0.54
	Exceptional	13	6	1.19	0.81
	Superb	13	4	1.79	0.45
	Star/Superstar	7	2	1.93	0.51
	Terrific	8	1	4.41	0.17
	Scholar/Scholarly	5	0	*	*
	Phenomenal	1	1	0.55	1.00
	Fabulous	0	2	*	*
	Total	**328**	**129**	**1.40**	**<0.01**

[+] Adjusted use was the ratio of two proportions: $Relative\ Use = \frac{\left(\frac{number\ of\ category\ words\ used\ for\ men}{number\ of\ words\ in\ evaluations\ of\ men}\right)}{\left(\frac{number\ of\ category\ words\ used\ for\ women}{number\ of\ words\ in\ evaluations\ of\ women}\right)}$.

* Could not be calculated because of zero-use for one gender.

Fig. 1. Codes grouped into themes from inductive thematic analysis. The numbers represent the number of times a code was used in the dataset.

Week 10

Congratulations!
Thank you all for your excellent contributions this quarter. :)

A couple of quick things

...Based on assignments, reflections, etc. since last week

Customer-facing colleagues and qualitative UXR+

Researcher disclosure, epistemic violence, and broader risk/reward

Please free to reach out to any of us as you continue your studies and beyond

Letters of recommendation
Networking
Guest speaker opportunities
Academic partnerships
Continuing academic plans
...and more!

See HCDE People page for additional info

HCDE Industry Partnerships & Events Liaison
Melissa Ewing, mewing3@uw.edu

HCDE Communications (current affiliates, alumni)
Leah Pistorius, lepisto@uw.edu

HCDE Academic Programs
Schedule appointments at HCDE Advising
MS, UCD certificate: Alex Llapitan, alex310@uw.edu
PhD: Kathleen Rascon, khorenst@uw.edu

Other
Alainna Brennan Brown, HCDE MD/PhD Candidate, HCDE PhD Ambassador, alainnab@uw.edu, on HCDE Slack, and on LinkedIn

Projects!

Olive	**6:20 - 6:40**	**AI in the Workplace**
Bramble	**6:40 - 7:00**	**Catalyst Meeting**
Pomegranate	**7:00 - 7:20**	**Self-Driving Cars**
	7:20 - 7:30	*BREAK*
Thimbleberry	**7:30 - 7:50**	**LLMs in Education**
Wild Ginger	**7:50 - 8:10**	**AI and Design Recruitment**
Dandelion	**8:10 - 8:30**	**Gaming Communities**
	8:30 - 8:40	*BREAK*
Prickly Pear	**8:40 - 9:00**	**Cozy Gaming**
Huckleberry	**9:00 - 9:20**	**AI and Healthcare**
	9:20 - end	**Celebrate, network, continue discussions!**

🎉🎉🎉🎉🎉🎉🎉🎉🎉🎉🎉🎉🎉🎉

AI in the Workplace

Sara Farhat, Raghav Sharma, Wilson Chen, Natasha Pietruschka

HCDE 519 Spring 2024

Motivation & Positionality

Our team's **motivation:**

- Interested in technology and ethics
- Noticed a surge of AI in the workplace
- Wanted to capture this moment in time

Our **positionality:**

- Sara: UX Designer encouraged by leadership to use AI at work
- Wilson: Human-centered computing, trust & safety interests
- Raghav: Aspiring designer, extensively uses ChatGPT
- Natasha: Content Designer encouraged by leadership to use AI at work

Research Questions

1. What is the **sentiment** of individual contributors (ICs) in the tech industry around using AI at work?

2. How do individual contributors (ICs) **navigate ambiguity** in a time where AI adoption is highly encouraged, if not mandatory at some companies?

3. What **power dynamics** exist within AI development ecosystems and how does that influence the development, direction, and perception of AI for the masses?

Participants

Product Manager

UX Designer
x 2

Software Engineer

Criteria:

✅ Working in Tech in IC roles

✅ at companies encouraging AI use

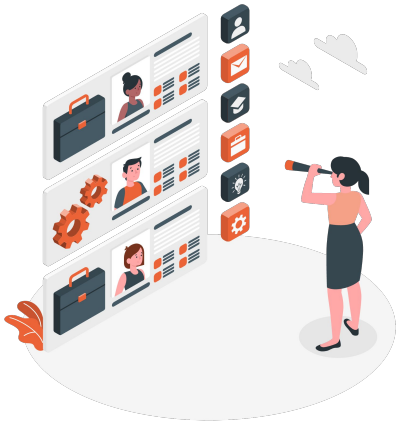
✅ anticipate being judged on AI use

❌ Not a senior leader

❌ Using AI only for personal use

Methodology

Recruitment

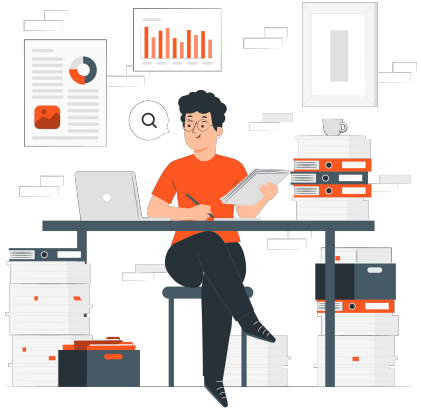


Screener

Data Collection

Diary Study,
Interviews

Analysis



Grounded Theory Method

Illustrations by Storyset

Sentiments

What is the sentiment of individual contributors (ICs) in the tech industry around using AI at work?

Eager to Use AI for Ideation
AI tools are excellent for generating ideas and initiating projects.

Fears Over Job Loss Drive AI Use
The fear of job loss has motivated participants to upskill themselves or change careers.

AI-Use Sparks Awe and Annoyance
AI tools were first perceived to be impressive, but after repeated use, participants realized AI tools have their limits.

*P2 "It gives you an **infinite volume of spaghetti to throw out the wall**. It's like spaghetti bazooka, you know, like, eventually something sticks."*

*P4 "**Will I be easily replaceable?** That's something that I worry about. And that's something I want to make sure I circumvent by just becoming more experienced in other places **where I'll be useful that AI can't replace."***

*P1 "Over time, I realized **it has limits**, it's never perfect. But at the beginning, I thought it was a genius."*

Navigating Ambiguity

How do ICs navigate ambiguity in a time where AI adoption is highly encouraged, if not mandatory at some companies?

Uncertainty Ahead Participants feared that AI would outpace their ability to adapt and potentially threaten their job.

Upskilling Participants recognize the need to integrate AI into their skill sets to secure their professional futures in a rapidly evolving job market.

Trial & Error Participants tested AI through a trial and error period and designated what tasks AI can help them with based on accuracy & speed.

P3 thinks this change will happen gradually. But also this assumption might be wrong because AI is exponentially getting better. They have doubts about how things will change and what the time frame of change will look like.

P4 "Will I be easily replaceable? That's something that I worry about. And that's something I want to make sure I circumvent by just becoming more experienced in other places where I'll be useful that AI can't replace."

P1 "Over time, I've realized that there's definitely limits to the output. It's, it's never perfect, it's almost never perfect."

Power Dynamics

What power dynamics exist within AI development ecosystems and how does that influence the development, direction, and perception of AI for the masses?

Leadership Expectations Shape AI Adoption
Leaders communicate expectations over AI use through emails, goal-setting, and peer adoption.

Normalization of AI use both rewards adoption and pressures ICs to pursue adoption.

Limitations: Small sample size constrained the depth of analysis for this research question.

*P3 "Leadership feels very strongly and it is very much encouraged. It is **a bullet point in their culture to integrate AI in their work**. It seems that employee's **curiosity about AI is appreciated by leadership.**"*

*P1 "They send this video where the CEO and a bunch of other C-suite people are talking about (...) how **since our clients are trying to embrace AI, that means we need to embrace AI even more to actually be the experts**."*

Inductive Memos

Some other themes that jumped out to us:

Losing Control
Some participants feel they are losing control over decision-making when using AI. They occasionally find it frustrating when AI makes decisions on their behalf. Additionally, some are uncertain about the future role of human intervention as AI continues to advance, questioning if it will remain necessary.

AI Increases Productivity
All participants immediately saw improvements to their daily tasks upon using AI - being able to work ‘quicker’ or ‘smarter’. Others shared that they were able to do technical jobs they weren't able to do before AI and that AI changed the way they thought about problems.

P2 “It didn’t give me the output I desired and it didn’t let me have any control over how the AI was performing. It wasn’t custom and didn’t allow it to be.”

P2 “it helps me do things i'm not proficient in, make good decisions, helps me get unstuck”

P3 “It helps me hone and scope my work. It helps me eliminate bad decisions before I start acting on them.”

Reflection

What did we learn?

- Gained experience with grounded theory method as a way of analyzing qualitative data
- Everyone practiced conducting an interview and being a note-taker

What might we do differently?

- Run a longer diary study
- Interview more people

What went well or was challenging?

- Working around a condensed timeline
- Team dynamics <3

Bramble link:
https://docs.google.com/document/d/1PVpWJZ_syi1NBlkjpqxmnplJOluCGYKsesib317WPNc/edit?usp=sharing

LLMs’ Impact on Higher Education As Seen by Educators

HCDE 519 - Qualitative Research Methods

By Anushka Kelkar, Kelli McGee, Lakshmi Narayana, Natasha Alcantra, and Ruijingya Tang

Table of contents

1 Background

2 Research Question

3 Target Audience

4 Methodology

5 Analysis

6 Conclusions

Research Questions

How do HCDE educators perceive the role that large language models (LLMs) currently play in higher education?

How might HCDE educators be using LLMs in teaching and/or grading?

How did we land on this topic?

1

Current Role of LLMs in education

Students & Professors now have free access to a variety of LLM tools for education.

2

Adult Learning & LLMs

Adult learning is generally less researched than K12 learning

3

Scope of this class

Studying adult learners in university fit in well with the scope of this class & resources available

4

Implications of LLMs in education

The implications of LLMs in education is high-stake

Research Methods

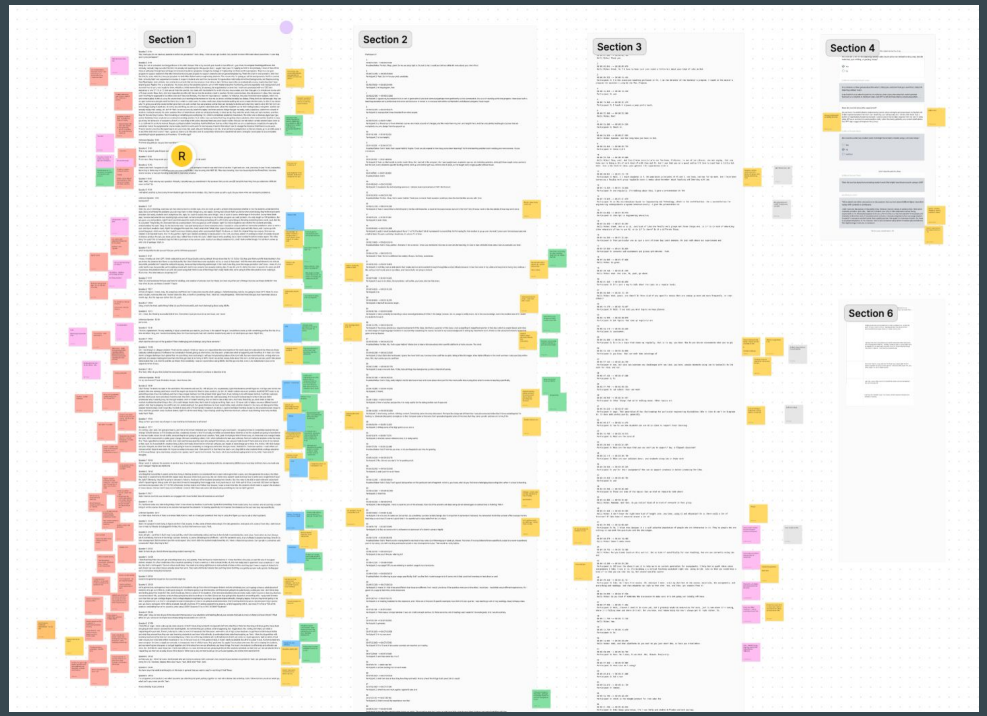
1	**Netnography**	Research on the public's general perceptions of LLMs
2	**Secondary research**	Competitive research: specs of different LLM tools
3	**Interviews**	Semi-structured, 30-minute interviews with 1 HCDE faculty, 1 HCDE PhD student, and 2 UW CSE faculty
4	**Diary Study**	5-7 min per day (for 5 days)
5	**In-person observation**	Conversations with HCDE faculty gathered at a 2-hour lunch salon focused on discussions on LLMs

Data Analysis Method

1

Individual open coding

Reducing bias through redundancy



Data Analysis Method

2

Affinity Mapping

Fruitful debates on data interpretations

Results

1. There are many ways educators are currently using LLMs in the classroom

   “The most useful thing is in doing the grunt work that needs to be done” - Participant 3

2. In some scenarios LLMs can help make learning more equitable for students

   "They were reading two to three things every class period… This was particularly challenging for students whose first language was not English or who were not accustomed to American academic English… I advised them… to use it as a support tool. It worked. Some students used it to synthesize readings and generate discussion points. Others used it to translate dense or difficult paragraphs into a language they were more comfortable with." - Participant 2

3. Concern that students may become overly reliant on LLMs

   “...And their code looks just like what would have come back from the LLM. They had no idea what the code was doing. And it wasn't the best way to write it. She just didn't understand why it wasn't giving her the right solution. And it wasn't working. [...] they're plopping the stuff in and not understanding it." - Participant 1

4. Educators are looking for more education on how LLMs should be used in academic settings

   “We as teachers were not given the time to adapt our curricula, to incorporate [LLMs] in ethical ways. [...] we're chasing the students, and we weren't given the space to just get together and think about how we can effectively use these things. And teach the students to effectively and ethically use them." - Participant 1

5. Usage among instructors and students may vary based on the suitability of LLMs for specific tasks in different fields.

Key Takeaway

Mixed sentiments surrounding the use of LLMs - the potential for aiding the teaching experience vs. student's use resulting in a detracted learning experience.

Our study was conducted with educators within HCDE disciplines - there may be different sentiments held by educators who teach other disciplines.

These insights may be helpful for educators (at the university level) incorporating LLM education with their students and creating class policies surrounding LLM use.

Learnings

- We learned the importance of narrowing down the scope.
- We learned the importance of pivoting when required.
- Having a Plan-B in case the research does not end up as expected is essential.

If we had more time, we would've

- Reached out to more educators and gained insights.
- Conducted deeper and longer dairy studies to understand what influences the perceptions of educators on LLMs
- Conducted Focus groups? (In an ideal world)

Future Scope

Explore how the perceptions are different for different disciplines

Thank You!

AI in recruitment

Dayton Kelly, Hemant Bothra, Rahul Gottimukkala

Research Question

How do recruiters and design managers currently feel about AI’s presence in the recruitment process?

Positionality

Hemant

I needed to turn off my business and marketing focused orientation. Instead, I needed to be open to noting things that aren't related to revenue.

Rahul

While learning about existing issues, I tend to favor "practical and efficient" solutions and ideas. Looking to make the best fit for all stakeholders.

Dayton

Needed to turn off *"consulting hat"*.

Motivation

1

We wanted to uncover if the recruitment process is fair and unbiased for designers.

2

We wanted to know how recent regulations around AI in recruitment has affected current recruitment practices.

3

As designers ourselves, we wanted to know if there are ways we can potentially optimize our candidate profiles.

Methods - Netnography, Interviews

Participant Criteria

We interviewed 6 participants with a combined number of 82 years of experience.

- 3 design recruiters
- 3 design leaders

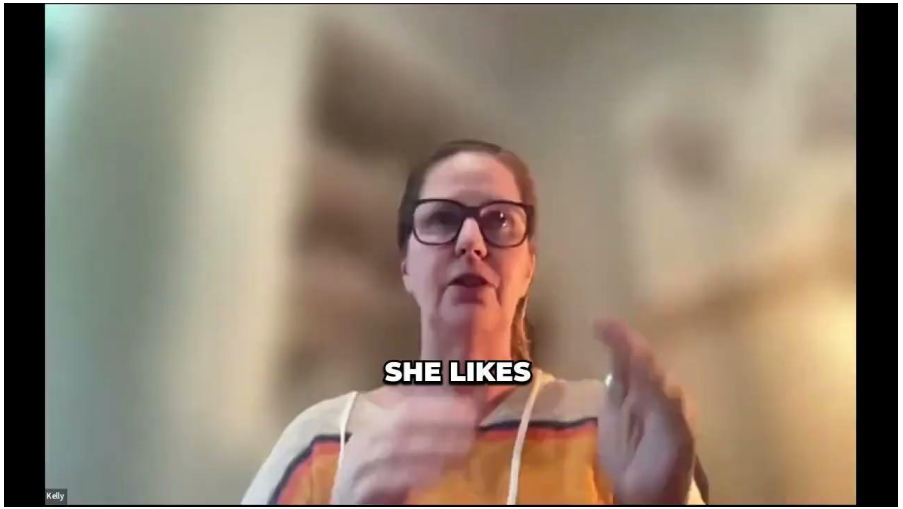
Research Themes

- Current Knowledge of AI
- Effectiveness of AI
- Privacy & Ethics
- Sociotechnical Space

Results

1. Design recruiters have a human-centered approach to recruitment and don’t rely on AI

2. Design leaders feel that having a good synergy with their recruitment team was very important



One of our participants talking about how she looks for intrinsic motivation in her candidates.

Key Takeaways

Optimism for AI in Recruitment

They see AI being useful to automate time-consuming tasks like initial resume screenings and managing large volumes of applications. AI tools are also valued for writing job descriptions and assessing candidates.

"It significantly reduced the time we spent on initial screenings."

Trust and Skepticism in AI

There are significant concerns about biases in AI algorithms and the accuracy of AI-generated evaluations. They also thought AI potentially missing good candidates, highlighting the need for human oversight.

"AI can't see things that I've been in the business for so long. I can see."

Opportunities for Improving Recruitment

They want a balanced approach where AI supports rather than replaces human decision-making, stressing the importance of integrating AI insights with human judgment.

"If I need three years of experience and there's not that on a resume, yes, please, AI, take that out of my inbox."

Reflection

- Learnings
  - We learnt how expanding our research scope could aid our research process.
  - We never looked at diversity in the same way the class made us thinking about it. That diversity could be from their experiences, or in their opinions.
- If we had more time
  - We would talk to more participants and narrow down our participant list.
  - We would do a focus group.

Projects!

Olive	**6:20 - 6:40**	**AI in the Workplace**
Bramble	**6:40 - 7:00**	**Catalyst Meeting**
Pomegranate	**7:00 - 7:20**	**Self-Driving Cars**
	7:20 - 7:30	*BREAK*
Thimbleberry	**7:30 - 7:50**	**LLMs in Education**
Wild Ginger	**7:50 - 8:10**	**AI and Design Recruitment**
Dandelion	**8:10 - 8:30**	**Gaming Communities**
	8:30 - 8:40	*BREAK*
Prickly Pear	**8:40 - 9:00**	**Cozy Gaming**
Huckleberry	**9:00 - 9:20**	**AI and Healthcare**
	9:20 - end	**Celebrate, network, continue discussions!**

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Examining Interactions Within Cozy Gaming Communities

Agenda

- Introduction
- Methodology
- Findings
- Q&A

The Team

Khristine Cancio

Candelaria Herrera

William King

Harry Rappaport

Srushti Sardeshmukh

Topic Selection

- ✗ Online Communities
- ✗ Third Place
- **Cozy Gaming**

Typically, a cozy game will be laid back, have minimal, if any, combat, an endearing art style, and will wrap its action around a wholesome story.

These kinds of games have become so popular in recent years that they've caused an online cozy game movement – inspiring developers, shaping lifestyles, and building communities.

(Source: Games Radar)

Research Questions

Do cozy gaming communities foster positive and wholesome interactions?

How / how not?

How do these interactions impact community members' well-being and affect their lifestyles?

Methodology

Method 1: Observations

We observed Twitch and YouTube livestreams to understand the dynamics of community engagement

Observation areas:

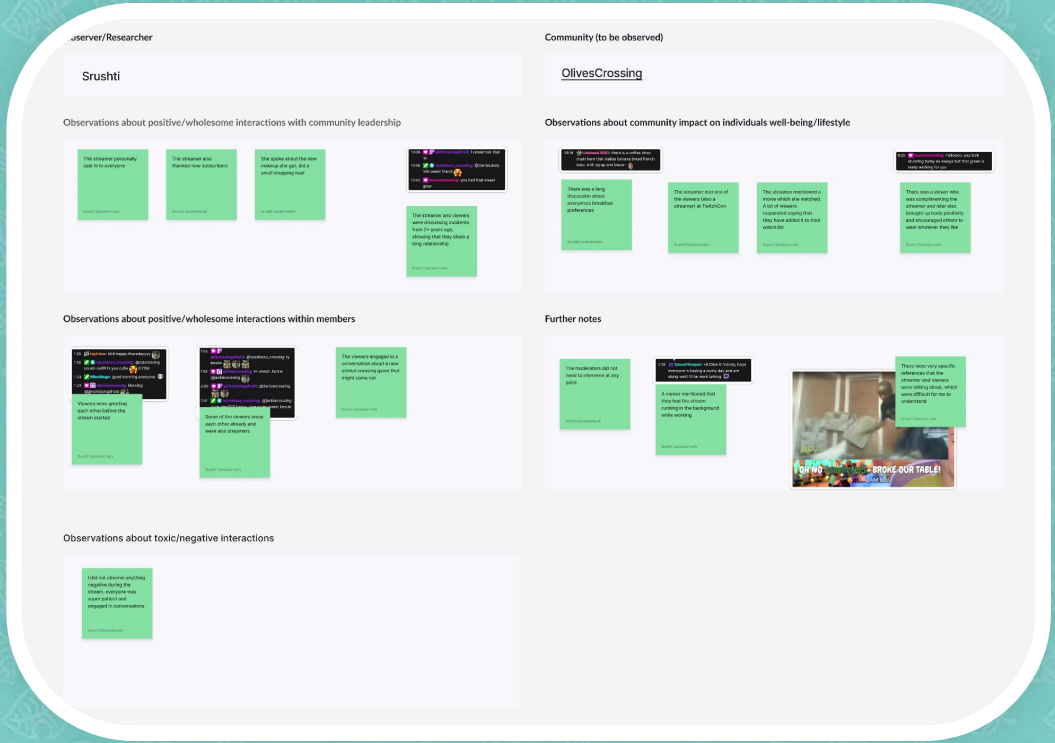
- Streamer Follower Interactions
- Moderator Roles
- Follower Interactions

Observational Data Collection

FigJam board

5 observations

4 key categories



Preliminary Observations

Most interactions/ comments were positive

Discussions continued beyond the game

The very few negative interactions were about the game /stream

Method 2: Interviews

Remote semi-structured interviews would help us understand the ‘Why’

Areas of focus:

- Type of games
- Meaning of ‘cozy’
- Type of interactions

Participant Characteristics & Recruitment

- We aimed to recruit participants via
  - Discord Servers
  - Subreddits
  - Facebook groups
- Our ideal participant would be a
  - Cozy Gamer
  - Part of a cozy gaming community in some way

Data collection and analysis

Collected interview transcripts

Preliminary coding round

Codebook formation

Second coding round

Deriving themes & memos

Findings

Key Findings

Artistic Expression through Cozy Gaming

Nostalgia Based Positivity

Feminine Influence

Artistic Expression through Cozy Gaming

Creativity and self-expression are some of the main aspects people tend to look for when playing cozy games. Members encourage one another to share their creations and **cheer each other on.**

Themes

- self-expression
- encouragement
- inspiration

"One of the main things that really draws me into these games are the customization options. I really like being creative and treating it kind of like an artistic experience, like designing an island, making it my own, and and sharing that with other people is really fun." ~ P1

Artistic Expression through Cozy Gaming

“I love browsing through like Pinterest and Instagram looking at people's creations. It's kind of like in its own art form, in a way.” ~P1

“I like how creative can people can be with it [customizing]. It just blows me away.” ~P3

Nostalgia Based Positivity

Cozy games such as Animal Crossing provide a sense of nostalgia among its players that foster an environment of childlike positivity and joy.

"The nostalgic feelings are always really nice. It's very cozy." ~P3

"I feel like that's why everyone really connects with cozy games. A lot of it is nostalgia for just the cozy childhood stuff like where the problems weren't real. It was like we were pretending to do stuff, but the responsibility wasn't actually attached to it, you know." ~P1

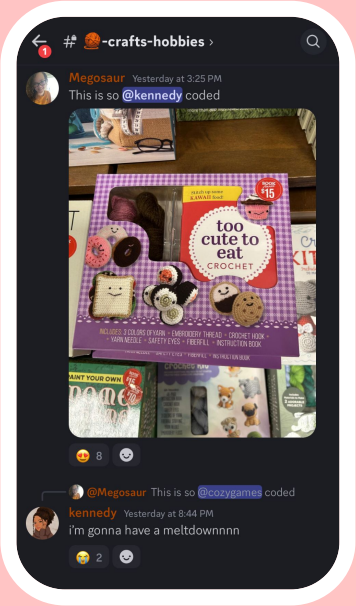
Social connection from shared hobbies

“I like that communication of everyone being connected in a way. I suppose it just feels like I’m going to a group where people understand what I like. I don't think I have any real-life friends who like Animal Crossing the way I do, and I don't know hardly anyone that even knows what Fae Farm is. I like finding people that are into my niche.” ~P3

Cozy gamers typically have a hard time finding like-minded people offline. Cozy gaming communities help improve mental health from social interactions and providing connections through a common hobby.

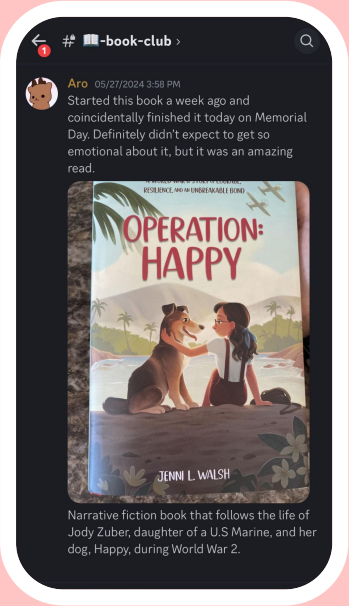
For members, these are not just games, but hobbies they regularly turn to. Conversations in communities go beyond games but other “cozy” hobbies like reading, knitting, etc.

Social connection from shared hobbies



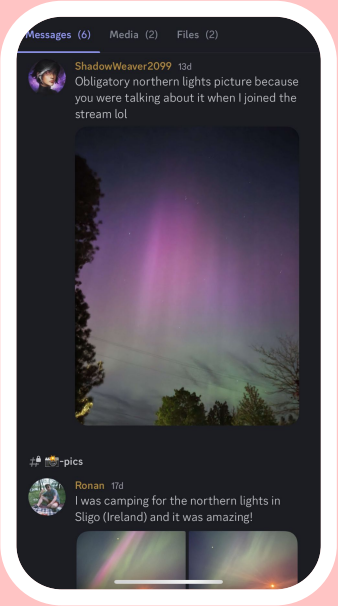
Crafts & Hobbies

Channel under Cozy Gamers Discord



Book Club Channel

Under Cozy Gamers Discord



Sharing

Members sharing Northern Lights photos from where they are

Feminine Influence*

*Of note, this finding is representative of *participant responses and their subjective experiences,* not our views or analysis.

Cozy games tend to have less combat gameplay.* This, coupled with the community being predominantly female-identifying *, helps create a welcoming atmosphere for its members.*

"Also there's a huge, like, feminine presenting community around it. And that's just something I never really saw as a kid, was like video games where there was a lot of women in it. So like if I went to the Esports lounge at my school, you know you wouldn't...you wouldn't find many women. But if you were to go to a cozy game community we would find all these women, and I just think it's...it's great to be able to connect to people I relate to like that, too." ~P4

Reflections

More time, investigate more cozy game spaces (Stardew Valley, Minecraft, etc)

Important to note how nice all our participants were. Very willing to help.

Comparative analysis with gaming communities that are considered “toxic” would be interesting

Thank you!

AI Powered Wearable Activity Tracker Research

Dale, Effie, Karlton, Maza, Niharthi

519 Qualitative Research Methods

Research Questions

1

How do people who use wearable activity trackers (smartwatches) use these devices to meet their health goals?

2

How receptive are people who use wearable activity trackers (smartwatches) to AI-based functionalities within these devices to meet their health goals?

Research Methods

Diary Study

Interview

Cognitive Walkthrough

Design Probe

Alarm that automatically wakes you up.

Decision-Making

Apple watch automatically takes action based on an assessment of your health metrics.

ATLAS.ti Web

Code Manager

Search /

Filter | New Code n+c

Name	Color	Groups	Quotations	Comment
13 - AI Decision-Making - Dislike/No Value (Karlton) 8		Round 2 Final Codes	0	Operational definition: (if any) Things about the AI decision-making functionality that users dislike or don't feel adds value for their health goals (from the design probe)
01 - Dislikes the AI decision making because they feel the user should have some type of control		Round 3 Final Codes	7	
02 - Dislikes the AI decision making because they want to determine their own wake time		Round 3 Final Codes	4	
03 - Dislikes the AI decision making because it may be inaccurate		Round 3 Final Codes	2	
Dislikes the AI decision making		Round 2 Final Codes	5	
Dislikes the AI decision making because it would make them upset (e.g., if it woke them up at the wrong time)		Round 2 Final Codes	3	

How do people who use wearable activity trackers use these devices to meet their health goals?

Positive

Negative

INSIGHT 1

Users found value in having their exercise activities recorded

- **Motivational Boost:** Users experience a heightened sense of achievement from seeing their activity data, which motivates continued exercise.
- **Enhanced Accuracy:** Recorded data helps fill memory gaps about untracked activities, ensuring a complete and accurate fitness log.
- **Proof of Effort:** Having tangible evidence of workout efforts, like a "receipt" for exercise, validates the time and effort spent, enhancing user satisfaction.
- **Reliance on Objective Data:** Access to precise workout data reduces reliance on subjective perception, increasing trust in the effectiveness of exercise routines.

Participant 2

> *I want all my data recorded, seeing it gives me a sense of achievement. So I will want to keep doing it. It also helps me patch some things I forgot to track*

Participant 3

> *Before, I had to just trust the process right like there was no proof that my workouts were working…But when you have a smart watch tracking your workouts, you at least feel like you got some kind of receipt for the workout.*

INSIGHT 2

Users experience negative emotional responses linked to smartwatch usage

- **Addictive Behaviors:** Users are motivated by accomplishing goals, begins to feel like a “chore.”
- **Anxiety:** Users experience anxiety due to frequent monitoring and dependency on using their smartwatch.
- **Notifications** Users feel overwhelmed with smartwatch notifications, some entirely avoid looking at smartwatch data due to expectations of emotional responses.

Participant 4

“*I think my first thought woiuld be how many notifications am I getting? And the suggestions would be good, but like how do i turn this feature off? It becomes too much.*”

Participant 1

“*“I don't like to check my watch during the run, because i’ll feel strong emotions..I know that I'm going to be emotional looking at it whether it's good or bad.*”

How receptive are people who use wearable activity tracker to AI-based functionalities within these devices to meet their health goals?

- Recognition
- Recommendation
- Prediction
- Decision Making

INSIGHT 3

Users think AI recognizing users activities and daily life is valuable to achieve their health goals

- **Personalized Goal Tracking:** Users appreciate AI's ability to recognize and track their daily activities to effectively plan their goals and stay motivated.
- **Customizable and Realistic Goals:** AI's recognition capabilities can set realistic and personalized health goals based on users' daily routines.
- **Flexible Scheduling:** Users find value in AI's ability to identify barriers and adjust their schedules to make achieving health goals easier.
- **Better Health Management:** Users believe that AI can provide a overall view of their health by integrating various data points, which helps them manage their health goals more effectively.

> *My body battery... it's hard to track my sleep and my average round... it could almost create those goals or plans for me based off of being on my wrist every day for 12 plus hours.*
>
> Participant 1

> *If it's not as an active thing, right. Like, if it's a busy work day, and it's not typically a gym day. I would assume then that maybe the metrics would be lowered for that day, like the goals would be lower.*
>
> Participant 4

INSIGHT 4

Users dislike AI “decision-making” because of control and inaccuracy

- **Control:** Some users expressed wanting to do things on their own but just needing help from AI, instead of AI doing it for them.
- **Wake Time:** Some users feel that sleep is a sensitive, personal thing and that they would prefer to determine their own wake time.
- **Inaccuracy:** Some users expressed concern over what data would be used to wake them up, if it is accurate, and that they’d be frustrated if it isn’t accurate.

“*Because at the end of the day, I don't want anybody to do anything for me. I wanna execute these tasks. I just need, you know, I need like a little bit of help...I need to be in control. So for me, this would not be valuable unless it was letting me in on the decision-making process.*”

Participant 3

“*(about a similar app they’ve used) I’ve used an app like this before...It had this function, but I think it didn't work well. It wasn't very useful. I think maybe its data wasn't very accurate. It said it would wake me up during light sleep, but I still felt very tired.*”

Participant 2

Team Positionality Statement

Compensation

All participants were compensated with cash for their participation. Some participants were compensated slightly more just due to the short notice on which they were recruited. This might've affected the quality or depth of participants' responses.

Course Project

This research was completed for a course project. This resulted in constraints with time and constraints with the team getting familiar with different research methodologies and tools. This might've affected the depth of our analysis.

Any Questions?

Thank you!

If you need screen projection, you can use **your own device** or **insert slide(s) in the slide deck** (can be a slide linking to your project materials)

Bagley 108's AV system connects via HDMI or VGA/basic audio jack

Alainna has a USB-C dongle available to use

If you need a different dongle, please request it ahead of time from the HCDE Office (can walk in when 4th floor main office is open) or bring your own