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INTRODUCTION TO QUALITATIVE RESEARCH

WHAT IS DESIGN RESEARCH?

Design research is about learning from people in the context of their lives.

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Find Problems	Understand a Topic	Build Empathy

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Design research uncovers "latent needs" – problems people have, but that they haven't yet identified.

WHAT IS DESIGN RESEARCH?

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Find Problems	Understand a Topic	Build Empathy

By conducting research in context, researchers learn the nuances, workflows, and vocabulary associated with complex topics and disciplines.

WHAT IS DESIGN RESEARCH?

Design research is about learning from people in the context of their lives.

Find Problems	Understand a Topic	Build Empathy

Most importantly, design research helps designers build empathy with other people, so they can better represent that person during the innovation process.

For example...

College debt

$37,172

Average student debt, class of 2016 graduate

Source: https://studentloanhero.com/student-loan-debt-statistics/

59% graduation rate

2015 higher education <u>six-year</u> graduation rate

Research goal

To understand what it's like to be a student or recent graduate carrying educational-related debt.
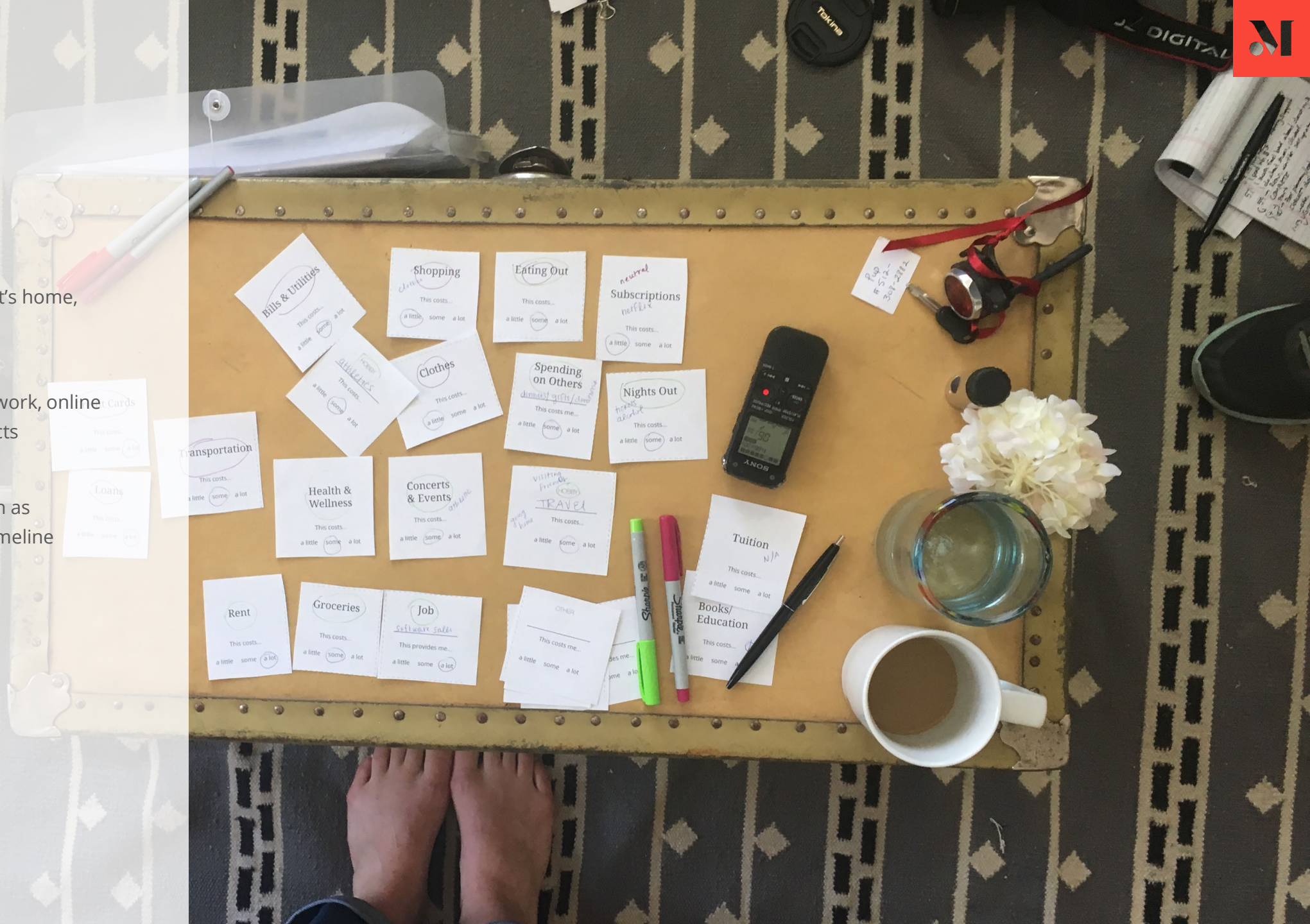
Methods

Contextual Inquiry
90 minute sessions in a participant's home, apartment, or dorm room

Artifact Walkthrough
Exploration of debt-related paperwork, online systems, and other tangible artifacts

Timeline Retrospective
Participatory design activities, such as sketching and discussing a debt timeline

Contextual Inquiry

"I knew when I signed the loan for Sally Mae, I didn't really know about the details of the interest rates for other loans until after... I got each of them each month but didn't open them. So I knew that there were interest rates, but I didn't totally understand what that meant.

It's embarrassing for me to tell you guys this stuff. I also don't know you so I don't really care that much. I wouldn't tell other people this. Like anyone."

Ashley, $60,000 in student debt
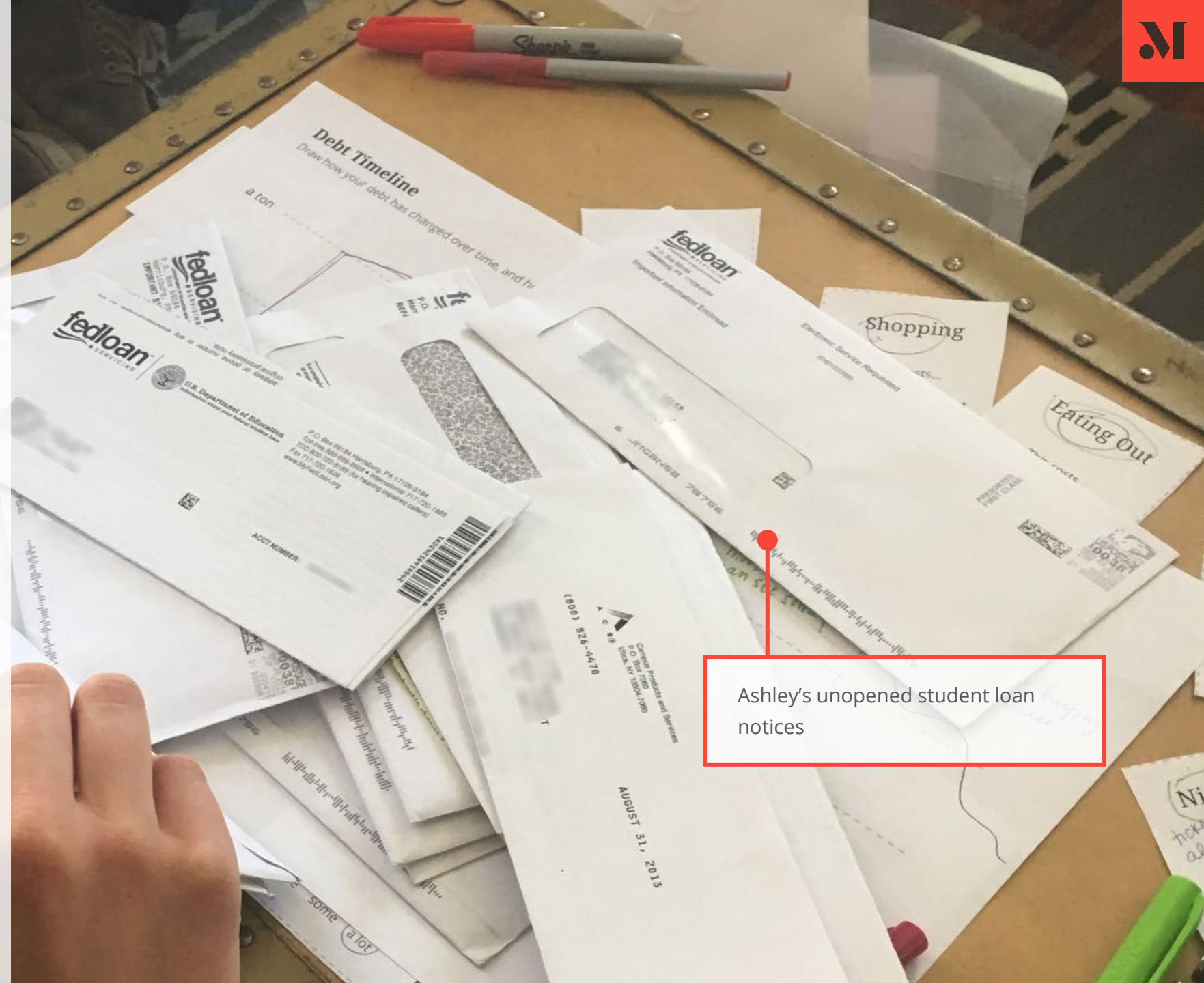
Ashley's unopened student loan notices

Artifact Walkthrough

"Whenever I moved here my ex and I had a place together, and all my mail was getting sent there because I didn't have a permanent address here. So that whole time, I was getting mail and I didn't know it and he never told me until we closed out the lease, probably like nine months later. Then I saw all this mail, like oh by the way, you're in default."

Vicki, $32,000 in student debt
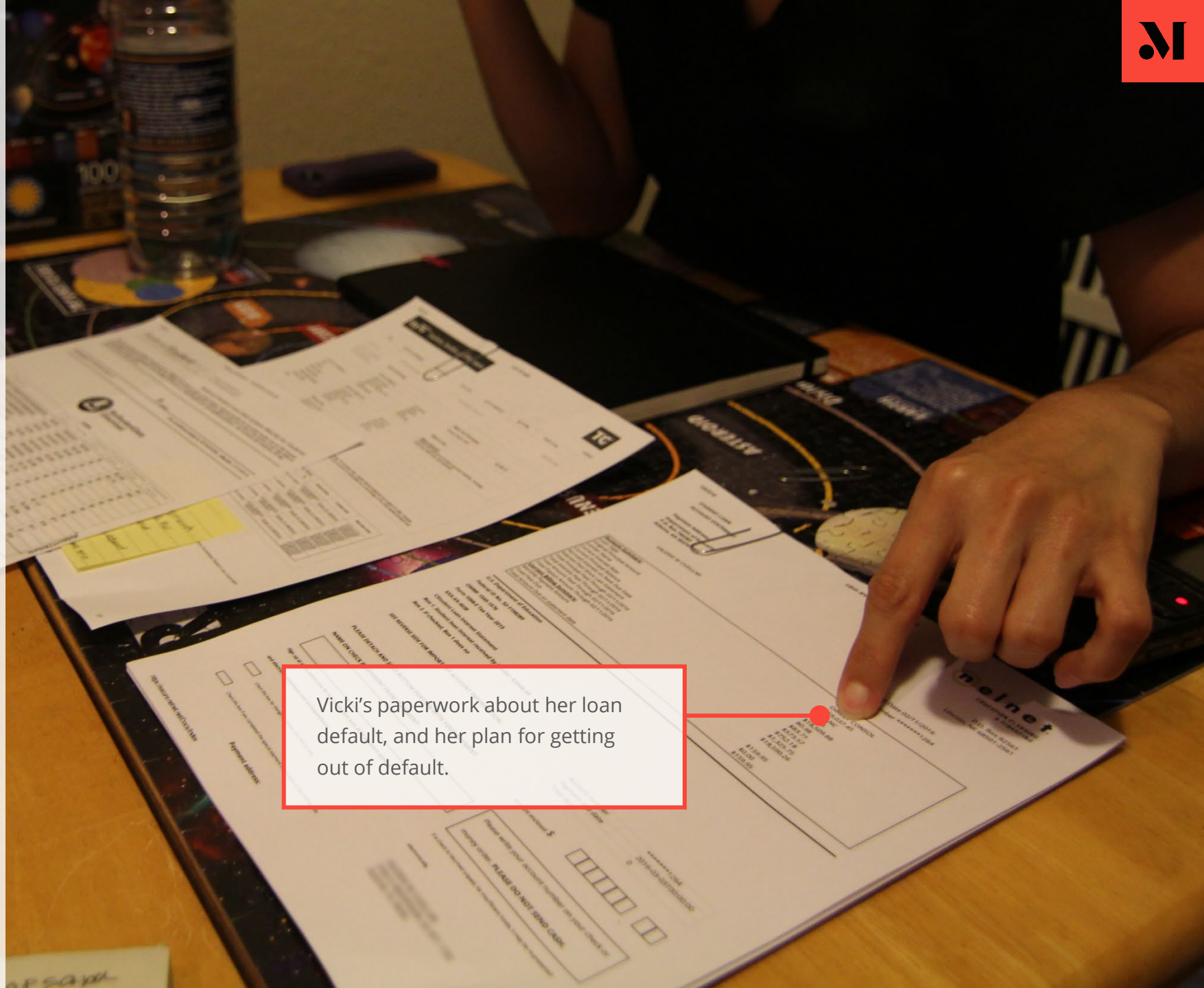
Vicki's paperwork about her loan default, and her plan for getting out of default.

Timeline Retrospective

"These goals make me feel a little out of control. That they're just not doable right now, which... It makes me nervous that I don't have any money saved at all. And the fact that I don't know when I will be able to start savings makes me feel kind of lame."

Gracie, $50,000 in student debt
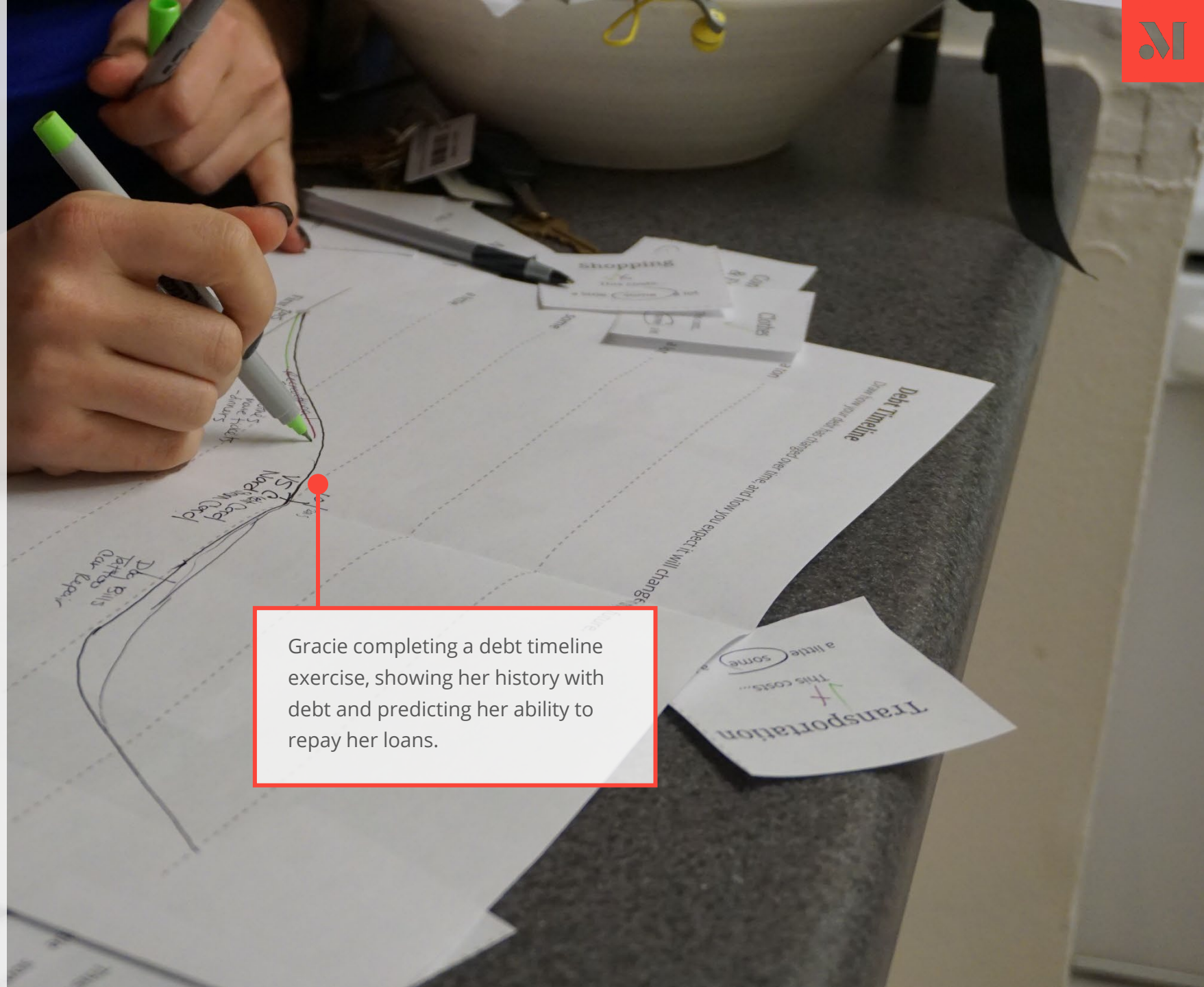
Gracie completing a debt timeline exercise, showing her history with debt and predicting her ability to repay her loans.

The value of research

| Find Problems | Understand a Topic | Build Empathy |

The value of research

Find Problems	Understand a Topic	Build Empathy

The research team was able to identify communication breakdowns in the way debt is described to students, comprehension problems in the various forms and statements delivered to borrowers, and interface problems in the existing online tools that support debt tracking and repayment.

The value of research

| Find Problems | Understand a Topic | Build Empathy |

The research team gained insight into the way students interact with lenders, how interests rates and financial distributions work, and the terms and deadlines associated with loans.

The value of research

| Find Problems | Understand a Topic | Build Empathy |

The research team was able to form an emotional bond with the students they collaborated with, and were able to feel what it's like to be stuck in a cycle of debt repayment.

WHAT IS DESIGN RESEARCH?

Design research is user-centered, not market or technology centered.

Market-Centered	Technology-Centered	User-Centered
Prioritizes market potential	Prioritizes technical capabilities	Prioritizes people
Starts by exploring the competitive market landscape, and builds on market opportunity	Starts by examining available and emerging technologies, and builds on functionality	Starts by speaking with people, and builds on understanding and empathy
Often found in consumable companies, like Gillette or J&J	Often found in engineering companies, like Microsoft or Google	Often found in design companies, like AirBNB or Nike

WHAT IS DESIGN RESEARCH?

Design research is different than market research.

Design Research	Market Research
Focuses on people	Focuses on people
Can be qualitative or quantitative	Can be qualitative or quantitative
Borrows from the social and behavioral sciences	Borrows from the social and behavioral sciences
Attempts to *understand culture*. Looks at the styles, words, tools and workarounds people use in an effort to inspire design.	Attempts to *predict behavior*. Looks at what people say they would do, or what they actually do, in an effort to predict what they would do in a new situation.
Celebrates the unique and peculiar. The rare or obscure in observations can lead to a new or interesting design idea.	*Avoids* the unique and peculiar. The goal is to understand mass responses; outliers are frequently ignored.
Avoiding bias is *irrelevant*. The goal is not to be objective but instead to be rigorous.	Avoiding bias is *critical*. The statistical analysis of data requires an objective point of view.

WHAT IS DESIGN RESEARCH?

The key: real behavior

To observe real behavior, we focus on **what people do**,
not **what they <u>say</u> they do**.

This means:

- Watching people in their job, life, and play

- Asking people questions as they do things

- Avoiding retrospective accounts or summary statements

- Learning by doing

WHAT IS DESIGN RESEARCH?

Three categories of design research

There are three main categories of design research that are used consistently through the design process:

Foundational Research

A way to learn about behavior first-person, by watching it and trying new skills in a master-apprentice relationship

Generative Research

A way to produce new design solutions in a collaborative manner, working with end users to help them describe their wants, needs, and desires

Evaluative Research

A way to evaluate the usability, utility, and desirability of new design solutions

FOUNDATIONAL RESEARCH

Watch, learn, feel, and try.

During foundational research, our goal is to build empathy with the people we are learning about, and to understand what they do, and why they do it.

Core methods:

- Contextual Inquiry

- Interviews

- Observation

FOUNDATIONAL RESEARCH

Method: Contextual Inquiry

What is it?

A form of active observation – learning by asking, and learning by doing.
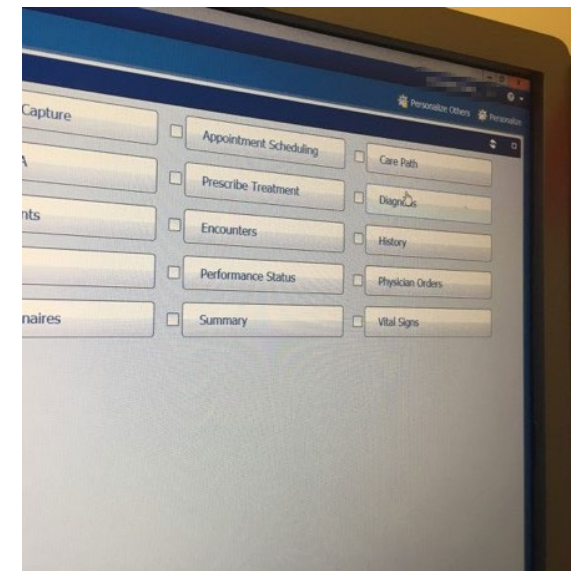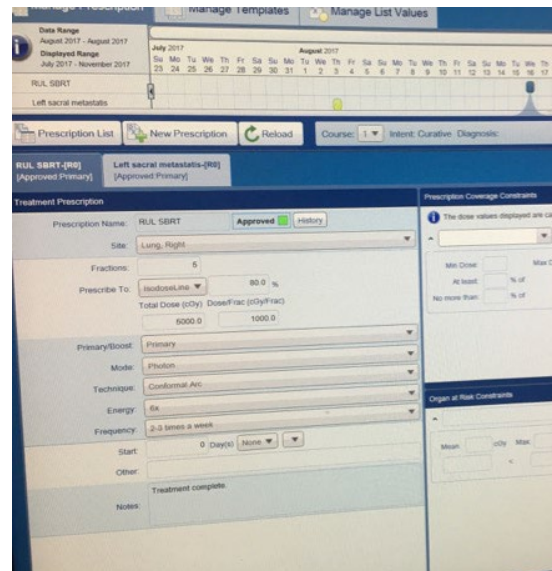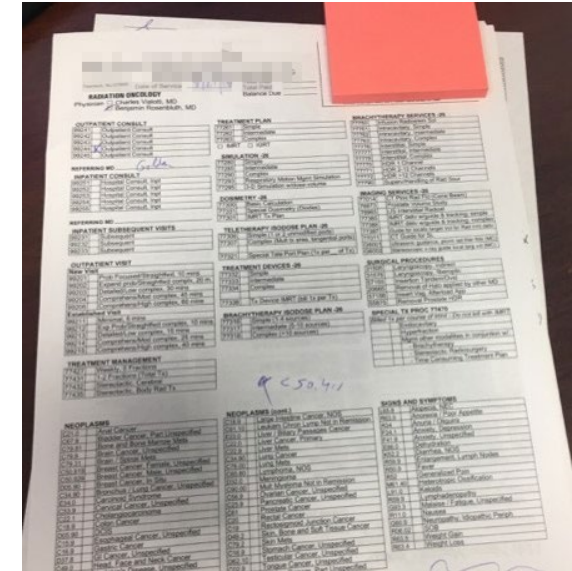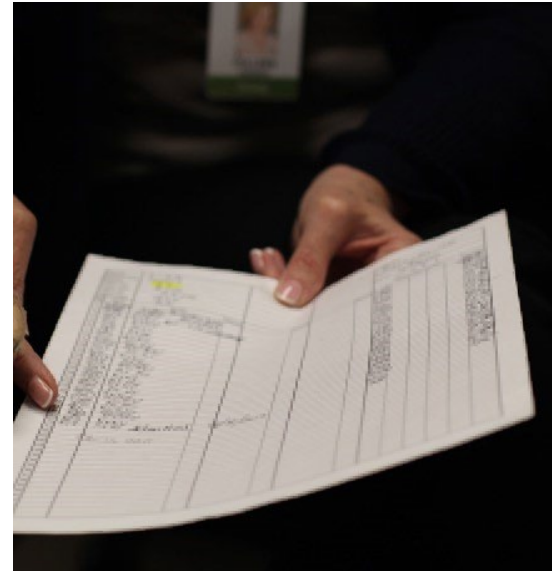
How does it work?

Researchers shadow a participant as they work, live, and play; as a participant does things, researchers prompt and ask open-ended questions.

When is it used?

Frequently – a contextual inquiry is our "base" form of research.

What's the downside?

It's time consuming, and requires the most commitment in terms of planning, recruiting, and synthesizing.

FOUNDATIONAL RESEARCH

Method: Interview

What is it?
A generalized (and often retrospective) form of data gathering through question and answer.

How does it work?
Researchers ask participants a series of open ended questions, and engage in a structured conversation.

When is it used?
Often, a contextual inquiry turns into an interview, because a facilitator cannot observe actual work being done.

What's the downside?
An interview relies on memory, retrospection and introspection, and other forms of less reliable participant activity.

Interviews work best when the facilitator builds rapport, and the participant lets down their guard.

Method: Observation

What is it?
Active attention: watching, listening, and learning (often from afar).

How does it work?
Researchers identify a particular context where relevant activity occurs, and observe the people, systems, and processes in that area.

When is it used?
Observation is typically used in an environment where critical work is done, passive activity occurs, or people are reluctant to engage with an interviewer.

What's the downside?
It's difficult to understand why things are happening.

Sit back, watch, and note...
Activities, environments, interactions, objects, and users

GENERATIVE RESEARCH

Make things together.

During generative research, our goal is to help participants conceive of ideas, stories, and concepts – and express themselves in a rich and multidimensional manner – by making things together.

Core methods:

- Cultural probes

- Diary studies (written, video, and photo)

- Timeline retrospectives
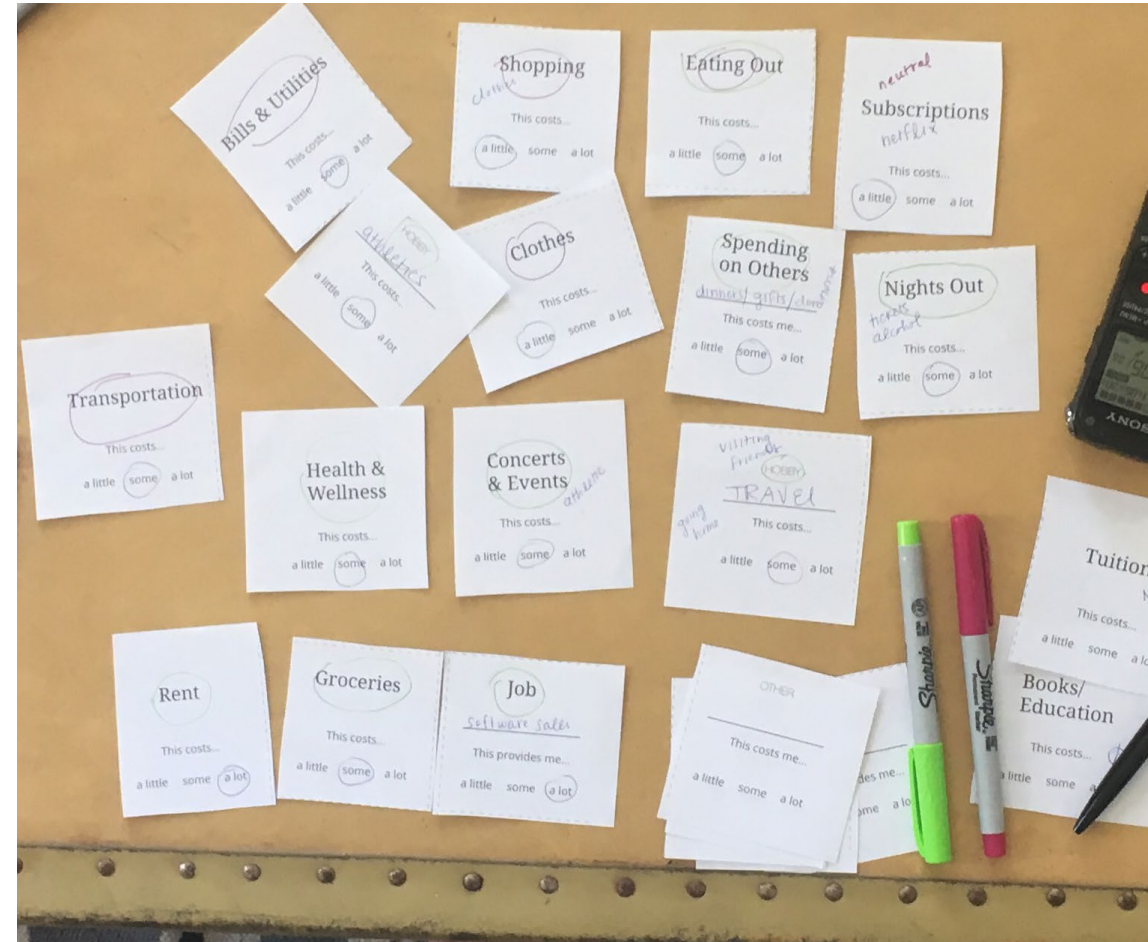
Exploring values related to money

GENERATIVE RESEARCH

Method: Cultural Probes

What is it?
A form of artifact-driven intervention.

How does it work?
An incomplete activity is distributed to participants; they complete the activity, return the probe, and discuss it with the facilitator.

When is it used?
Cultural probes are effectively used for gathering private data from events that may happen in a sensitive setting, or data that occurs over time.

What's the downside?
Probes are expensive: they take a long time to make, to use, and to evaluate. The logistics of tracking many culture probes can be overwhelming.

Daily postcards

GENERATIVE RESEARCH

Method: Diary Studies

What is it?
Participant-driven summaries, introspection, and data gathering.
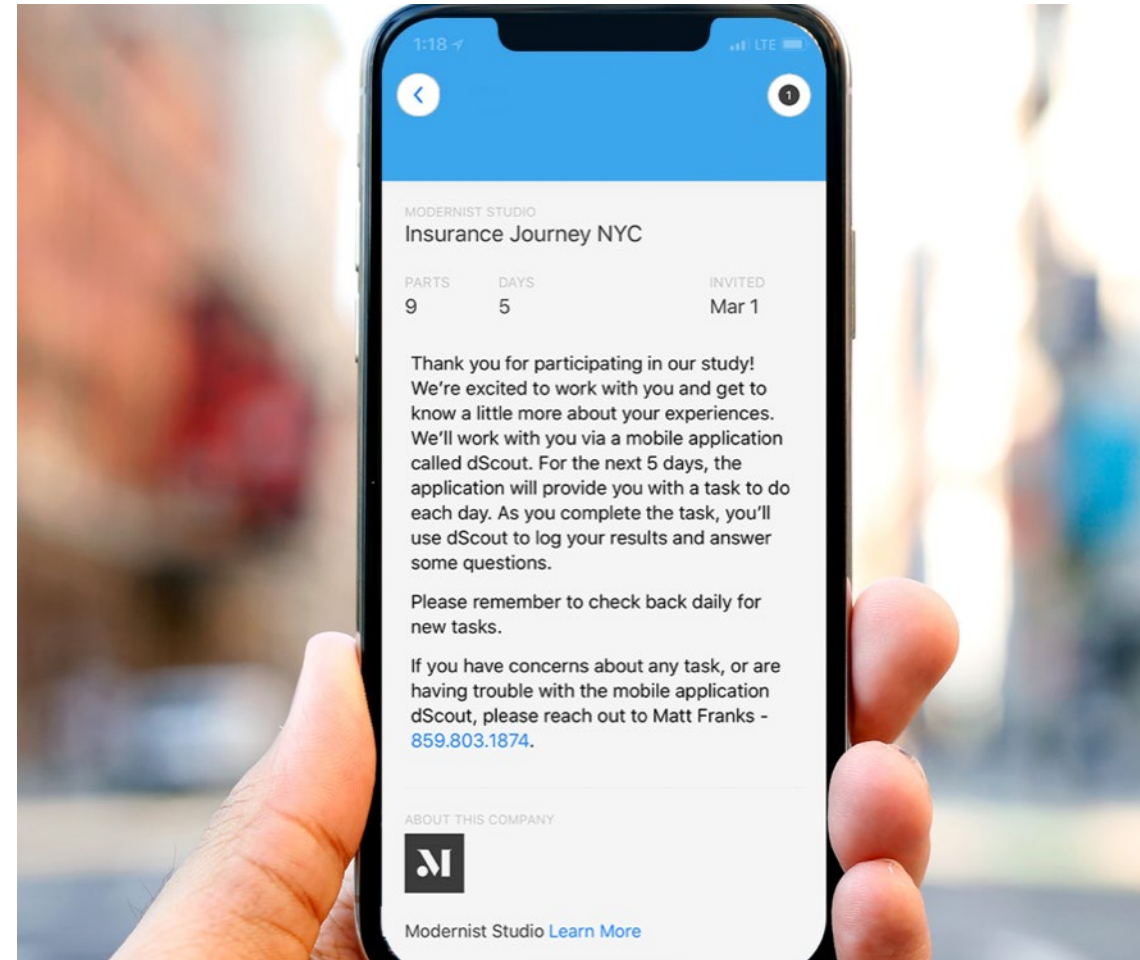
How does it work?
A participant is given instructions on data to gather during their daily life; they capture that data using a combination of writing, video, and pictures.

When is it used?
Diary studies are useful for tracking work done over time, and for entering a context that may be off-limits to a researcher.

What's the downside?
Diary studies depend on a participant remembering to follow instructions.

A remote time-based insurance journey

GENERATIVE RESEARCH

Method: Timeline Retrospectives

What is it?
A sketched history of an event or time period.

How does it work?
A participant is given an incomplete timeline, and through a series of prompts and discussion, fills in the timeline.

When is it used?
Timelines are effective in helping participants recall past events, identify sequences of events, and highlight emotional journey moments.

What's the downside?
A timeline is retrospective, and so the data is often incomplete and can be inaccurate.
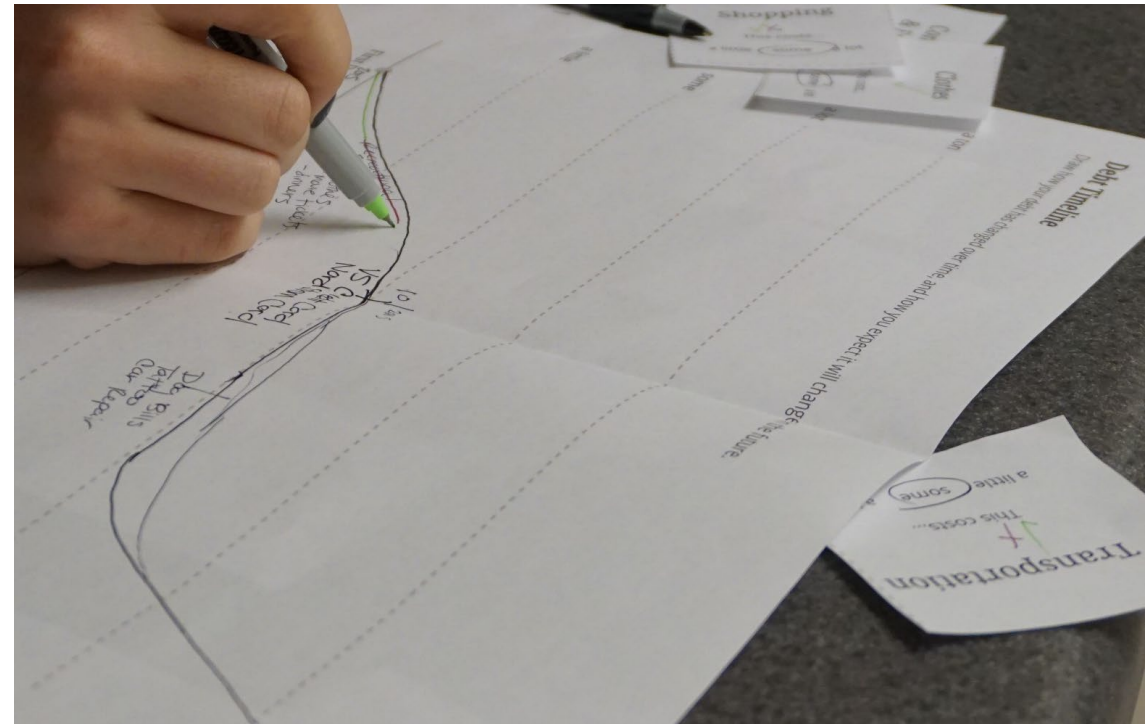
EVALUATIVE RESEARCH

See if things work.

During evaluative research, our goal is to understand if things we made – or other people made – work well, and to identify where they can be improved.

Core methods:

- Think-aloud testing

- Scenario or cognitive walkthrough

EVALUATIVE RESEARCH

Method: Think-aloud Testing

What is it?
A verbal protocol of activity.

How does it work?
A participant speaks out loud as they complete a series of tasks.

When is it used?
Think-aloud testing is the primary way of gathering usability and comprehension data related to software and other interactive products.

What's the downside?
It's easy to do think-aloud testing poorly: it's a method that relies on a specific cognitive state, and without a detailed protocol, data can be suspect.

EVALUATIVE RESEARCH

Method: Scenario or Cognitive Walkthrough

What is it?
A critical examination of a time-based process.

How does it work?
An evaluator attempts to mirror the way a user will interact with a system, examining each screen or state in the system and considering places where a user may fail.

When is it used?
Scenario walkthroughs are effective in evaluating highly complex and time-based products (such as software.)

What's the downside?
While intended to be participant-focused, this method is a form of expert review, requiring strong levels of empathy and projection.

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- thanks!

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APPENDIX

WHAT IS DESIGN RESEARCH?

Fitting into Agile

Design research can fit seamlessly into two places in an Agile product development process:

- **As a sprint 0**
  Design research can be used to inform the creation of epics, identifying product vision and identifying success criteria

- **Concurrently throughout sprints**
  Design research can be used to refine emergent design directions, to set a direction for future sprints, to help prioritize backlog material, and to test existing and new designs

Design research doesn't have to take a long time. It can be performed in the same quick, nimble manner as other agile product development capabilities.