Week 4-1
Understanding Users: Look

SFWRENG 4HC3/6HC3 Human Computer Interfaces

* Slides adapted from previous instructors of COMPSCI/SFWRENG 4HC3/6HC3

Week 4 Goals Overview

- **Monday**
  - **Understanding User**
  - **Understanding Users: Look**
- Wednesday
  - Understanding Users: Ask
- Friday
  - Understanding Users: Ask
  - Design Principles: Practices

IDEO Methods Cards

IDEO is an award-winning design company

Very successful design process

- Human-Centered Design process, Design Thinking, IDEO Brainstorming

IDEO Method Cards: easy-to-digest notes on some of their methods

IDEO Methods Cards

Let's learn lots of methods, techniques, tried and true ways to investigate

- Not a **complete** list
- Not a **perfect** list
- A **great resource/starting point**

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Understanding Users: **Look**

- Involves many methods, such as **observation, ethnography, shadowing** etc.

- Can happen **in person** and **online/digital**

- Good to understand users' **actual behavior** in **real context**

- Good to understand users' **actual behavior** that are **difficult to articulate**

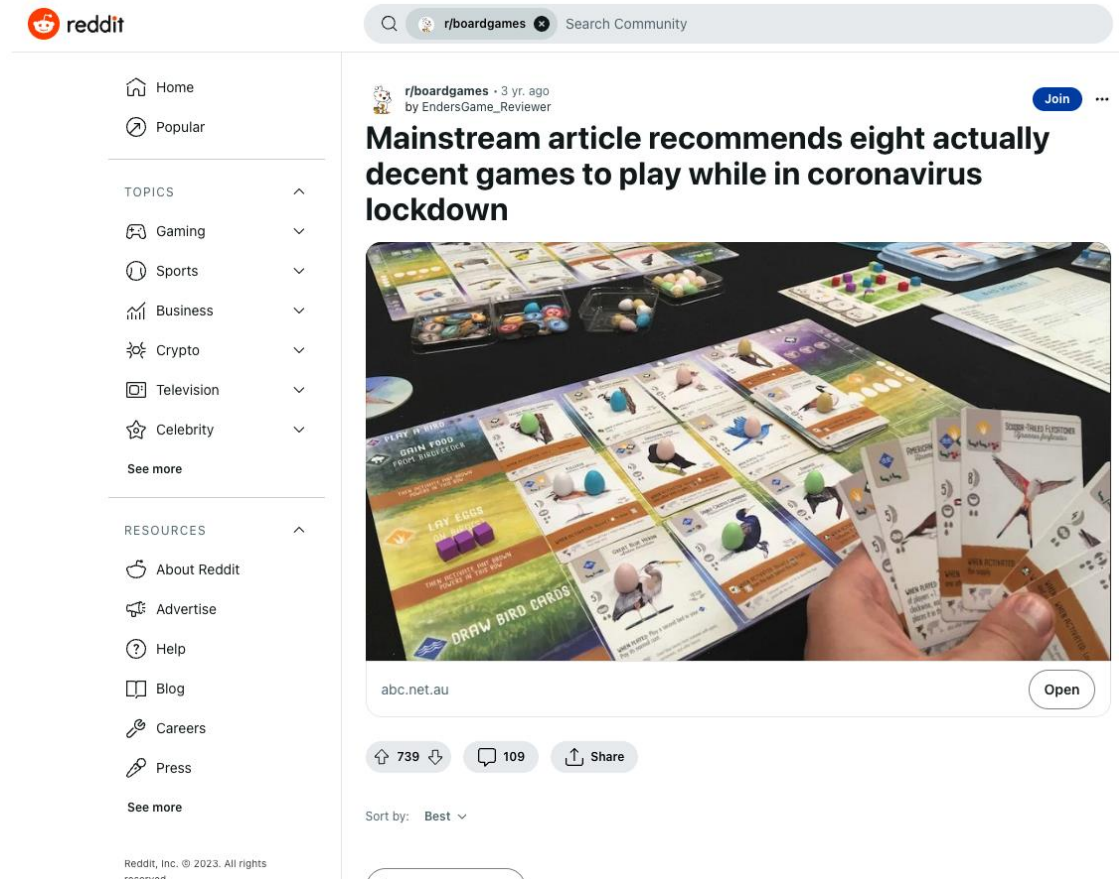- Good to understand users' **actual behavior** in **details**

Field Observation Example

Intergenerational reading tutoring program

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Online Observation Example

Online communities (Reddit, Twitter, Facebook groups, Wikipedia communities, Online Forum)

Understanding Users: **Look**

Non-participatory

Passive Participatory

Moderate Participatory

Active Participatory

Complete Participatory

Unobtrusive

Obtrusive

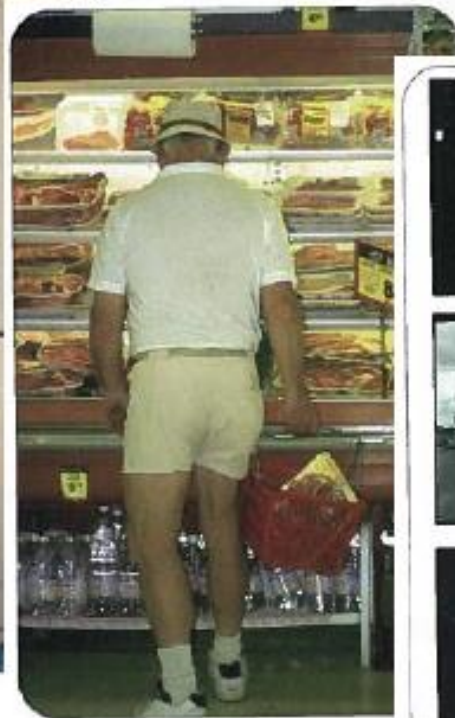Level of Interaction with the participants group

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Assume you are wrong about what people do.

IDEO Methods: Look

LOOK at what people really do

FLY ON THE WALL

A DAY IN THE LIFE

SHADOWING

PERSONAL INVENTORY

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Look: **Fly on the Wall**

Fly on the Wall

HOW: Observe and record behavior within its context, without interfering with people's activities.
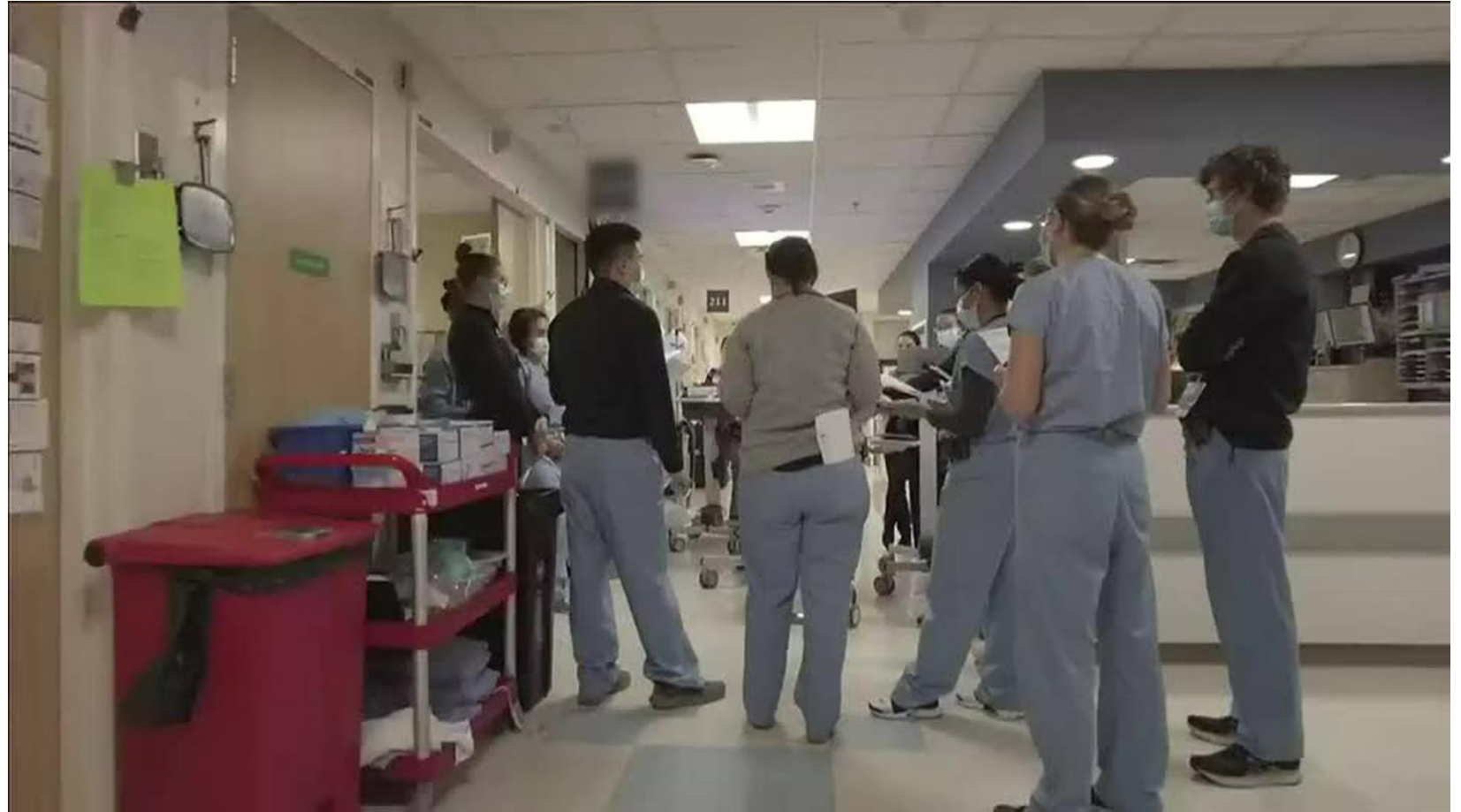
WHY: It is useful to see what people actually do within real contexts and time frames, rather than accept what they say they did after the fact.

By spending time in an operating room, IDEO designers witnessed the regard with which the surgeons treated a transplant organ and incorporated these ideas into the transport box they were designing.

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Look: **Example #1**

Observe
doctors in ICU

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Look: **Rapid Ethnography**

Rapid Ethnography

HOW: Spend as much time as you can with people relevant to the design topic. Establish their trust in order to visit and/or participate in their natural habitat and witness specific activities.

WHY: This is a good way to achieve a deep firsthand understanding of habits, rituals, natural language, and meanings around relevant activities and artifacts.

In exploring opportunities for internet-enabled devices, an IDEO team spent time with families from different ethnic, economic, and educational backgrounds to learn about their daily patterns.
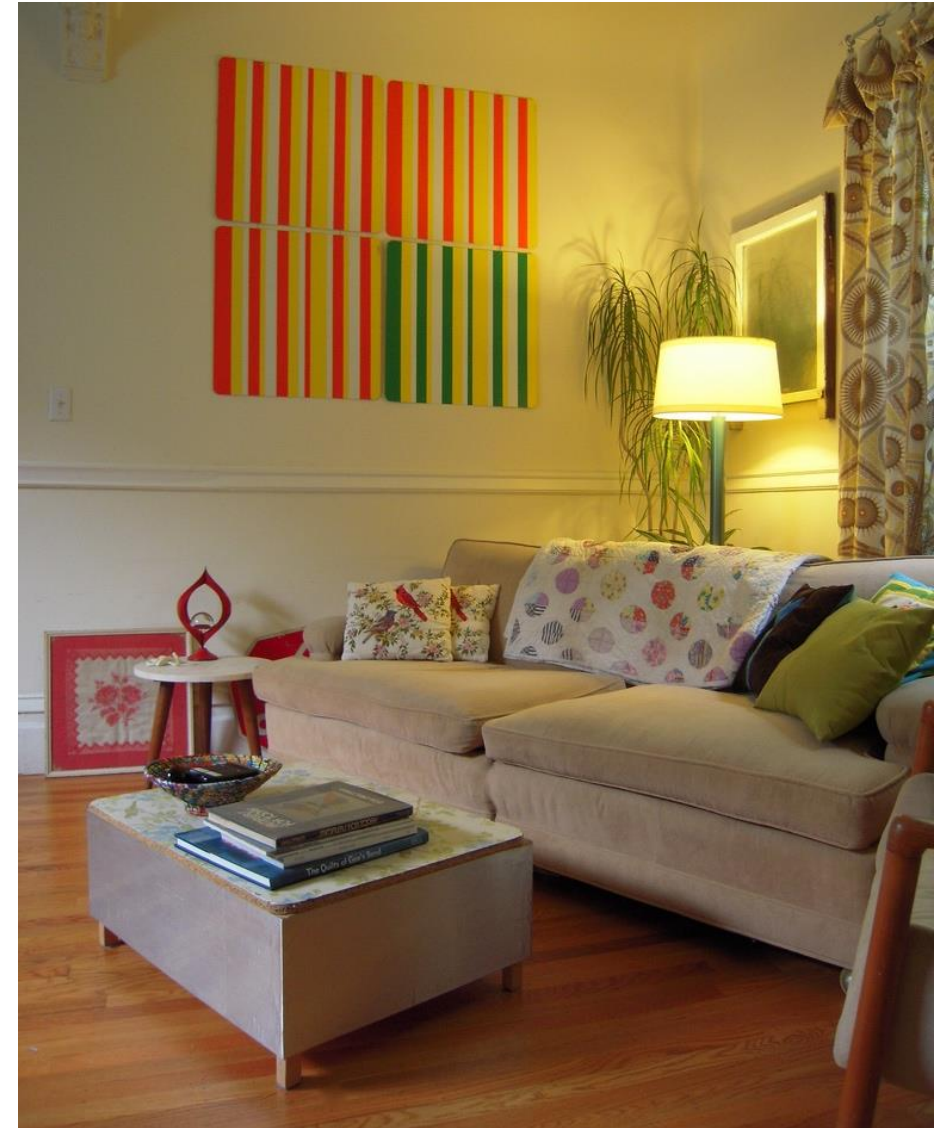
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Look: **Example #2**
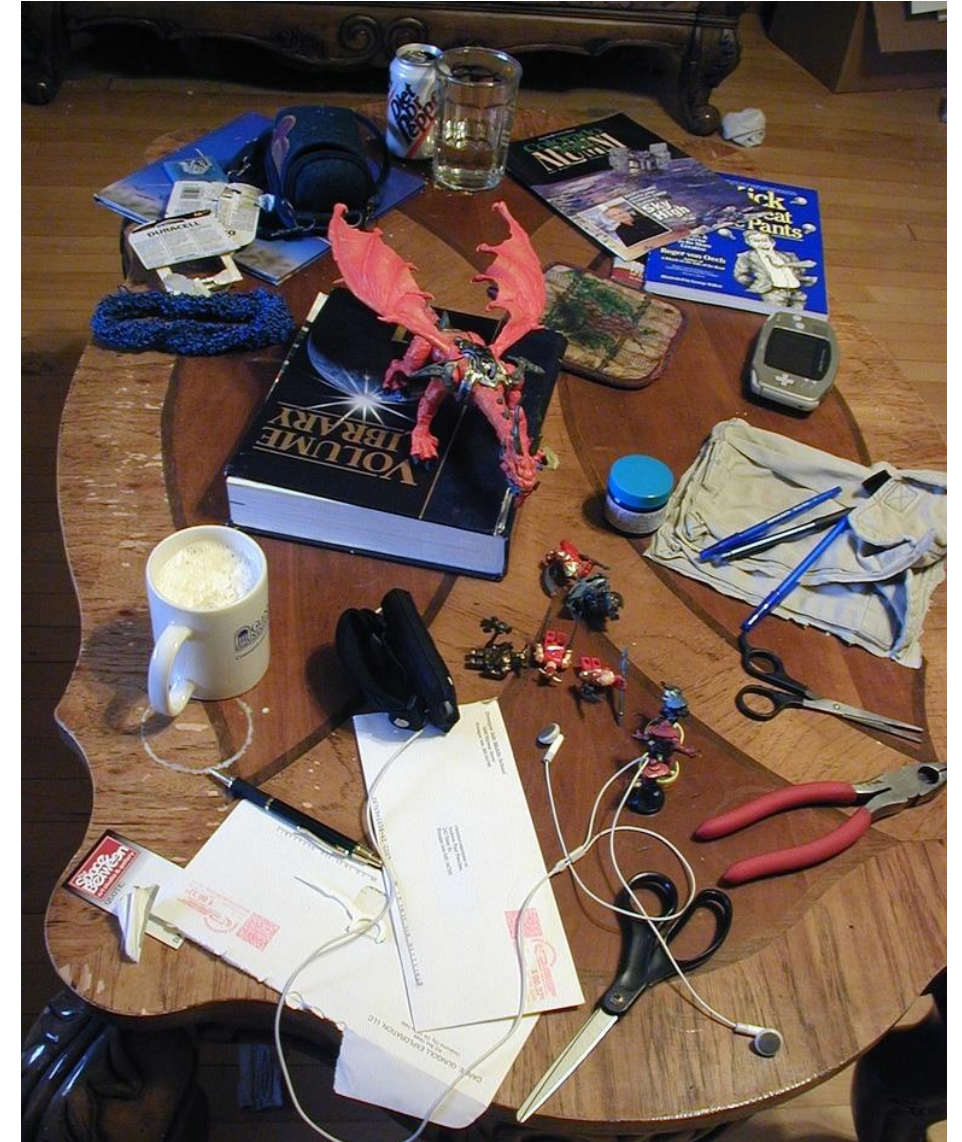
What people actually do is different from what they say.

Look: **Example #3**

- What can you tell from this living room?

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Look: **Example #3**

- What can you tell from this living room?
  - Visiting vs. Living
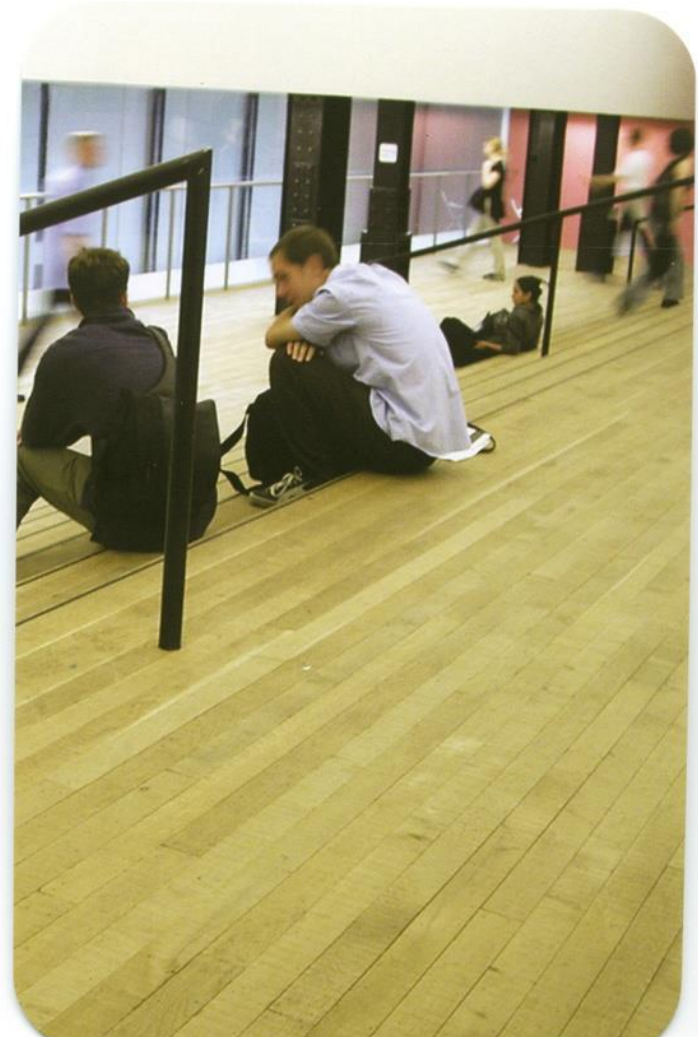 - Presented vs. Actual Behaviors

Look: **Time-Lapse Video**

Time-Lapse Video

HOW: Set up a time-lapse camera to record movements in a space over an extended period of time.

WHY: Useful for providing an objective, longitudinal view of activity within a context.

The IDEO team recorded the activity of museum visitors over several days to learn how to improve space layout.

Casual Interaction in a Hallway

Greenberg, S. (1990)
Grouplab Video Report
Department of Computer Science
University of Calgary, Canada

Duration ~2:30

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How do people use their spaces/artifacts?

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Look: **Behavioral Archaeology**

Behavioral Archaeology

HOW: Look for the evidence of people's activities inherent in the placement, wear patterns, and organization of places and things.

WHY: This reveals how artifacts and environments figure in people's lives, highlighting aspects of their lifestyle, habits, priorities and values.

Noting that people efficiently organized multiple work tasks by stacking paper all over their desk surfaces, IDEO invented a brand-new system furniture element to support this.

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What People Actually Do

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Look: **Example #5**

Which buttons are used most?

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Look: **Example #6**

Which buttons are used most?

Look: **Example #7**

How families and friends play boardgames during lockdown

Look: **Example #7**

How families and friends play boardgames during lockdown

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Understanding Users: **Look**

1. Assume **you are wrong about users**

2. Go and figure out **in what ways**, and **how much you're wrong**

Asking for Consent

- Consent is not required if observe in public space (if only taking notes)

- Consent/permission is needed in other situations

- Consent/permission is needed for pictures and recordings
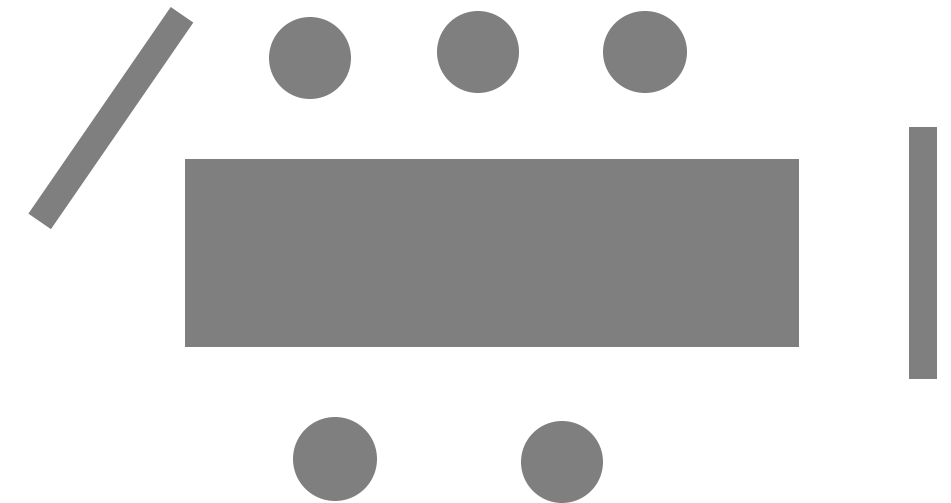
  - Give participants options

Data Collection

- Pictures (with permission)

- Audio / Video (with permission)

- Sketches

- Notes

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Structure Your Notes

- What do you hope to capture in your notes?

- Are there other types of evidence you want to capture?

- What granularity is relevant to you?

- How will these notes be qualified or quantified?

Time Stamp	Reading Interaction	Social Interaction

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Practice the Method

Observation Activity

1. Partner up with your neighbor, or maybe group of 3

2. One of you will be the "artist" the other one will be the researcher

3. You'll need pen & paper, or some other way of drawing (e.g., trackpad, tablet, etc.)

Observation Activity

Artist: draw a cat chasing a ball of yarn

Researchers: record all the steps that the "artist" took to arrive at the finished drawing

Observation Activity

- Was it easy?

- What did you notice?

- Do you know something now that you didn't know before?

- What would you do differently?

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