



PHENIKAA UNIVERSITY
Faculty of Computer Science

CSE703016: Introduction to HCI

Lecture 06: User Research I
(Nghiên Cứu Người Dùng Phần 1)

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Today's Topics

- User Research
 - User research methods:
 - Observational
 - Self-Report
- Work with your group on 2b

User Research

User Research Methods

Observational vs Self-Report

Participant Observation

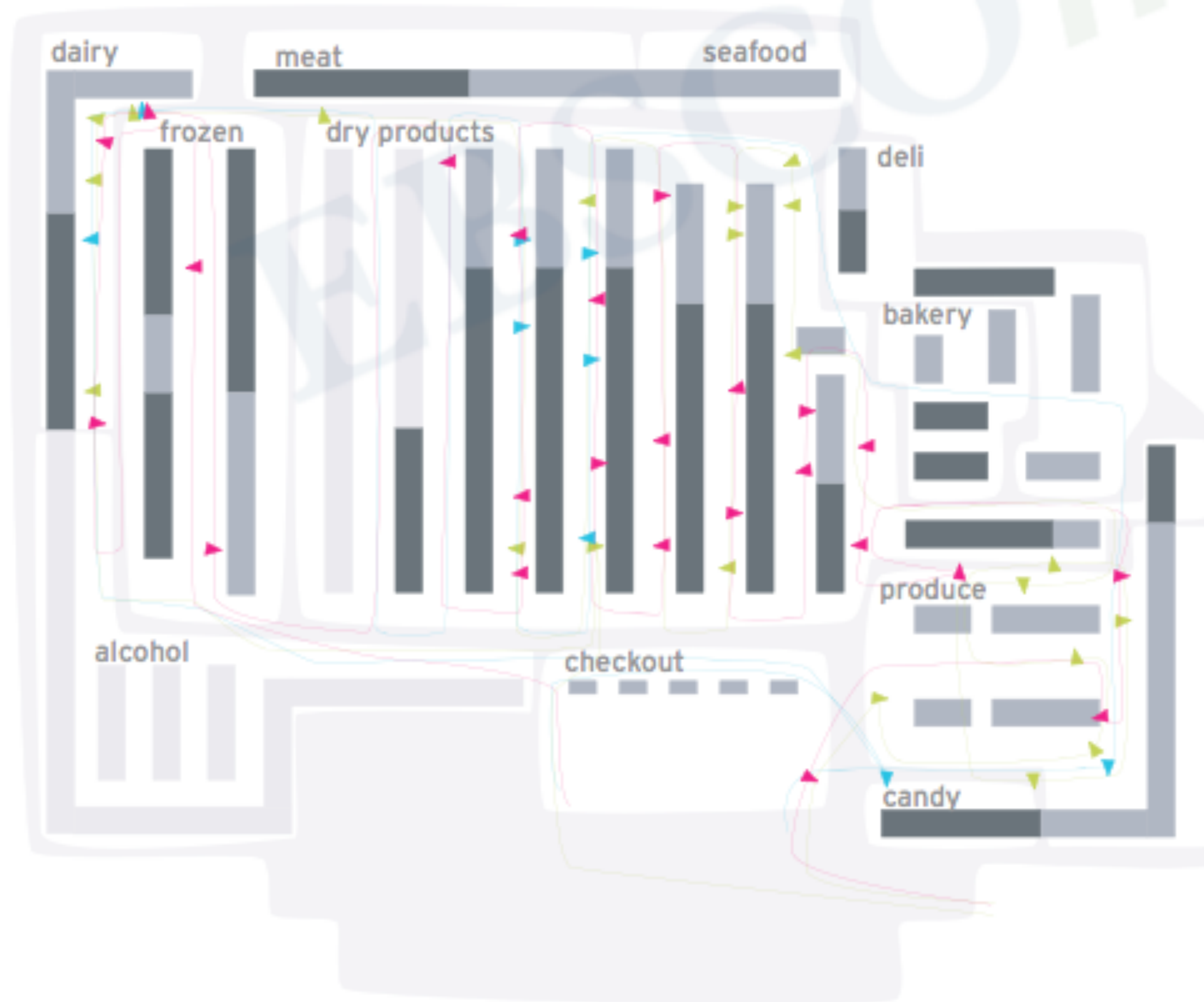
- Goal: Viewing users and their behavior in context
- When: You want to see users in their element and learn about their experience
- How:
 - “deep hanging out” - spend time in the vicinity of the subjects
 - active participation in the activities they are doing
 - experience of membership in the context, culture, or subculture
 - forming connections and empathy with the people and things important to them

Fly-on-the-Wall Observation

- Goal: To gain a deep understanding of how people behave in a specific location
- When: Use when you want to study people unobtrusively (to avoid bias - Hawthorne effect)
- How: Go to a location and observe what is happening there without interacting or talking to people. Be a fly on the wall!

Behavioral Mapping

- Goal: To uncover discrepancies between how participants use a space and how it was intended to be used
- When: Use when you want to study a specific space/environment in order to plan improvements
- How: Unobtrusive (done “at a distance”)
 - Start with a site plan or map and a list of behaviors you want to record, then note when those behaviors happen on the map



Participant 1



31 items total =
17 food +
14 sad nonfood

Participant 2



13 items total =
7 food +
6 sad nonfood

Participant 3



40 items total =
16 food +
34 sad nonfood

Contextual Inquiry

- Combining both observation and self-report:
- “The core premise of Contextual Inquiry is very simple: go where the customer works, observe the customer as he or she works, and talk to the customer about the work. Do that, and you can’t help but gain a better understanding of your customer.” - Beyer & Holtzblatt (1998)

Contextual Inquiry

- Goal: To study actual behavior in real contexts of use and see how context impacts interactions.
- When: Use when you are not worried about biases introduced by your observation and discussion, and you are interested in specific tasks
- How:
 - Unlike participant observation, you aren't doing the task yourself with them
 - Define your tasks up front, asking participants in advance about the types of things that they do, and the places where they do them to help design your session
 - Conduct the session in the place and time that the task is normally conducted
 - Let the participant complete the task with as few interruptions as possible. Have them think aloud throughout the task and assist you in understanding what they are doing.
 - Ask questions afterward

Contextual Inquiry

- Back-and-forth between researcher and participant:
 - The participant is doing a task in an appropriate context
 - The participant explains what they are doing
 - The researcher offers an interpretation
 - The participant agrees or corrects
- You're not just observing and learning but you're also not leading the interaction either

Observational vs Self-Report

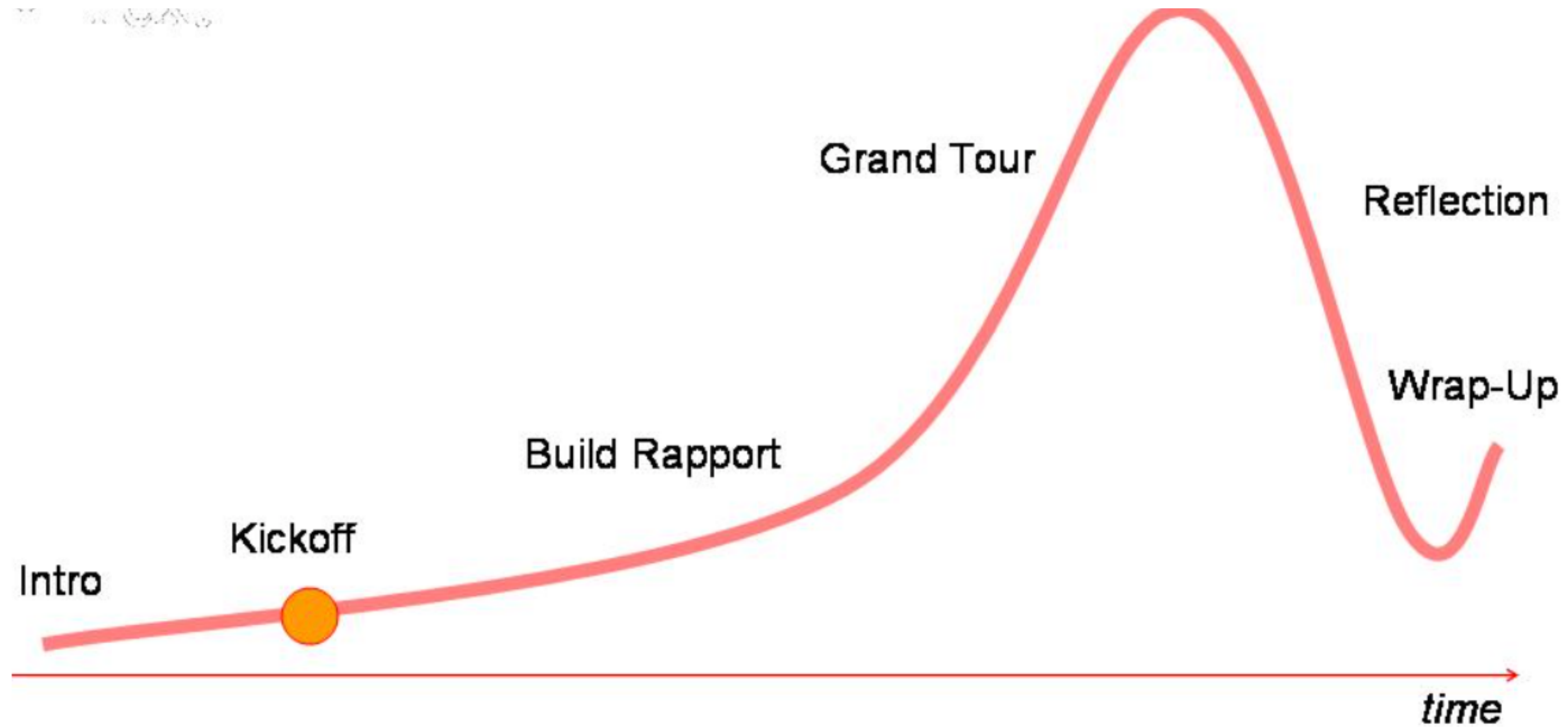
Interviews

- Goal: To collect first hand personal accounts of experiences, opinions, attitudes, and perceptions
- When: Use when you want to maximize the amount of information you can get per time spent, you are likely to have follow-up questions, and if context is less important
- How:
 - Write up an interview script and then meet with participants to ask questions on your script
 - Script is “semi-structured” for flexibility - meaning you can deviate or reconfigure your script on the fly

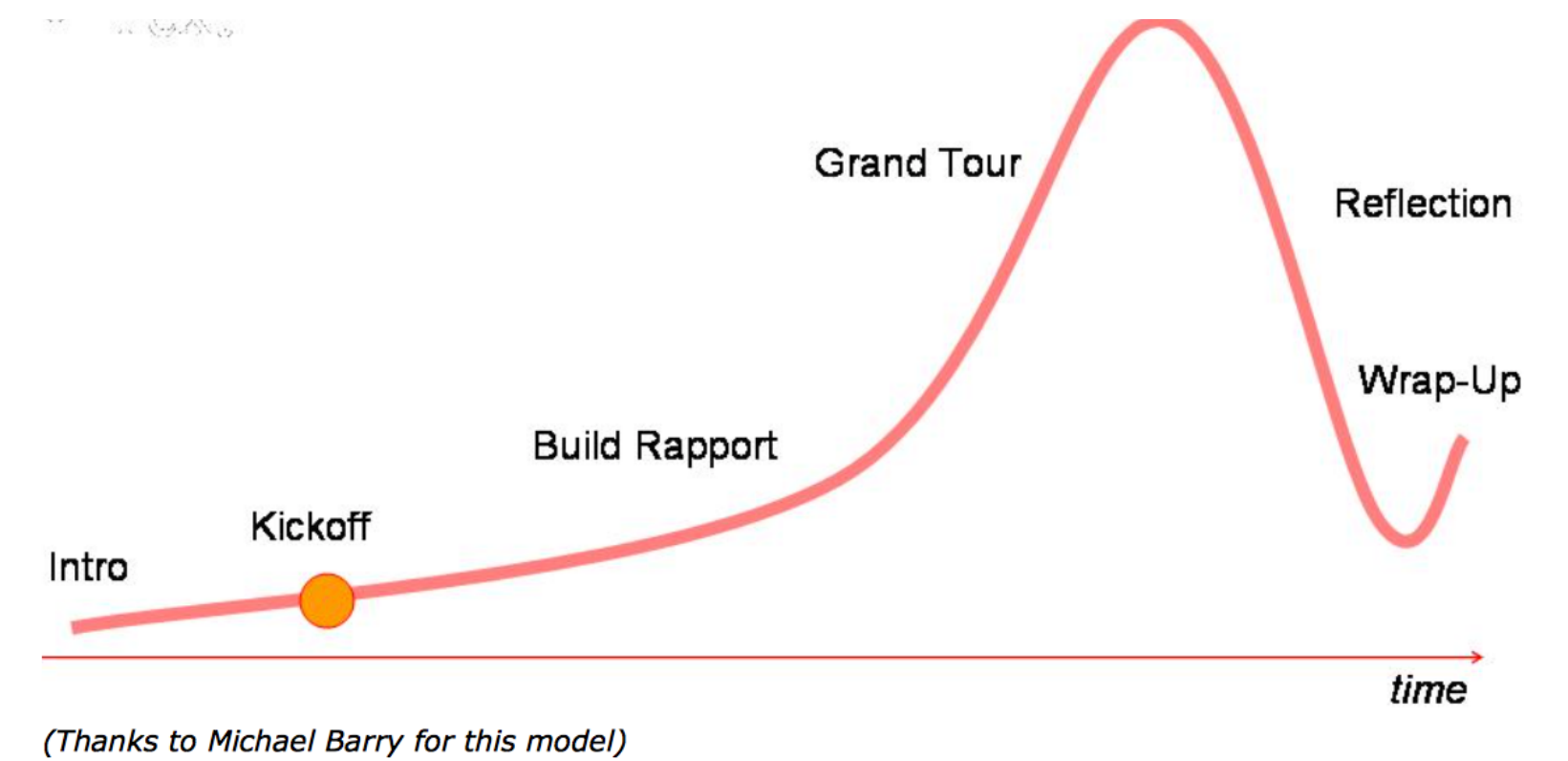
Interviews

- Why not?
 - People are bad at remembering specific details of activities
 - People remember almost nothing about routine events (e.g., a specific time you checked your phone)
 - People are bad at estimating frequency (how many times an hour do you check your phone?)

77 100%



(Thanks to Michael Barry for this model)



- Intro: “Hi, I’m a UW student studying coffee. I’m interested in hearing about your experience with coffee. There are no right or wrong answers, I just want to hear what you have to say.”
- Kick-off: “Do you drink coffee?”
- Build rapport: “Did you have a coffee today? How was it? Do you have a favorite coffee?”
- Grand Tour: “Can you describe your most memorable coffee experience? Why was it so unique? What happened?”
- Reflection: “If you were designing the ultimate coffee shop based on your ideal experience...”

Focus Groups

- Goal: To gain insights into themes, patterns, and trends that are likely to come out more in a group setting.
- When: Use when you want to learn about the opinions, feelings, and attitudes from a group about a specific product, service, brand, location. Interested in how people build off of each other's thoughts.
- How:
 - Write an interview script (i.e., a number of questions) and meet with participants in a small group to ask these questions
 - Be flexible enough to allow the group to carry the conversation elsewhere

Diary Studies

- Goal: To capture specific details of real interactions, close to when they happened
 - Capture specific context of interaction (photo diaries, screenshots)
 - Better understand frequency of use of a feature/app
- When: Use when you want to learn about specific activities over an extended period of time (e.g., when it is impossible to observe users throughout that time period) and if it doesn't matter that participants might be more aware of the task you're interested in
 - Less frequent activities can take months to document!
- How: Ask participants to note down specific activities

	A	B	C	D
1	10am ping		1. Sally	2. Joseph
2	When was the last time you used _____? Have you used it since you last responded?		I used it at 9am	I used it at 11pm last night
3	How long did you use it?		~10 minutes	35 minutes
4	What motivated to you use it?		I was bored and was looking for something new to entertain me.	I couldn't sleep so I decided to go use the app to kill time
5				
6	1pm ping			
7	When was the last time you used _____? Have you used it since you last responded?		I just used it a few minutes ago!	No I haven't used it since
Day 1		Day 2	Day 3	+

Directed Storytelling

- Goal: To collect rich stories of people's experiences
- When: Use when you want to collect stories from participants when time or other factors prevent direct observation or longer forms of research inquiry
 - Good when you wouldn't be able to come up with questions for an interview because more knowledge is needed
- How: Similar to interviews, but focused on stories. E.g., "Tell me a story about the last time you..."

Surveys

- Goal: To collect large amounts of self-reported information from people
 - E.g., to understand how common a specific behavior is
- When: Use when you want to get as many perspectives rapidly and/or quantify and statistically test insights and when you have a good understanding of the questions you want to ask
 - Can be remote
 - Less flexible than interviews -> requires more knowledge about the population, no chance to ask follow-ups
 - Can complement interviews to understand broader patterns
- How: Develop and sequence questions, test the survey, recruit participants

Six User Research Tips

1.



**Cast aside your biases,
listen and observe**

Let subjects tell their own story,
and listen for the things that
elicit emotion, cause them
concern or frustration.

"If you want to find out what
people really need, you have to
forget about your problems and
worry about their lives."

2.



**Note the contradictions
between what people
say and what they do**

Opportunities for innovation lie
within the disconnect between
action and words.

3.



Listen to people's personal stories

Let them relate their successes and failures.

Stories encompass the implicit rules that govern and organize people's lives and reveal what they find normal, acceptable and true. They reveal moral codes, sources of pride, shames, shoulds and should-nots.

4.



Watch for "work arounds"

People make do and work around the shortcomings of products and situations.

In everyday life, we all come up with "work arounds," clumsy or clever, that we usually are totally unaware of.

You must take note.

5.



Distinguish between needs and solutions.

Needs open up possibilities, solutions constrain them.

If you start with a solution then you may overlook the possibility of coming up with an entirely new and revolutionary product or service.

6.



Look beyond the obvious.

Your research may seem so routine and familiar that you feel there is nothing new to be learned.

Boredom and frustration easily set in. Stay alert.

The epiphanies and insights emerge from the nuances.

Group Project

- Let us know if you're having trouble with recruiting, and we can try to help! You may need to broaden your search or pivot slightly if you cannot reach your target group. Talk with us and your classmates to get feedback.
- User research may reveal some issues with your initial problem space as you conceived it (or reveal some hidden assumptions you may have had) so that you may need to reframe your problem slightly. That's okay too!

Design Process in a Nutshell

1: Three Project Proposals

