

Impact your Library UX with Contextual Inquiry

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University of Houston Libraries

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@vacekrae

What is user experience (UX)?

User experience encompasses all aspects of the end-user's interaction with the company, its services, and its products.



- Jakob Nielsen and
Don Norman

<http://www.nngroup.com/articles/definition-user-experience/>

UX \neq User Interface

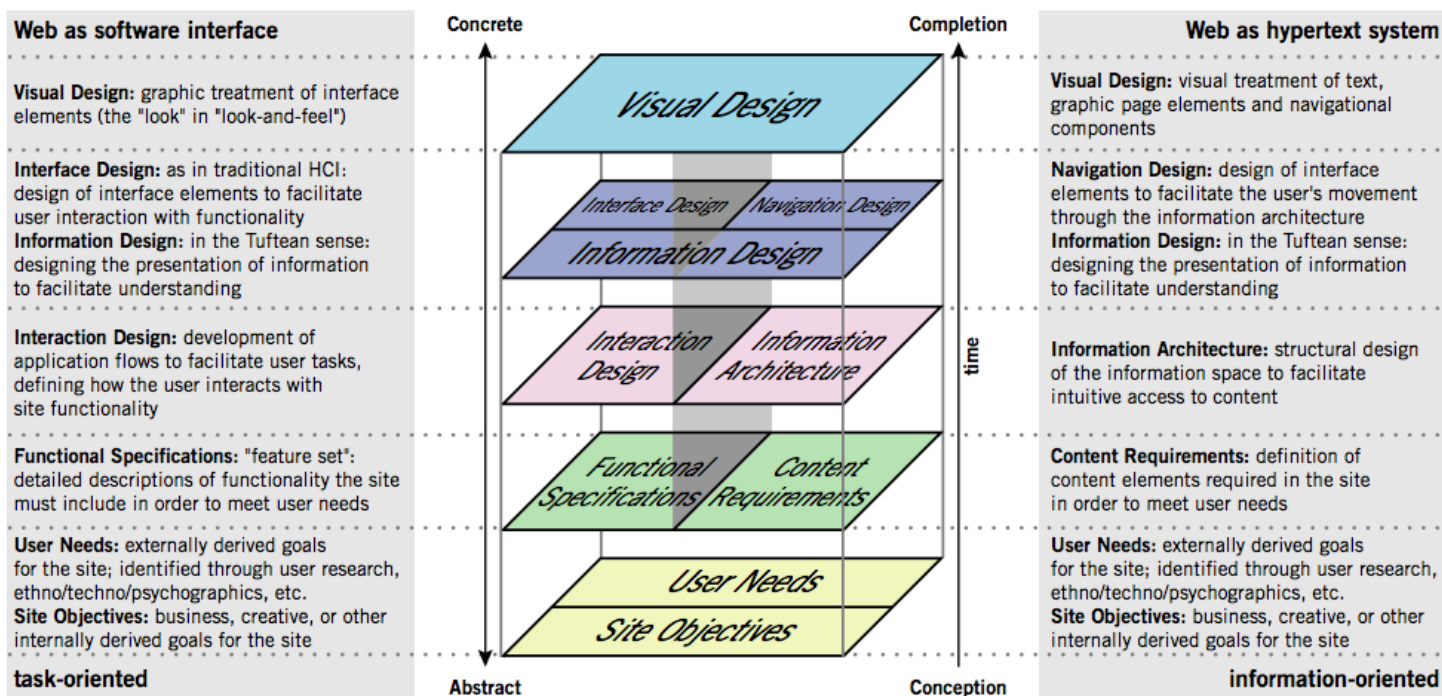
UX \neq Usability

The Elements of User Experience

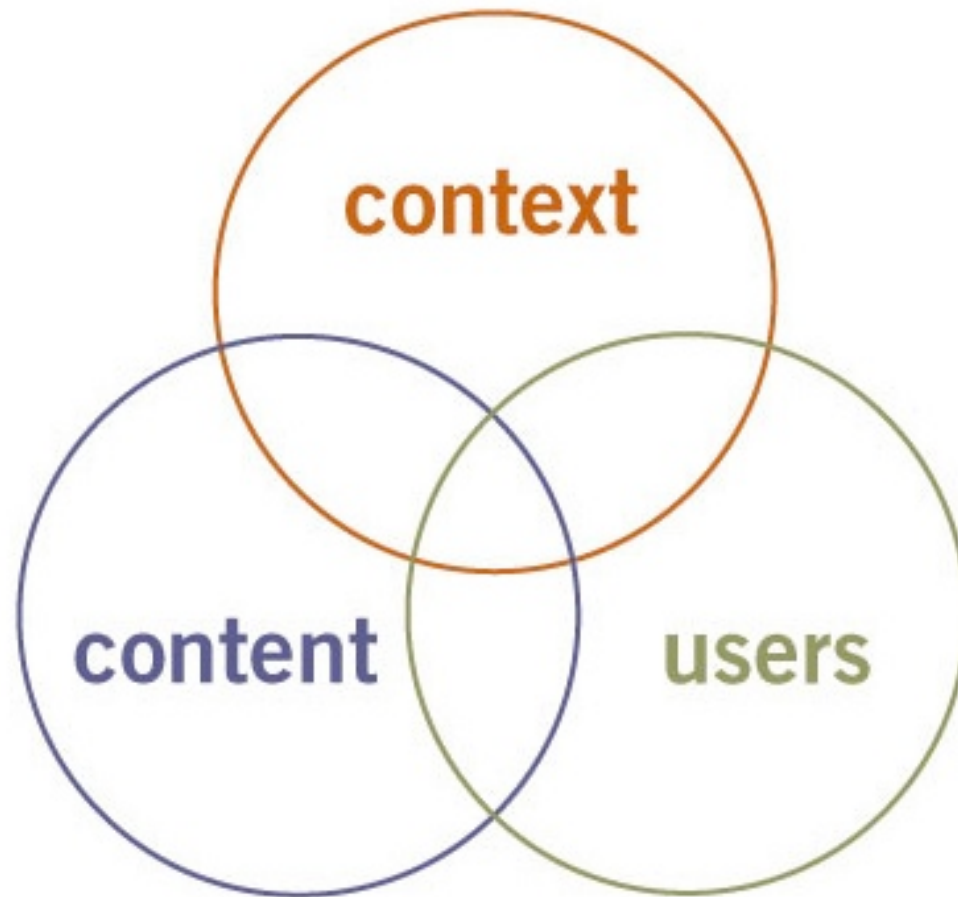
Jesse James Garrett
jig@jig.net

30 March 2000

A basic duality: The Web was originally conceived as a hypertextual information space; but the development of increasingly sophisticated front- and back-end technologies has fostered its use as a remote software interface. This dual nature has led to much confusion, as user experience practitioners have attempted to adapt their terminology to cases beyond the scope of its original application. The goal of this document is to define some of these terms within their appropriate contexts, and to clarify the underlying relationships among these various elements.



This picture is incomplete: The model outlined here does not account for secondary considerations (such as those arising during technical or content development) that may influence decisions during user experience development. Also, this model does not describe a development process, nor does it define roles within a user experience development team. Rather, it seeks to define the key considerations that go into the development of user experience on the Web today.



http://semanticstudios.com/user_experience_design/

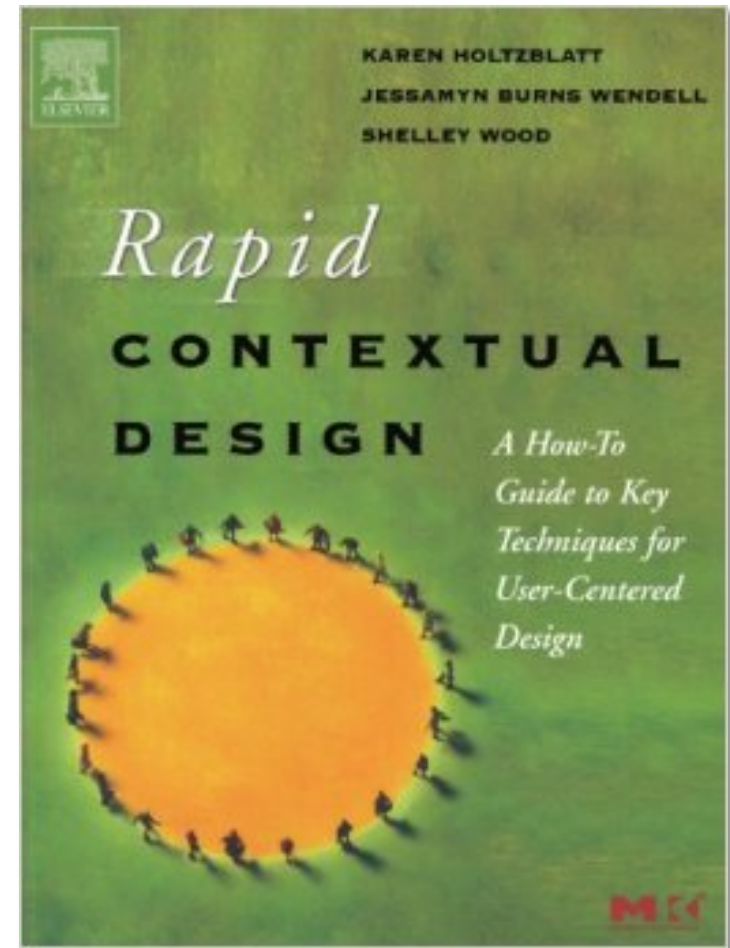


http://semanticstudios.com/user_experience_design/

What is contextual inquiry?

- It's a user-centered design (UCD) ethnographic research method
- It's a series of structured, in-depth user interviews
- The interviewer asks the user to perform common tasks that he/she would normally do


- Human computer interaction engineers created the methodology in the late 1980s.
- It's based on theories from several disciplines, including anthropology, psychology and design.
- Contextual inquiries have rarely been documented through formal scholarly communication.



[← NC State Home](#)

RESOURCES

search ncsu.edu

 **NCSU LIBRARIES**

FINDGET HELPSERVICESLIBRARIESABOUT

Search books, articles, journals, website

ASK US | MY ACCOUNT | HOURS | FAQ | LOG OUT | CHAT NOW

Persona Interviews for Web Site Redesign (2010) | User Studies

Overview

As part of the redesign process for the Libraries' Web site, the Libraries developed personas, fictional portrayals of users in different patron categories. These personas were designed to enable the Web design teams to both understand users' behavior and to view the site from the users' perspective. Being able to reference the personas as representative Web site users would enable the design teams to better meet the needs of library patrons. To assist with creating the personas, a consulting firm ([Hesketh.com](#)) was hired to both analyze research from other universities, and to collect user data through a series of contextual interviews. From these data the firm created and presented to the Libraries the finished personas.

Team and Partners

- › Angela Ballard, study coordinator, minder and observer
- › Susan Teague Rector, study coordinator, minder and observer
- › Babi Hammond, participant recruitment
- › Susan Pauley, observation and participant recruitment
- › Alice Williams, [Hesketh.com](#)
- › Abe Crystal, [More Better Labs](#)

Recruitment and Interview Procedures

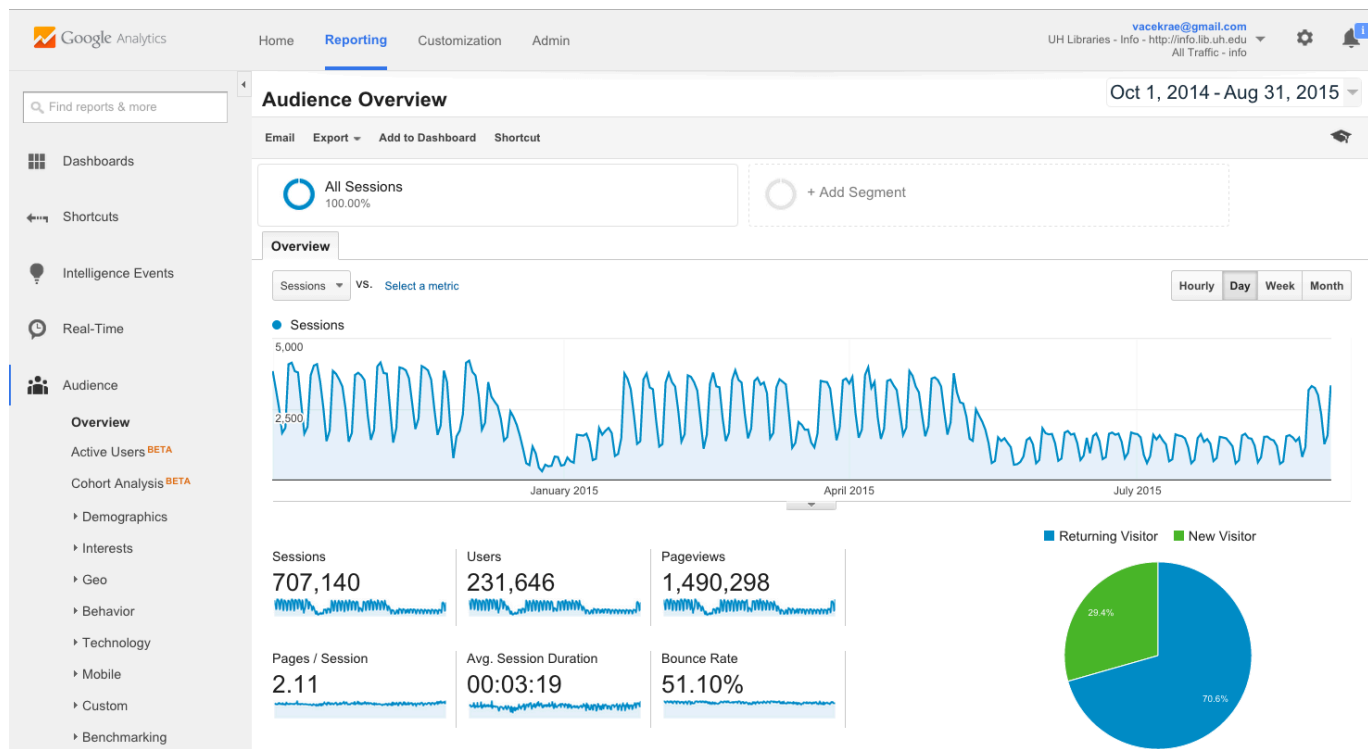
The first step in participant recruitment involved establishing the target audiences that stakeholders wanted to be represented in these studies. From here, the process involved further narrowing down the ideal demographics criteria for participants. With assistance from the consulting firm, the next step was to create a standard list of screening questions to be asked of potential participants.

Libraries staff members were assigned the responsibility of recruiting participants. Potentially interested faculty members were identified, and a list of names and departments of randomly selected faculty, staff, undergraduate and graduate students was also provided by Registration & Records. Six standard email scripts were generated and emailed to potential participants at stages in the

<http://www.lib.ncsu.edu/userstudies/studies/2010personainterviewsredesign>

How is contextual inquiry different
from other research methods?

Unlike web analytics, we can understand the intent behind their actions. If it's unclear, we can ask them why they did something a certain way.



Unlike surveys, we can interact with the users and observe what they are doing. This is much more accurate than self-reporting.



While surveys can be excellent tools for many questions, and are attractive for LIS professionals because they can reach many people economically, effective surveys require knowledge of survey design and validation, sampling methods, quantitative (and often qualitative) data analysis, and other skills that require formal training many LIS professionals do not possess. ... Without rigorous survey design and validation, data can lead to results that are invalid, misleading, or simply not meaningful to answer the question at hand.

- From “#DitchTheSurvey: Expanding Methodological Diversity in LIS Research”



<http://www.inthelibrarywiththeleadpipe.org/2015/ditchthesurvey-expanding-methodological-diversity-in-lis-research/>

Unlike usability testing, it's not under contrived conditions in a laboratory-like setting. It's what they would really do in real life, not tasks we designed to test specific parts of the system.



Unlike focus groups, an individual user is able to talk about and show us in detail the way he/she does things without the influence of others.



...relying strictly on what students tell us in focus groups is potentially incomplete ... focus group participants may share only what they think we want to hear or they may fail to accurately describe their library use. Listening is important, but observation can yield unexpected revelations.



- Stephen Bell, *From the Bell Tower*
column, *Library Journal*

<http://lj.libraryjournal.com/2015/06/opinion/steven-bell/not-liking-what-users-have-to-say-listen-anyway-from-the-bell-tower/#>

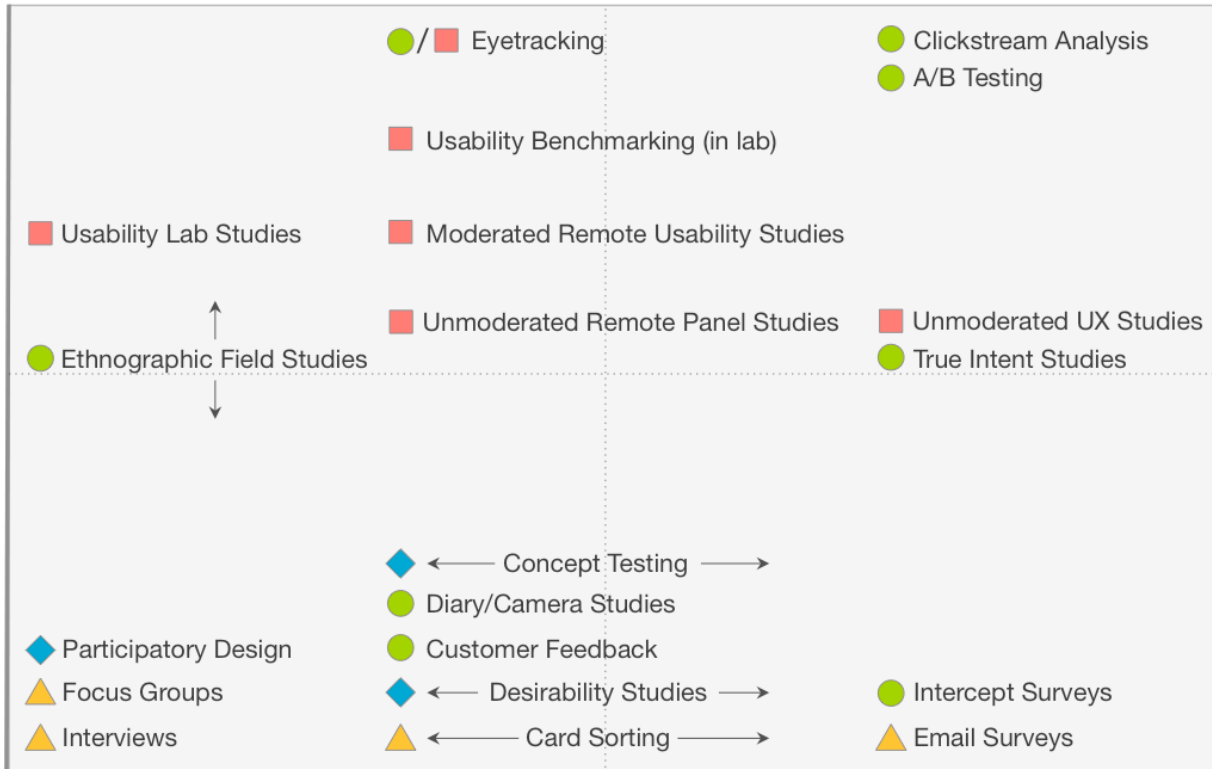
What are the advantages of contextual inquiry?

- The open-ended nature of the interaction makes it possible to reveal **tacit knowledge** .
- The information produced by contextual inquiry is **highly reliable** and **highly detailed**.
- The technique is **very flexible** as you can conduct interviews anywhere your users are.

Users can **show** us what
they do rather than tell us,
and we can better
understand **why** they do it.

A LANDSCAPE OF USER RESEARCH METHODS

BEHAVIORAL



QUALITATIVE (DIRECT)

QUANTITATIVE (INDIRECT)

KEY FOR CONTEXT OF PRODUCT USE DURING DATA COLLECTION

Green circle: Natural use of product

Yellow triangle: De-contextualized / not using product

Red square: Scripted (often lab-based) use of product

Blue diamond: Combination / hybrid

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Christian Rohrer

<http://www.nngroup.com/articles/which-ux-research-methods/>

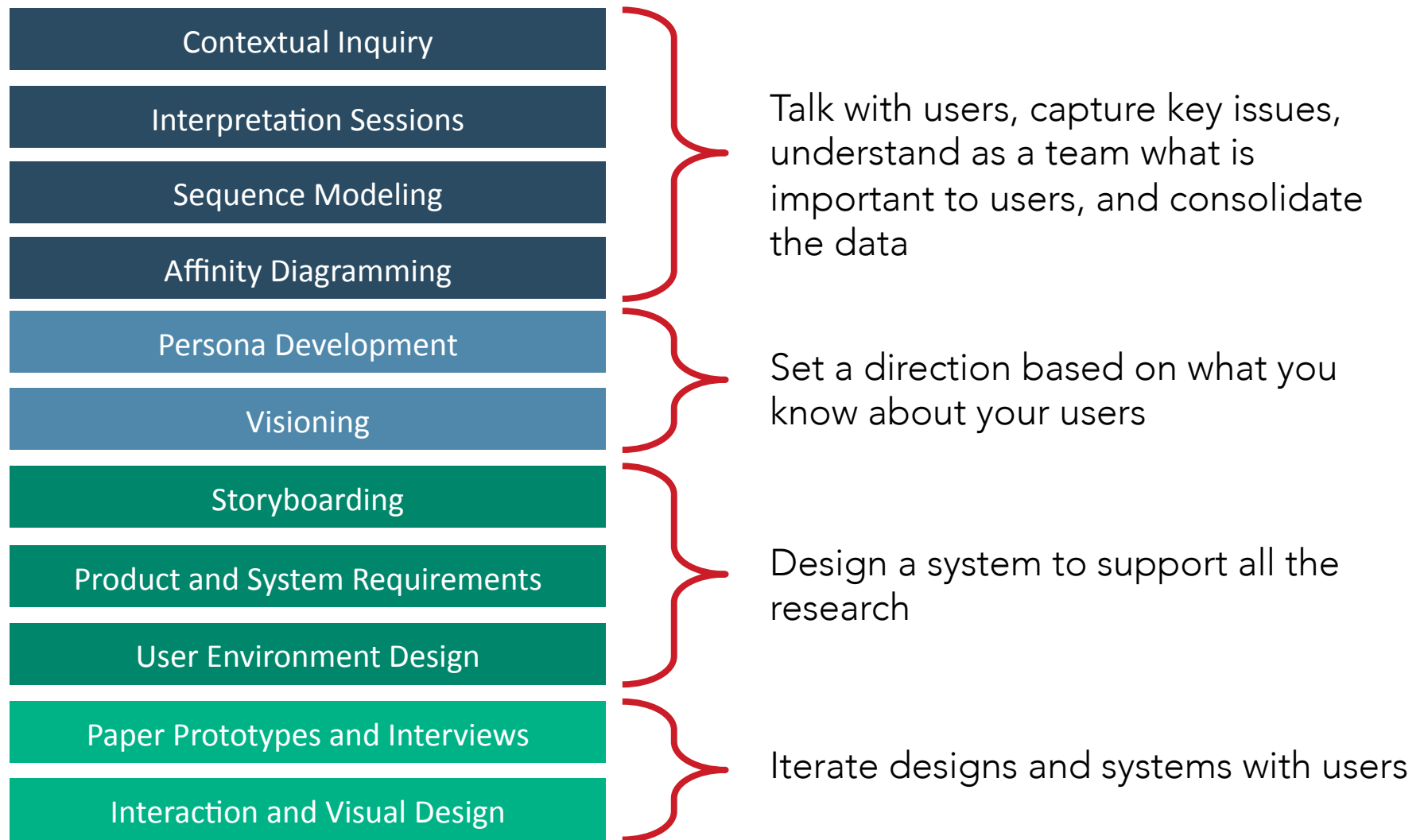
Once you invite [ethnographic] practices into the the everyday way of doing things, it can be institutionally transformative. It takes time. It is inexact at times. It requires reflection, the backing away from assumptions, it involves being uncomfortable with what is revealed. Institutions willing to take on those complications can thrive ... Institutions who want the publicity that comes from ethnography but not the work, not the ambiguity, and not the full-time commitment, will fall short.



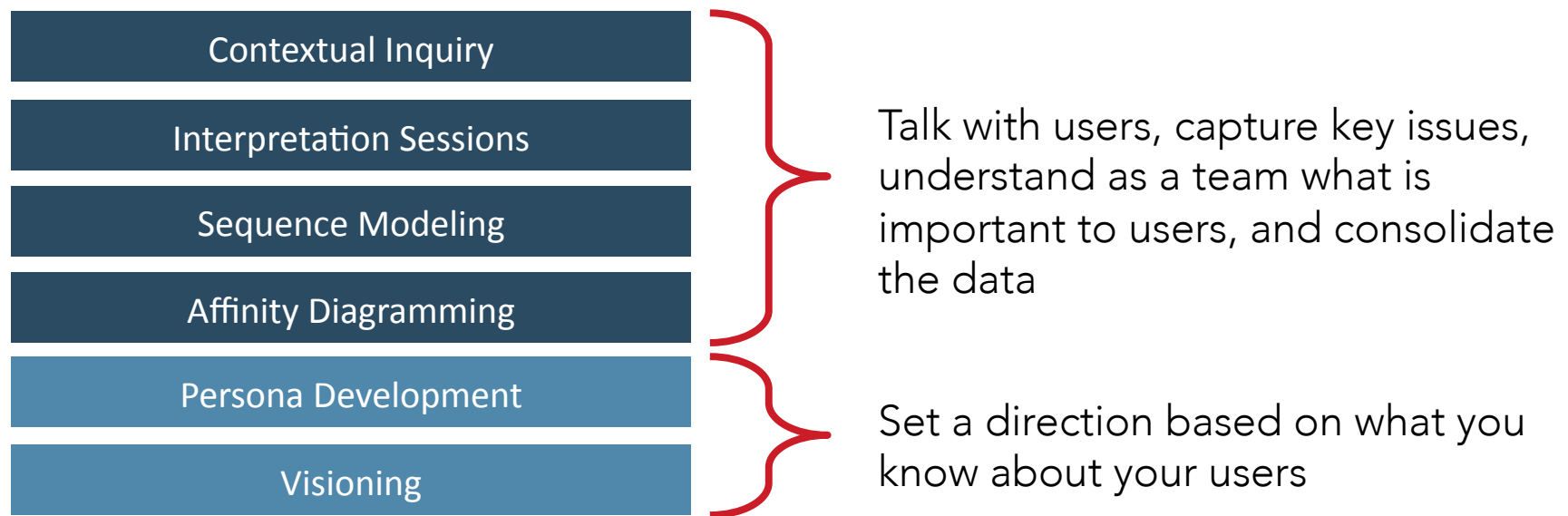
- Dr. Donna Lanclos , Anthropologist
at UNC Charlotte

<http://www.donnalanclos.com/?p=305>

What's involved in
contextual design?



Inspired by <https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/contextual-design>



We are only going to review this first half of the contextual design process.

Why did the Web Services
Department decide to do this?

What we had done already

- Reviewed web analytics
- Observed web design and develop trends
- Performed a literature review
- Held focus groups with stakeholders
- Conducted competitive analysis on aspirational websites
- Ran usability benchmark tests

We needed to talk
with the **users** of the site.

- Surveys, focus groups, and analytics have not proven that useful for us for getting actual data on how users do research.
- To many UCD practitioners, contextual inquiry is the best way to understand user needs. It is the foundational user research method at many UX firms.
- Only one other academic library has done it formally and published the study.
- It's the only method that can answer some of our questions about how users do research.

We thought that going through
the data together
to get a shared understanding of
the users' contexts would
be valuable.

It was.



November
2014

- Did lots of research
- Defined the goal of contextual inquiry
- Planned the interview questions
- Prepared IRB application

December
2014

- Applied for IRB approval
- Obtained money for participation

January
2015

- Prepared materials and gave training about contextual inquiry to Web Services dept.

February
2015

- Study was awarded Exempt status by IRB
- Refined interview questions
- Recruited and trained library stakeholders

March
2015

- Ran pilot interviews
- Recruited and interviewed users
- Conducted interpretation sessions

April
2015

- Continued to interview users
- Conducted interpretation sessions
- Created sequence models
- Created personas

May
2015

- Consolidated sequence models
- Did affinity diagramming
- Did visioning
- Prepared final report

So what is contextual inquiry?
What are interpretation sessions?

The interview process

- Interviews were scheduled in advance at location where user typically did research
- Interviewer and note taker conducted 1-hour interviews with each user
- Utilized master/apprentice model
- Each participant received a gift card
- Captured audio as well as hand-written notes
- 2-hour interpretation session followed each interview within 24 hours





**UNIVERSITY OF HOUSTON
CONSENT TO PARTICIPATE IN RESEARCH**

PROJECT TITLE:

You are being invited to take part in a research project conducted by Robert Newell and Rachel Vacek from UH Libraries at the University of Houston.

NON-PARTICIPATION STATEMENT

Taking part in the research project is voluntary and you may refuse to take part or withdraw at any time without penalty or loss of benefits to which you are otherwise entitled. You may also refuse to answer any research-related questions that make you uncomfortable. If you are a student, a decision to participate or not or to withdraw your participation will have no effect on your standing.

PURPOSE OF THE STUDY

The purpose of the study is to gather information from students and faculty about how they conduct research in the context of their daily lives and routines so that we may improve the UH Libraries website. Combining all of its phases, the study will run for approximately three months. We will be conducting interviews for approximately three weeks. This is part of our website redesign project which will take approximately one year to complete.

PROCEDURES

A total of 10 subjects at multiple locations will be asked to participate in this project. You will be one of approximately 1 subject asked to participate at this location.

This type of study is referred to as a contextual inquiry. The goal of the inquiry is to get a picture of how a user engages with a product or service in the context of their real-life experience. It's structured much like a traditional interview. I will ask you questions about your daily routine as well as how you currently engage with UH Libraries website and services. In the second half of the interview I will ask you to perform a few pre-determined tasks so that we can observe what your research process and workflow are like. This ideally works like a "show and tell" in which you demonstrate how you would go about doing something and we observe. I will occasionally ask clarification questions to make sure we are understanding your actions and

Types in "UM oversearch" in
google, gets UH library website

types

"UBX in vitro" in over search

modifies/narrow search

by adding electrophoresis

3 options was to narrow, so

just searched on electrophoresis

- checks on peer-reviewed

(always searches, even checks that)

- looks at title to determine if it's what
she wants

(sometimes requires login - didn't let her
to)

- assumes it's available to public because
she didn't have to login

Livescribe 2GB Echo Smartpen (~\$120)



<http://tinyurl.com/pr96xmg>

Appendix A: Undergraduate Interview Guide

1. INTRODUCTION AND FRAMING [5 MINUTES]

- a. I work in the Web Services department at UH Libraries. Thanks for your time today! We'll spend about the next hour talking about your experiences as a UH student and library user.
- b. I'd like to emphasize that I did not design the current web site for the library, so nothing you say today will hurt my feelings. You can be completely open and candid with me. This is about us in Web Services learning from you so we can help the library better serve the UH community.
- c. Please stop me at any point if you have questions.

2. WARM-UP AND BACKGROUND INFORMATION [2-6, 25 MINUTES]

- a. Could you tell me a bit about yourself...
 - ii. Where are you from?
 - iii. Where are you living now?
 - iv. What made you decide to come to UH?
 - v. Interest or hobbies?
 - vi. What does a typical Saturday look like for you?
 - vii. What are some of your goals for this semester?
 - viii. What are your aspirations after graduation?

3. COMPUTER USAGE

- a. Can you take me through your typical online routine? What's the first device you usually use to go online? And where do you go first?
- b. Do you have any other favorite websites?
- c. Where do you typically do work on your computer and where do you usually spend time online?

- d. In an average week, how many hours would you say you typically spend online? Approximately what percentage of that time is spent on school or work?

4. ACADEMIC INFORMATION

- a. What is your major, or if you haven't declared yet, in what areas are you most interested?
- b. What interests you about that field of study?
- c. How would you describe the teaching style of your professors?
- d. Walk me through a typical Tuesday for you.
- e. Describe a typical assignment for a class in your major. How do you approach that task?

5. LIBRARY INFORMATION

- a. How would you describe the MD Anderson Library to a friend who has never been there?
- b. How often do you go to the library? How often do you go to the library website?
- c. You walk into the MD Anderson Library. Where is the first place you typically go? Have you gone to the library web site before walking in the door?
- d. What do you do there? How long do you stay?
- e. What do you usually bring with you to the library?
- f. What frustrates you about using the library?
- g. When was the last time you talked to a librarian? What was the conversation about?

Appendix A: Undergraduate Interview Guide *(continued)*

6. LIBRARY WEBSITE INFORMATION

- a. When do you go to the library website? What do you do when you're there? (Take participant to site)
- b. What immediately draws your attention? Why?
- c. Reaction to Tiny Gallery?

7. OBSERVATION OF WORK [25 MINUTES]

- a. Can you walk me through a research project you are currently working on?
ALT: You've been given an assignment to write a research paper on the impact of climate change on our global food supply with at least 4 sources cited throughout the paper.
 - i. How long do you have for this assignment? When did you start? (**ALT:** You have two weeks for this assignment. When do you typically start?)
 - ii. What is the first thing you do?
 - iii. How would you find and review resources to determine the sources you want to use?
 - iv. What is the thing that makes (would make) you most nervous about the assignment?
 - v. How would you cite your sources in the paper?
- b. Have you recently done a project (or are currently working on one) where you have had to learn software or get technical assistance to complete? (i.e. podcast, excel, power point, etc.)
ALT: One of your professors has asked you to record and edit an HD video as part of an assignment. Where would you go to learn how to do this? What tools would you use?
- c. Do you remember the last book you found for an assign-

ment? Could you walk me through your steps?

ALT: You need to find a book called Team of Rivals by Doris Kearns Goodwin for a US History class. How would you do that?

- d. Let's say you need to find an article in a specific journal related to your research topic. How would you find that article?

ALT: You need to find an article by Neil McLatchie on the effects of violent video games on aggressive behavior. You don't have the exact title of the article, but you know it's in the journal Psychological Science. How would you find it?

8. WRAP UP [5 MINUTES]

We've reached the end of the interview.

- a. Do you have any reactions the *amount* of information you were exposed to throughout the searching process today?
- b. Do you have any reactions to the *layout* of how information was presented to you throughout the searching process today?
- c. Thank you very much for sharing with us how you conduct your research. Do you have any questions for us?

Solicit reactions to the amount and layout of information throughout the searching process.

Who did we interview?

Undergraduates (8)*

- Geology and Geophysics
- Civil and Environmental Engineering
- Biochemistry
- Business Finance
- Graphic Design
- Chemical Engineering
- History
- English Literature

Graduate Students (3)

- Construction Management
- Social Work
- Library & Information Science

Faculty (1)

- Classical Rhetoric

* Three of the undergrads were also students in the Honors College

Where did we interview them?

- M.D. Anderson Library – Quiet zones
- M.D. Anderson Library – Business zones
- M.D. Anderson Library – Learning Commons
- M.D. Anderson Library – Instruction Room 106-R
- M.D. Anderson Library – Academic Research Center
- Department of Earth & Atmospheric Science Computer Lab
- Student Center – Legacy Lounge
- The Nook coffee shop
- Faculty member's office

We observed how they did research
in the context of their daily lives.

What are the team roles?

- **Interviewer** tells the story of the interview
- **Interview note taker** helps tell the story
- **Interpretation session note taker** records thoughts and observations of the team as notes for an affinity diagram
- **Moderator** keeps the meeting focused on the session objectives and makes sure everyone is involved
- **Designer** generates sequence models as the interview story is told
- **Additional team members / stakeholders** contribute thoughts and observations

Our interpretation team*

- Interviewer - Rachel/Robert
- Interview note taker - Rachel/Robert
- Interpretation session note taker - Sean/Keith
- Moderator - Sean/Keith
- Designer - J
- Stakeholders** - Kelsey, Frederick, Lisa, Ashley, Cherie

* Everyone in Web Services (Rachel, Robert, Sean, Keith, J) participated in some way

** Librarians from Liaison Services and Resource Discovery Systems departments to help analyze the data

Participant Schedule for Contextual Inquiry

Session	Date & Time	Participants					
Contextual Inquiry Overview	Wednesday, March 11, 4-5 pm (Room 106-T)	Robert	Frederick	Kelsey	Lisa	Ashley	Cherie
Pilot Interview	Wednesday, March 18, 9:30-10:30 am (The Nook)	Rachel	Sean	Dan			
Pilot Interpretation Session	Thursday, March 19, 10am-Noon (Room 106-T)	Robert	Frederick	Kelsey	Lisa	Ashley	Cherie
		Keith	Sean	Rachel	J		

Session	Date & Time	Participants and Roles					
		Interviewer	Interviewer	Notetaker	Moderator	Sequence Modeler	Stakeholder
Interpretation Session #1	Tuesday, March 24, 10am-Noon (The Cave)	Robert	Rachel	Keith	Sean	J	Frederick
Interpretation Session #2	Wednesday, March 25, 10am-Noon (The Cave)	Robert	Rachel	Keith	Sean	J	Kelsey
Interpretation Session #3	Thursday, March 26, 10am-Noon (The Cave)	Robert	Rachel	Sean		J	Frederick
Interpretation Session #4	Friday, March 27, 10am-Noon (The Cave)	Robert		Sean		J	Kelsey
Interpretation Session #5	Tuesday, March 31, 10am-Noon (The Cave)	Robert	Rachel	Keith	Sean	J	Lisa
Interpretation Session #6	Wednesday, April 1, 10am-Noon (The Cave)	Robert	Rachel	Sean	Keith	J	Lisa
Interpretation Session #7	Thursday, April 2, 10am-Noon (The Cave)	Robert	Rachel	Keith	Sean	J	Ashley
Interpretation Session #8	Friday, April 3, 10am-Noon (The Cave)	Robert	Rachel	Sean	Keith	J	Cherie
Interpretation Session #9	Monday, April 6, 2-4pm (The Cave)	Robert	Rachel	Keith	Sean	J	Ashley
Interpretation Session #10	Wednesday, April 8, 10am-Noon (The Cave)	Robert	Rachel	Sean	Keith	J	Cherie

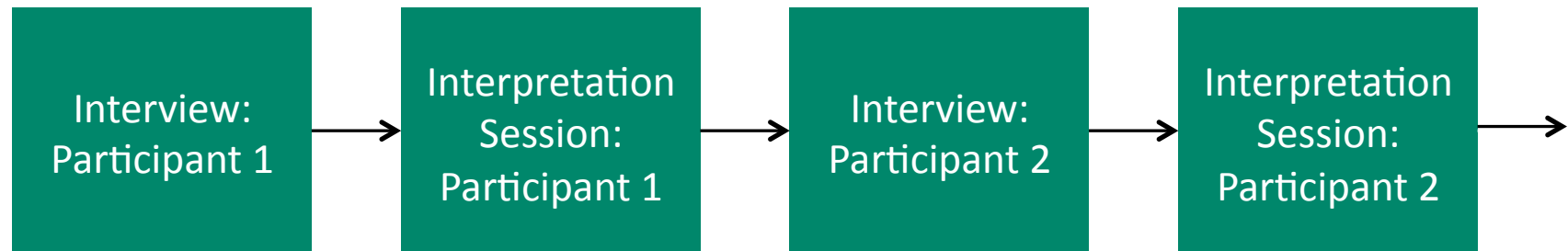
Session	Date & Time	Participants and Roles					
		Leader	Participant #1	Participant #2	Participant #3	Participant #4	Participant #5
Affinity Diagram Session - Undergrads	Wednesday, April 8, 1-3 pm (The Cave)	Robert	Sean	J	Lisa	Ashley	Cherie
Affinity Diagram Session - Graduates	Thursday, April 9, 10am-Noon (The Cave)	Robert	Rachel	J	Lisa	Ashley	Kelsey
Affinity Diagram Session - Faculty	Friday, April 10, 10am-Noon (The Cave)	Robert	Rachel	J	Sean	Frederick	Kelsey

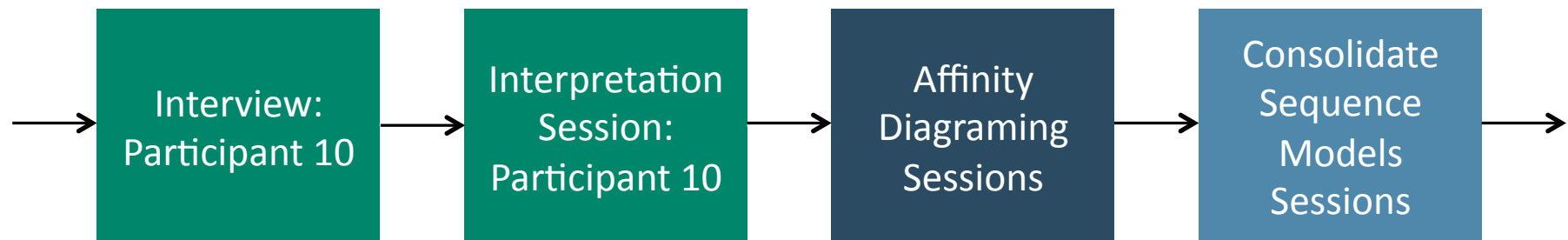
** Robert and Rachel will be conducting interviews with Undergrads, Grads, and Faculty, March 23-April 7*

What are the goals of an interpretation session?

1. To make sense of data
2. To understand intent
3. To move towards insights

So what does this whole
process look like?







What is the interpretation
session protocol?

1. The **interviewer** – along with the **interview session note taker** – described to the team from the notes what the participant said and did during the interview.
2. The **team members** provided an interpretation of the events as they were recounted, making observations about themes, important characteristics of the work, etc.
3. The **interpretation session note taker** captured these thoughts into a Word document that was displayed through a projector. Notes from every interpretation session were used to construct affinity diagrams.
4. At the same time, the **designer** documented the description of the interview on a white board by creating diagrams called sequence models.

What is captured in an interpretation session?

- Interpretations of events, use of tools, problems, and opportunities
- Important characteristics of the work
- Breakdowns in the work
- Cultural influences
- Design ideas (flagged with DI:)
- Questions or uncertainty about something from the interview (flagged with a Q:)
- Insightful user quotes

Thoughts were captured in a Word document template so we could easily print them out onto sticky notes.

<p>Q: Signs into Google.com or Gmail?</p> <p>Breakdown: Wants to visit websites he's bookmarked and can't because his bookmarks are on his local machine</p>	<p>Opens 5-7 different articles in a new tab (by right-clicking on "View Online" before reading any.</p> <p>Only opens 5-7 new tabs at a time (even if he needs more articles), because 5-7 is all he's comfortable with at a time.</p>	<p>Q: When do you capture the citation information?</p> <p>Q: Did this user look for books?</p>
<p>As a commuter he finds it most feasible to stay on campus during breaks between work and classes and he'll usually work on homework</p> <p>Goes to <u>OneSearch</u> because he "prefers articles"</p>	<p>Closes tab if the article doesn't appear useful. The closing of tabs could be more related to the depth of the article rather than the relevancy</p> <p>Refers frequently to assignment sheet to judge relevancy of chosen articles to his assignment</p>	<p>Prefers <u>ebooks</u> to regular books</p> <p>To determine relevancy of <u>ebook</u>, searches through the full text of the <u>ebook</u></p>
<p>If the search results "look decent" he'll click on them. "Look decent" means that the title looks relevant</p> <p>Looks at peer-reviewed articles if available</p>	<p>Copies and pastes sections of articles into a Word doc to refer to as he writes starts to write paragraphs in another Word doc</p> <p>Keeps tabs open for days</p>	<p>Occasionally bookmarks articles he finds useful for his assignment</p> <p>When there is a book on reserve waiting for him, he goes to the service desk to get it. He doesn't go online to see if it's there and feels that no one else does either.</p>
<p>Info.lib redesign contextual inquiry, spring 2015</p> <p>Participant 1: U1</p>	<p>Info.lib redesign contextual inquiry, spring 2015</p> <p>Participant 1: U1</p>	<p>Info.lib redesign contextual inquiry, spring 2015</p> <p>Participant 1: U1</p>

We also
captured
insights from
discussing the
data.

Insights

- Many people are selective in their printing because they're environmentally-conscious
- A lot of improvement can be made to the various automated emails that the library sends out
- Grad students are better at planning, more invested in the research process, more organized, better at searching
- Grad students are able to find workarounds better than undergrads; they are persistent enough to keep finding workarounds and troubleshooting problems
- PhD students are different from Masters students; PhD and Masters students are different from professional students
- Only uses her laptop at home instead of taking it with her
- Doesn't use the physical library space. She is action-oriented / task-oriented when in the library and doesn't use it for work or study.
- Some majors have study space available within their colleges and buildings, and some don't. This can influence who visits the library to study and who doesn't.
- DI: There could be more training or a more intuitive way to use Document Delivery, ILL, and related services. The website could better explain what each one is used for or how to use them optimally. Too many "library terms."
- Some of her information literacy skills have come from interactions with librarians in Liaison Services.
- The PhD/international type of student is a common type of student at UH and has specific needs that we need to address

At the end of the interviews and interpretation sessions, we had:

- User profile data that helped us build personas
- Captured notes that were combined to build an affinity diagram
 - We generated ~75 notes per interpretation session
- A list of insights from discussing the data
- A series of sequence models for an individual participant

What's a sequence model?

A **sequence model** is a diagram that show the order in which each participant completed each of their tasks.

A **consolidated sequence model** is a diagram that displays all the participants' diagrams together.

A model provides a shared understanding of the user data, a shared language for the design team, and an easily understandable deliverable for communication outside the design team.

- Jon Kolko, Founder & Director of The Austin Center for Design



What are the components of
a sequence model?

- **The step:** The actual thing the user did at the appropriate level of detail.
- **The trigger:** The situation(s) that prompts a user to start a new task or a particular step. A trigger always starts a sequence.
- **The intent:** The reason, known or unconscious, the user is doing the task or the step. The more intents you can identify, the better for your future design.
- **A breakdown:** A point in the sequence where the direct path to fulfilling the intent breaks down, and the user must devise a workaround or quit.

What do they look like?

U2 Sequence -- Grocery Shopping

Pg. 1 of 2

INTENT: Collect groceries needed to feed family and plan what they'll eat

TRIGGER: Weekend and there's time to shop.

Invites husband to go along as a shared activity

*INTENT:
Balance doing
tasks with
family time*

Husband had 3 other things planned
and is overwhelmed

Argument

Husband agrees to come along

Go to favorite grocery store – it's closed

Decide to get only the things that are really needed right
now (Passover, breakfast--ricotta, fruit); helper will buy
produce later

Go back to second-choice store

Walk to produce

Decide it's no good--will get canned fruit

Decide to go straight to canned fruit instead of walking
aisles

H leaves, gets detergent, comes back

Pg. 2 of 2

U walks down end of aisles, trying to read signs saying
what aisles have--can't find canned fruit

End up in front of Passover items

Discuss with H what they need, how many boxes Matzo

Look at gefilte fish without sugar, decide how much to get

Look at new cereal to try, decide to get

Discuss whether kids will like pan cakes, decide to get

Can't find chocolate, H finds elsewhere

Decides not to buy any of the normal items, helper will
buy the next day

Look at safflower oil, okay for Passover, buy it

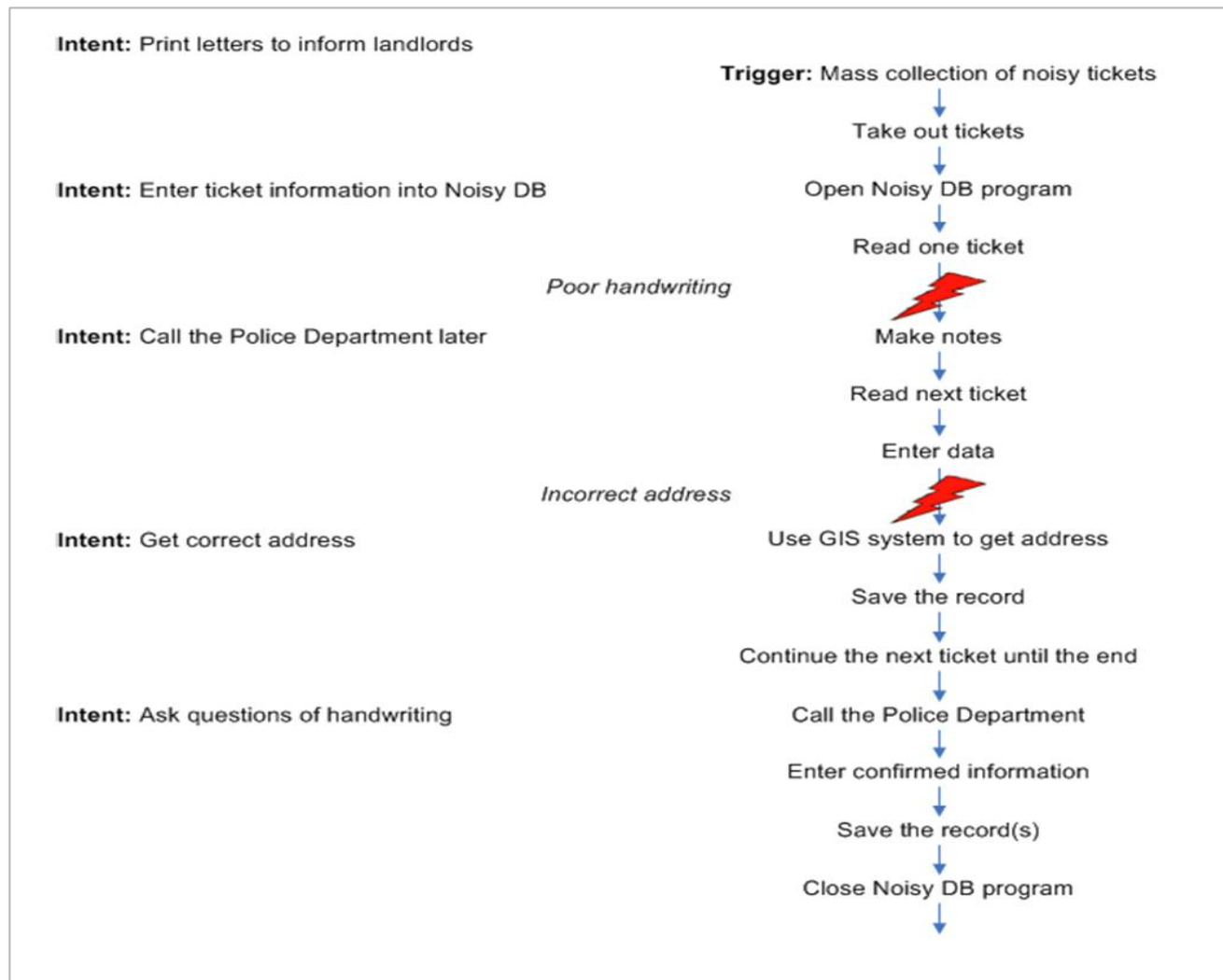
Look at chocolate covered Matzos, say it's expensive,
buy it

Walk aisles again for canned fruit--still can't find

H separates and goes off looking on his own

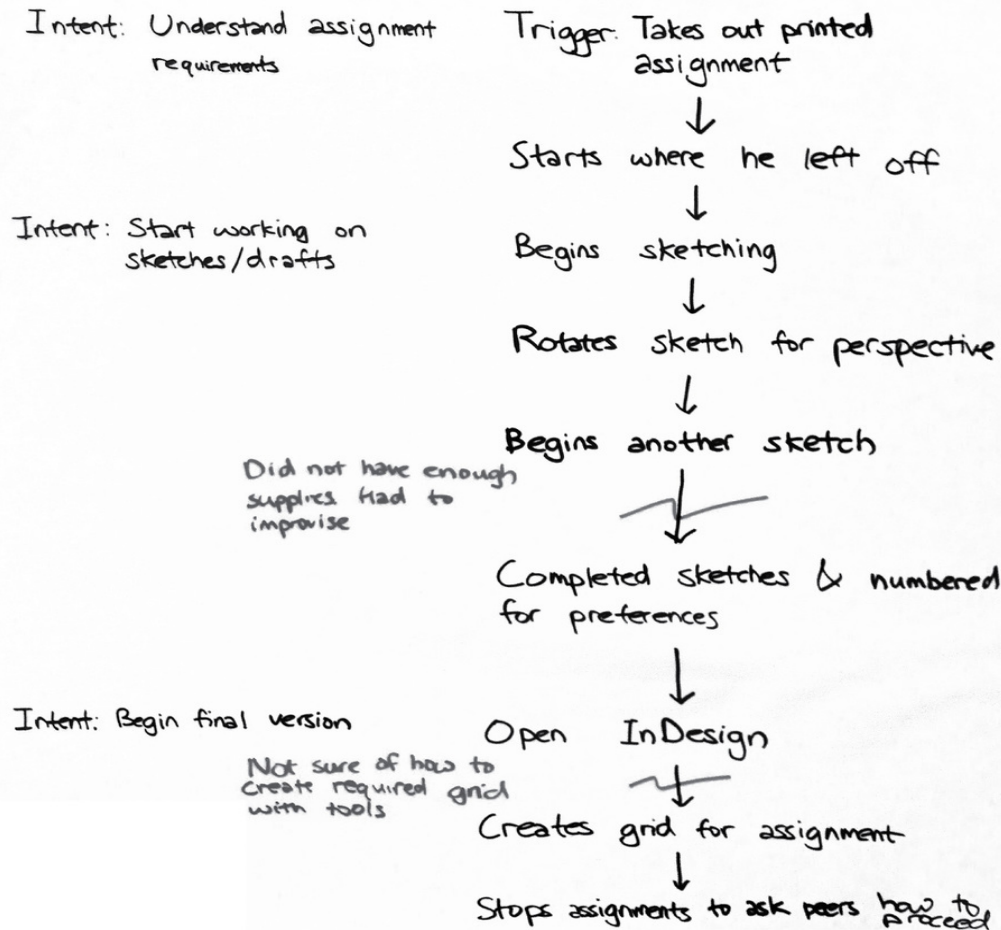
H returns and says found fruit, hidden by promotional sign

Go to checkout counter



https://interactioncultureclass.files.wordpress.com/2008/11/seq_model.jpg

Sequence Model U#4



http://static.squarespace.com/static/510417dbe4b0554384f78c51/51ca85bde4b03f5551914111/51ca85c8e4b07cb3e84e986d/1372227055762/01_sequence_model.jpg

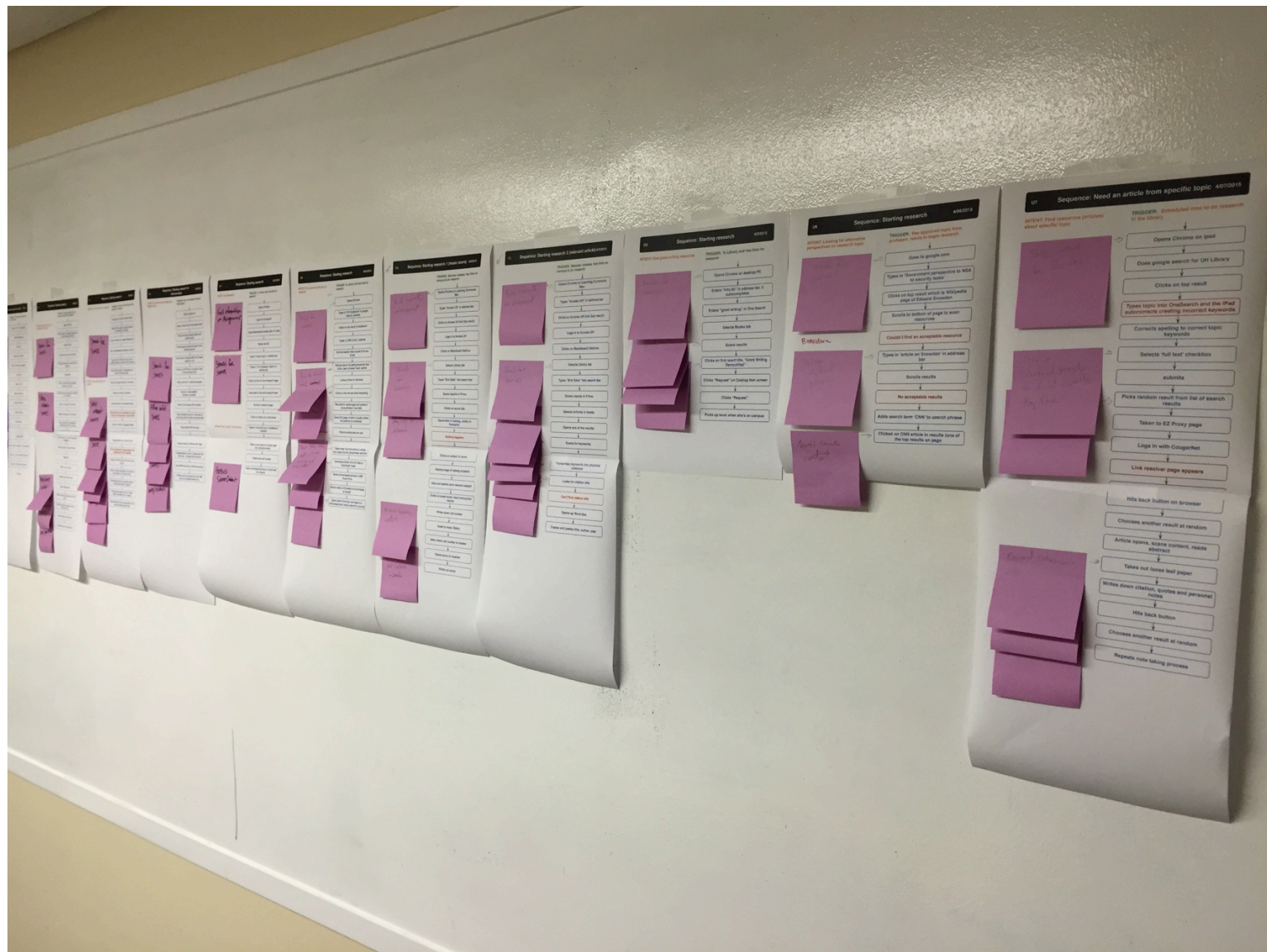
trigger
week before
assignment is due
intent
begin research
on assignment

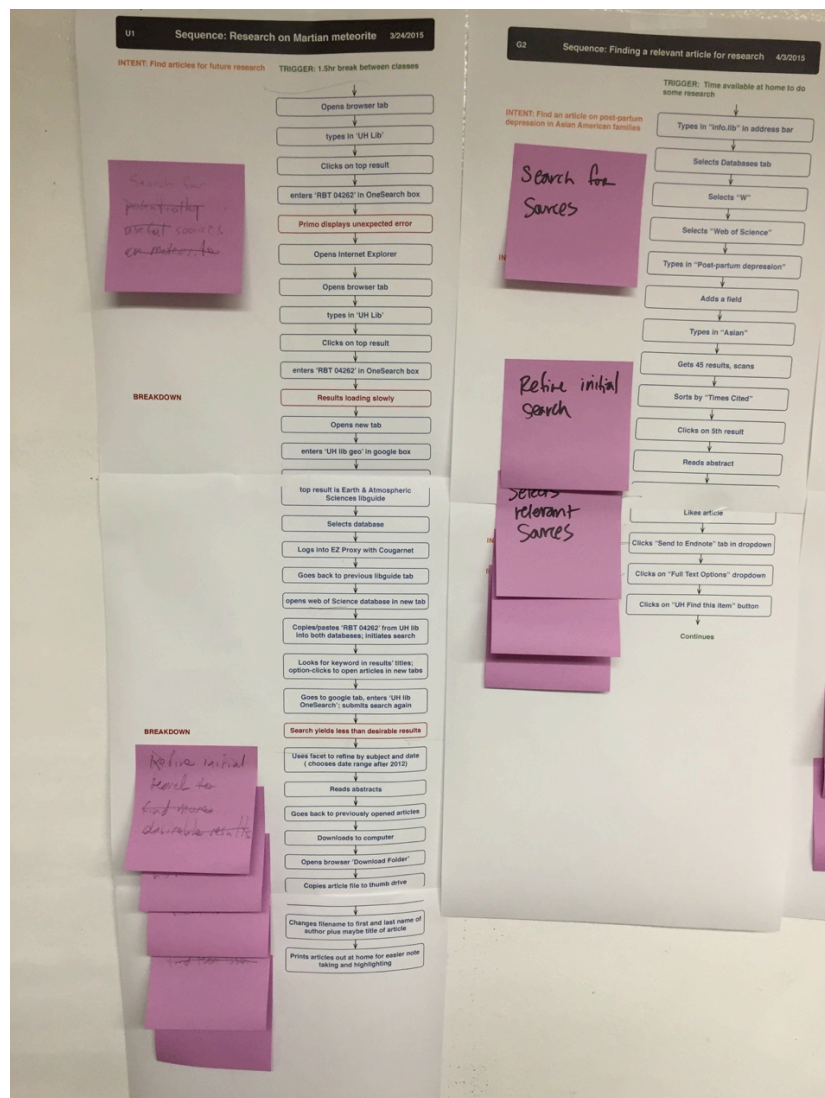
BEGINNING RESEARCH

opens browser
↓
typed in UHAccess
↓
Clicked on top result
↓
logged in to UHAccess / CougarNet
↓
clicked on Black Board icon
↓
Viewed list of classes
↓
Selected class info
↓
opens assignment
↓
Opens new tab in browser (assignment still open in another tab)
↓
types UH library into URL/search bar
↓
Clicked on top result
↓
goes to research on homepage (because he has tendency to use articles)

- Bookmarks
unavailable
on Library PC

↓
types in "Mapping Hum
↓
Browns through links
↓
right clicked to open
↓
returned to list of res
↓
repeats process of op
↓
returns to first tabbed so
↓
seems content of saved
↓
closes tabs if articles is
↓
alternates between assignment
↓
opens a blank word doc
↓
copies and pastes select
↓
opens 2nd blank word d
↓
copies portions from 1st word

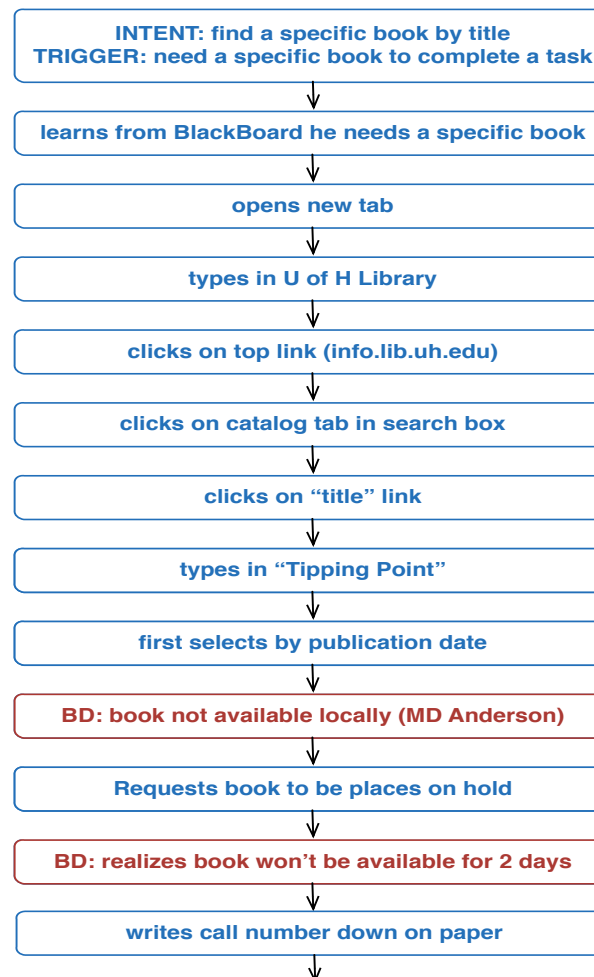




U01 TITLE: Find Specific Book By Title 2/27/2015

Sequence #4

PAGE 1/2



The sequence models help direct design decisions on what to do as well as what not to do.

We learned what breakdowns exist and can make design decisions to help users more easily recover from the inevitable breakdowns.

What are affinity diagrams?

- They are hierarchical representations of the issues for your user population built from interpretation session affinity notes.
- They group the data into key issues under labels that reveal users' needs.
- They show in one place the common issues, themes, and scope across all users.
- The issues and themes translate well into user requirements and user stories.

Affinity diagrams synthesize major themes and issues for each of three different types of users.

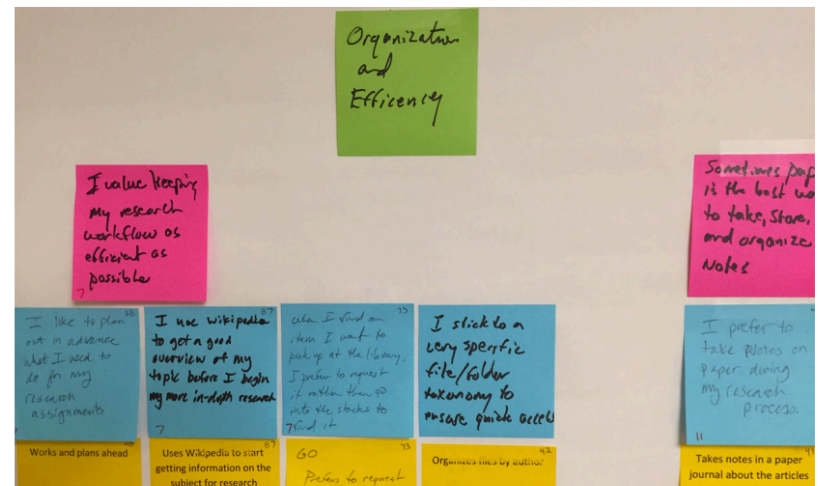
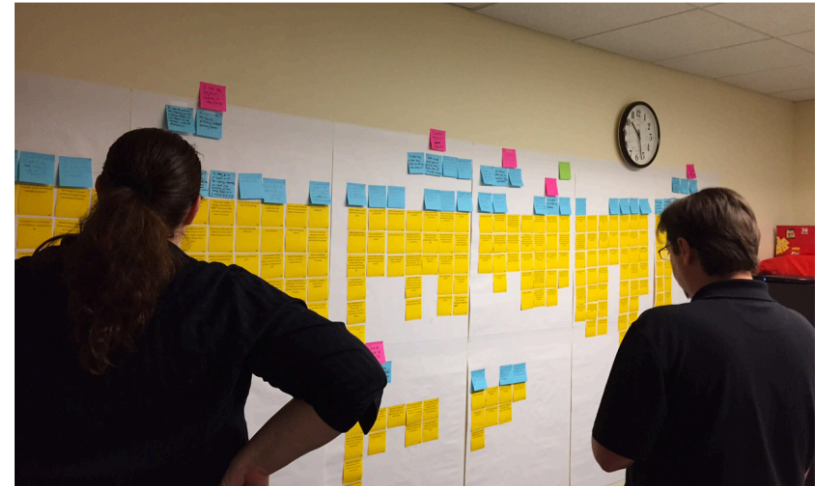
- The objective of an affinity diagram in a contextual inquiry is to identify user needs.
- As low-level insights and ideas are grouped, labels are assigned that articulate a consolidated user need.
- These needs are then grouped into a higher level need, which themselves are grouped under a theme.

Top Level: Theme

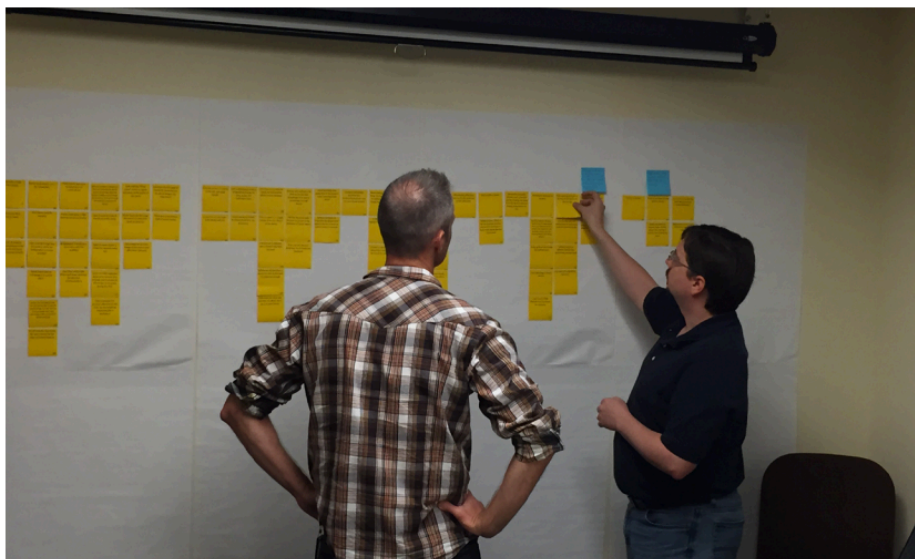
Second Level: Consolidated user needs, often articulated in the voice of the user

Third level: Individual user needs, always in the voice of the user

Fourth Level: Ideas, insights, and observations from the user interview interpretation sessions







Targeted Research				
Guide Users To More Relevant Results	Organize Results To Fit Research Context	Simplify Search Options	More Direct Path To Content	Scope Search for Branches
Have a guided search, narrative of the steps to search. Like having a treasure map to get to your results.	Like a custom search result for spanning Spec Coll items (Finding Aids, Rare Books, etc.).	SFX: What about eBooks? eBook is going away and will just be within a Book search. Same with eJournals, and just do a search in Journals.	Like to see list of finding aids under headings instead of just one long list within the portal page.	Search box : Catalog, Research guides, Site, eJournals for Opt and Health only, Databases
Wonder what the different searches are from the point of the user. What to use and when.	Spec Coll search results should come up with oldest stuff first.	SFX: Advanced search is a mess. Like to see advanced search go away.	SFX: Like to have a scoped search in Primo to deal with eJournals and eBooks.	
Spec Colls stuff is hard to search in the catalog. Users like to have things more specific, can have a hard time with detail results within the catalog.	SFX: The search results have too much information that comes back to the user and they don't understand what it all is. BYU has a better way of return information. People hate the fact the date ranges are not clear as to what item it belongs too.		Students want information quickly and don't want to go searching for it. Just want links to specific things.	
Have topical divisions				
OneSearch is useless				
Users are not searching for known items. Looking for search are, topic, or subject.				
Students just search in the catalog, like to see a guided search.				



Affinity major themes

*(These are from the **green** sticky notes.)*

- Discoverability of resources
- Valuing physical space and their resources
- Information overload
- Organization and efficiency
- Collaboration and exploration
- Lack of confidence and trust
- Resource medium is important to me

What are personas?

- Personas are fictional characters created to represent the different user types that might use a site, brand, or product.
- They embody the characteristics, behaviors, and needs observed through user interviews.
- They help project team members and stakeholders develop a shared understanding of what the users might need in a variety of scenarios.

Josh McDonald - The Newbie

Knows Google and high school reports, but wants to learn the ropes to get a good grade and that internship



"I'm pretty good at researching a topic. If I want the latest take on it, I'll go to Google. When I need a book I try the library. I mean, what else is there?"

ABOUT JOSH

Josh moved around a lot as a kid (his father works in energy) but spent his last year of high school at St. Thomas. He chose UH to join his friends and because he likes the city. He tries to do as much schoolwork as he can on campus during the week so he has his weekends free to enjoy at his parents' house.

HIS RESEARCH PROCESS

As he's just starting out, Josh still does what worked for him in high school. Josh logs in to AccessUH to check email and see what's due on Blackboard. Next, he starts searching keywords in Google, which primarily pulls up popular articles, blog posts, and commercial sites. He'll use these as sources and mine them for keywords for future searches. He's quick to abandon a source if it's confusing to access or the page loads too slowly. He's diligent at gathering citation info, but always uses MLA, the preferred choice in his high school English classes.

From there he'll go directly to the UH Catalog by typing in the URL and bypassing the UH Libraries' website homepage. He checks out physical books, but often gets confused navigating the online options. As he scans content it's unclear to him whether it's full or partial text. His papers draw from both popular and scholarly work, but, while he may technically understand the distinction, he's not sure why it's important.

PERSONAL STATS

- 19 years old
- 2nd semester freshman
- Economics major
- Lives in Calhoun Lofts

JOSH'S GOALS

This Semester

- Get more required classes out of the way
- Keep grades up
- Land a summer internship

After Graduation

- Work as an analyst for a consulting firm

HOW HE USES THE LIBRARIES

- Accesses resources and services through Google
- Looks up books directly through the Catalog
- Studies and hangs out in the Learning Commons
- Engages with online learning modules for class
- Prints materials and assignments at MDA

WHAT FRUSTRATES HIM

- Does not like rigidity of learning modules his professors use
- Unsure how to approach research in college
- Wishes UH Libraries resources were easier to find from Blackboard
- Learning Commons gets crowded, hard to find a free computer

Comfort with Technology



Research Skills



Sylvia Fuentes - The Explorer

An explorer who gets inspiration browsing online and in the stacks



PERSONAL STATS

- 22 years old
- Junior
- Graphic Design major, English minor
- Lives with a roommate inside the Loop

SOPHIA'S GOALS

This Semester

- Get good grades
- Get into the BLOCK undergraduate design program
- Build her portfolio

After Graduation

- Work for a publishing company

"I tend to approach research assignments pretty broadly. I like to let what I find take me in interesting and unexpected directions. It's not the most efficient, but I think it adds a lot of value to my work. It also gives me ideas to explore outside of school."

ABOUT SYLVIA

Sylvia grew up in League City and chose UH because she liked its friendly, down-to-earth environment. She also appreciates Houston's supportive Arts scene. Between her part-time job, her classes, and personal design projects that tend to take up her whole weekend, she's trying to catch exhibits at the Menil or HMFA. Oh, and she produces a weekly online radio show.

HER RESEARCH PROCESS

She'll start with a search on a topic in OneSearch, identify an interesting book, and browse the stacks in the Architecture & Art Library where it is located. She's drawn to images, and will often browse Amazon.com instead of the library catalog, switching back to the catalog when she finds something that piques her interest. She'll take notes in a journal rather than on a computer. A video, a music score, anything can be source material, and she finds searching by format really useful.

Researching a paper topic can often give her ideas for personal projects or public discussions. If she runs across an interesting Shakespeare quote, she'll post it on Facebook to start talking about it. Or, she'll use a collection on Houston history as a premise for an episode of her radio show.

HOW SHE USES THE LIBRARIES

- Searches for materials by format for her design projects
- Browses both MDA and Architecture & Art stacks by topic
- Browses the digital library and online exhibits for ideas
- Uses the physical space for design projects
- Uses A/V resources for her radio show

WHAT FRUSTRATES HER

- Hard to search by format
- Prefers image-based browsing experience (like Amazon)
- Sometimes can't find a quiet space in the library to spread out her materials

Comfort with Technology



Research Skills



Anil Chandra - The Achiever

Enthusiastic and goal oriented, he's quick to adopt new research tools and strategies



PERSONAL STATS

- 20 years old
- Sophomore
- Environmental Engineering major
- In the Honors College
- RA in Cougar Village

ANIL'S GOALS

This Semester

- Maintain 4.0 GPA
- Lead project for volunteer organization
- Learn AutoCAD
- Land summer fellowship

After Graduation

- Peace Corps in Africa
- Work for government agency like the EPA

"The library has been huge for me. Subject librarians help me out all the time, and the research guides point me to great databases. I'm always in MDA, whether it's in a Quiet Zone or at the Honors College."

ABOUT ANIL

Anil grew up in SugarLand, where his parents moved from Mumbai. He was drawn to UH's diversity and the small university feel of the Honors College. His scholarship made the decision easy.

Anil is engaged in one commitment or another every moment of the day. School projects are woven between volunteer events, skills development classes, his RA duties, and tennis at the Rec Center. He finds his busy life incredibly rewarding and he loves learning new things.

HIS RESEARCH PROCESS

Anil checks upcoming assignment due dates in Blackboard through the notifications feature he set up. Next, he'll get a quick overview of an unfamiliar topic by looking through popular sites like Wikipedia. He picks up keywords and goes to OneSearch or a database. He'll use the peer-reviewed filter as soon as he can find it.

Anil copies potentially useful sections from articles into a Word document with a URL for future reference and citation info. If he's on a library computer, he'll save this document and any downloaded articles on a thumb drive.

He has adopted many of the research strategies and resources a liaison introduced him to in a freshman English class. He's bookmarked research guides and will often rely on them or search for new ones. He also periodically reaches out to liaisons for guidance.

HOW HE USES THE LIBRARIES

- Bookmarks and uses Research Guides
- Seeks out subject librarians
- Searches math and science databases
- Checks out books
- Does schoolwork in Quiet Zones and Regent's Reading Room in MDA
- Prints materials and assignments in MDA
- Conducts research on volunteer group projects and post-grad opportunities

WHAT FRUSTRATES HIM

- Sometimes can't find a quiet place in MDA to study

Comfort with Technology

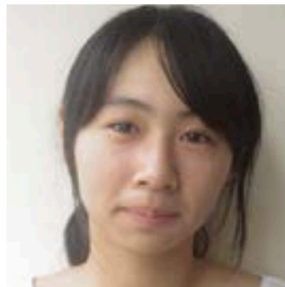


Research Skills



Sophia Huang - The Committed Researcher

Committed, resourceful researcher who makes the most of her time



"A lot of the library's services are quite efficient, and I really appreciate that. I can get to or request most of what I need online. This makes my trips to the library quick and productive, and that helps with everything I'm juggling right now."

ABOUT SOPHIA

While Sophia got accepted into several US graduate programs, she chose UH for its financial support. Her family has been in the country for two years, and her husband works as an analyst for an oil & gas company. While she frequently commutes 40 minutes by bus to campus to attend class and work as a research assistant, Sophia performs much of her schoolwork at home. She weaves academic work into her daily and weekend routines with her family. Whether on her iPad during her commute or reading the New York Times Sunday morning, Sophia is always thinking about research.

PERSONAL STATS

- 32 years old
- 2nd year PhD student in Sociology
- Married with 3-year-old daughter
- Taiwanese citizen

SOPHIA'S GOALS

This Semester

- Maintain 4.0 GPA
- Get more than one article published
- Complete literature review for professor

After Graduation

- Professorship or post-doc, or job with a public policy research firm

HER RESEARCH PROCESS

Sophia usually starts at the UH Libraries website homepage, where she often looks to multiple resources. She'll search for books through OneSearch and request what's available rather than locate them in the stacks. For articles she goes straight to a specialized database, usually Web of Science. "Times Cited" is her quick metric for research quality, and prefers to sort that way when she can.

She uses Endnote, and likes in Web Science that she can send citations to her account straight from the item record. She usually tries to store full-text of articles in Dropbox so she can access them on her iPad during her long commute.

HOW SHE USES THE LIBRARIES

- Performs literature reviews
- Investigates journals as possible submission targets
- Uses ILL to retrieve sources for herself and her professor
- Requests books from the catalog
- Prints papers and articles in MDA
- Seeks help with quantitative analysis tools
- Quick visits to MDA between classes to pick up books and use ARC computers

WHAT FRUSTRATES HER

- Availability status of items is not always accurate online
- No efficient way to digitally store and access resources
- Lacks confidence in One Search
- Concern about conducting research in her second language

Comfort with Technology



Research Skills



Stuart - The Working Professional

Transitioning careers through a professional-track graduate program



PERSONAL STATS

- 42 years old
- 1st-year graduate student in construction management
- Lives with wife and two kids in Pearland
- B.A. in Business Administration 20 years ago
- 10 years as a real estate agent

GOALS AND LIBRARY USE

Stuart wants to leverage his real estate experience and previous degree to get into construction project management. Because it's been so long since he was in school and his program relies on industry-led rather than scholarly research, he uses Google almost exclusively. He's not familiar with UH Libraries resources other than the Catalog, and has never accessed the UH Libraries website through the homepage. He likes to use MDA as a homepage between classes, but doesn't stay long. He's always running off campus to show a property.

Comfort with Technology



Research Skills



Amy - The Assistant Professor

Managing information-rich resources for her classes, her research, and her affiliations



PERSONAL STATS

- 33 years old
- From Milwaukee, Wisconsin
- 4th year on Computer Science faculty
- Sponsors a mobile app development club
- Co-teaches a summer software design program through the Honors College

GOALS AND LIBRARY USE

Amy is hoping to earn tenure in the next two years and build the software design community at UH. She is always gathering and sharing sources for her research, the app-building group, her classes, and the summer program. She juggles her information workflows with multiple document management systems, including Dropbox, SharePoint, a wiki, and Blackboard. She chooses Google Scholar over OneSearch, noting, "it just doesn't cover all the databases that Google Scholar does or the industry whitepapers I'm looking for."

Comfort with Technology



Research Skills



What is visioning?

- Visioning is where the team uses the consolidated data to drive conversations about how to improve users' work.
- A vision includes the system, its delivery, and support structures to make the new work practice successful.
- It sets a possible design direction, without fleshing out every detail. This enables the team to see the overall structure of the solution and ensure its coherence.

Full Library Discovery

Key Issues

- Getting to things quicker
 - Too much info at once
 - too many steps
- Better Visual Communication
- More Discovery vs. Info Overload

Big Ideas

- Robust My Account Save, Share, Find, Print
- Expanded Search Results (Full library discovery)
-



Full Library Discovery

Key Issues

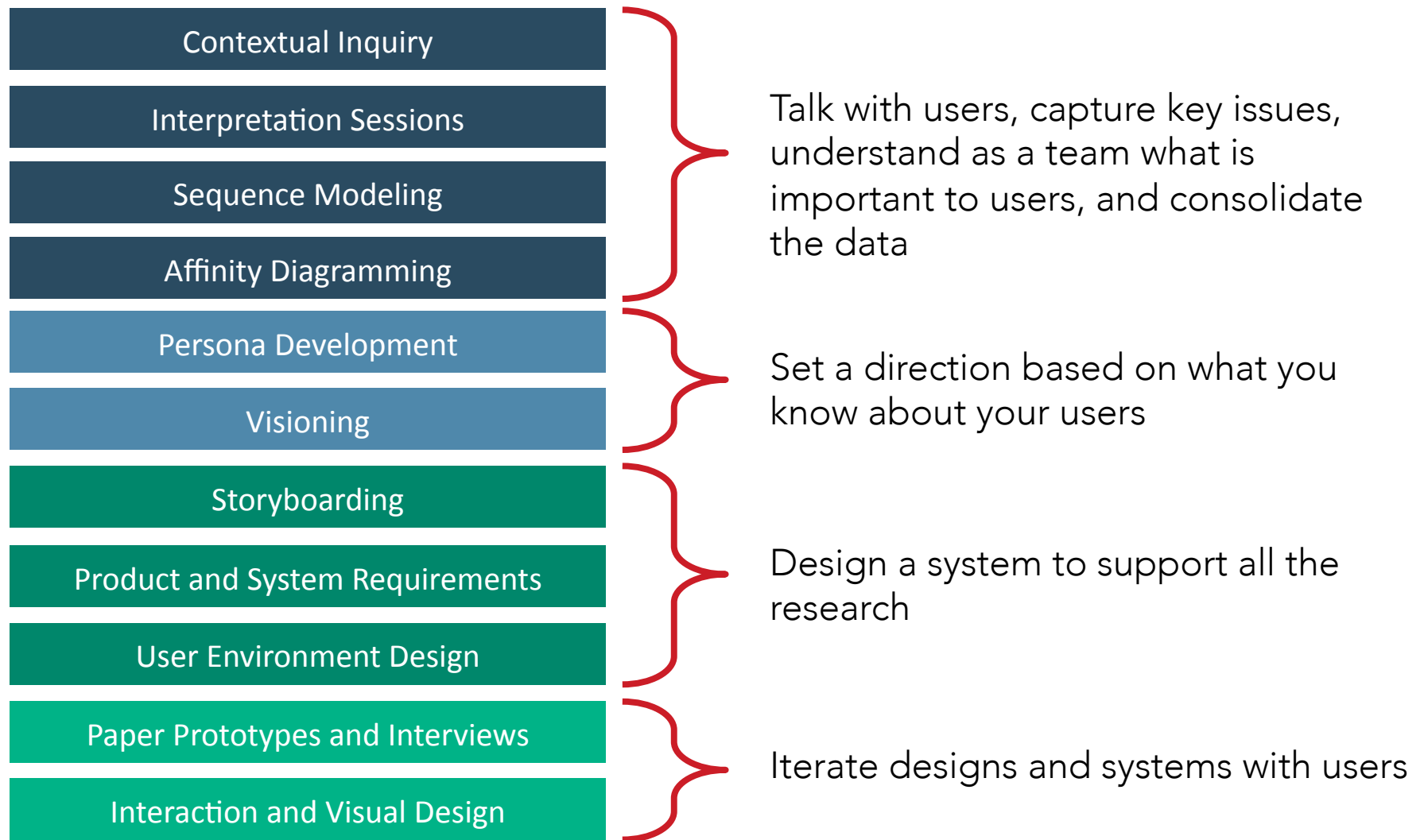
- More Discovery vs. Information Overload
- Process for managing sources during research is inefficient/dunky/idiosyncratic
- Users have a few distinct service needs when entering library
- Many services (and even our website) fall outside common student workflows
- Many UX issues go beyond the website and across the entire library experience

Big Ideas

- UI is more visually based, selective disclosure of info, Give all content more room
- Expanded Search Results Page (Portal) to Full Library Discovery
- Robust My Account (save, store, find, annotate)
- Mobile (esp. homepage) targets Contextual Needs (find/reserve computer, find print)
- Design clear touchpoints between Blackboard, UH Access, and library homepage
- Reports to other departments about UX issues that intersect with their work

What happens next?





Inspired by <https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/contextual-design>

What were the challenges of
doing contextual inquiry?

- It's **time-intensive**. It took us 7 months from writing the IRB to finishing the final report.
- It's **resource-intensive**. Although a lot of the work was done by 1 or 2 people, there were 10 people involved in interpretation sessions and affinity diagramming sessions.
- Lead investigators need **training and familiarity** with overall process and especially with analyzing large amounts of data
- You need **incentives** for 10+ users to participate in hour long interviews.
- You need **space** for affinity diagramming.

What were the advantages of
doing contextual inquiry?

- It produced an incredible amount of in-depth, **rich qualitative data** that can be used by multiple departments within the library.
- We **better understand our users** and their research process.
- We developed **robust personas** that can be used for spaces and services throughout the library, not just the website.

- We have a final **report to share** with colleagues at UH and other libraries about our methodology, findings, and future directions.
- We have a better understanding of where **breakdowns** exist.
- We will be able to create a website that is **more responsive to our users' needs**.

We could do this again with other types of users:

- External researchers who access our print and digital unique collections
- Alumni and donors
- Faculty in specialized fields
- Users with disabilities
- International students with language acquisition needs
- Health science professionals

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This presentation is available at:
slideshare.net/vacekrae/

All our user research is publically available at:
sites.lib.uh.edu/wp/website-redesign/