Intro to User Experience & UI Design

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Questions?
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What IS User Experience?

Broad field, usually broken into one of three:

- **UX Design**
  - prototyping, wireframes, graphic design
- **UX Research**
  - usability testing, a/b testing, statistical analysis, metrics
- **UX Development**
  - web development + coding in general

*UX is a highly iterative and collaborative process!*
Interaction + Interface Design

- Defining the way your product interacts with users in a linear, simple, and aesthetically pleasing manner.

- Usually the wireframe stage
User Research

● Understanding your users through observation, interviewing, and testing
● Generally analytics and metrics

Methods include:
● usability testing, Google analytics, mental models, video recording, polls, questionnaires, interviews
Mental Model vs Conceptual Model

- What the user thinks your app does vs what your app really does.
- Best when they match.
UX Development

Coding up the design

WHAT IS THE CHALLENGE HERE?
Learn from User Behavior

What did you do? What are you doing? What are you going to do?

Do:
- Try to use quantitative data - much more convincing
- Qualitative data is good for creating generalizations, such as personas
- Force them to experiment

Don’t:
- Tell them how to use something
- Don’t interfere

Tools, References, Search Terms:
- Design methods: personas, mental models, mind maps
- Analytics and Metrics tools

Before you move on:
- Compile results to design methods
- Reflect
Design Workshop
pen + paper
Market and User Research

As-Is Problems and Pain Points

Idea in Prioritization Grid

Experience-based Roadmap

It's hard to reproduce Spotify's 2006-2007 view on the market and users, so this part in particular is a bit of guesswork. Normally, there should be an artifact with market facts answering the "Unknows" above.

Note: Green indicates target users, market segment and experience/functionality for first release.
This can be modeled by the double diamond abstraction of research, design, and development processes:

1. **Stakeholder / system map**: define all the stakeholders (users, clients, customers, etc.) and map their relationships in/with the systems you’re working with.

2. **Journey map (as-is)**: represent chronologically the experiences and interactions between stakeholders and through touchpoints/tasks/activities in a system, to identify pain points and critical points for innovation.

3. **Problem definition**: narrow down from a rich picture about complex interconnected issues, towards a key issue which could be improved upon. Keep this around and update as needed throughout the whole design process.

4. **Job story**: create quotable, succinct stories based on problem definition from stakeholder’s perspective. These are good when paired with target group profiles and personas on presentations.

5. **Ideate with SCAMPER**: form innovative ideas and solutions with the divergent, constructive SCAMPER approaches to original ideas and to critique existing solutions already in the world. At this point we’re reached our peak divergence.

6. **Segment by themes**: start converging by segmenting and ranking ideas by themes like feasibility and criticality. When working in a group, it’s easier to do this dimension-by-dimension rather than all at once. Similar to the Eisenhower method.

7. **Blueprint & proposition**: take your as-is journey map and SCAMPER it with your ideas to produce a to-be journey map or a more robust blueprint. Tighten that up with a proposition for development.

Design workshop: lo-fi
Definition
Strategy and plan, aka “Why?” and “How?”

Execution
Working through tradeoffs to deliver optimal solution, aka “What?”

design makes strategy concrete
design supports delightful, engaging experiences

Stakeholder / system map

- WH - Metrolab
- CUI - GTRI - COAIT
- Intel
- NSF
- PDW (gno)
- RNOC
- SLS (PSP+GSP)
- Classes
- GT
- FormaL Relationships
- RE: IoT/AOT IN atlanta

- IBM - Stadium
- City of Atlanta
- AT&T
- Cisco
- Deloitte
- Ericsson
- GE
- Qualcomm
Customer Journey Map - Treinreis

IK

Reisplan

Het maken van een reisplan om te weten hoe de treinreis zal verlopen.

Fietsen en fietstalling

Het gebruik van de fiets en het vinden van een plek om te stallingen.

Station en tunnel

Het afstappen bij het station en het lopen door de tunnel.

Waiting

Het wachten op de trein om aan te sluiten.

Train

Het bekijken van de trein en het welk station als het de overstap is.

Station automaat

Het gebruik van de treinreizigers automaat voor kaart rechtstreeks aan de treinreizigers.

In het station, het pakken van een kaart en het bekijken van de kaart na het trekken van de treinreizigers.

Train conducteur

Het bekijken van de treinconducteur en het luisteren naar de aanwijzingen.

Reis

Het afsluiten van de treinreis en het bekijken van het eindstation.
Problem definition
Use this to find and define the issue

What is the issue?

Who is it a problem for?

What social/cultural factors shape this problem?

What evidence do you have that this is a significant problem?

Can you think of this problem in a different way? Can you reframe it?
When ____ I want to ____ So I can ____

Situation    Motivation    Expected Outcome

Situations (jobs) should be independent from solutions

Job Story ‘A’    Solution 1
Segment by themes
Q&A

● Want to see more examples of things we covered?
● What are your experiences with UX in class or professionally?
● What methods/tools do you like/dislike?
Thanks y’all!

Email us: rnoc-lab-staff@lists.gatech.edu

This tutorial: cic.gatech.edu

Resources: gtjourney.gatech.edu
Prototyping + Wireframing Tools

- Axure
- Balsamiq
- Invision
- Pixate
- Sketch
- Illustrator
- Photoshop
- And more: uxdesign.cc/ux-tools
Terminology

- **Low-fidelity**
  - paper, sticky notes, sketchy
- **Wireframes**
  - bare-bones
- **High-fidelity**
  - polished but not deployed
- **Prototypes**
  - interactive demo
Low Fidelity

Source: Andrew Nelson, IDEAID

Source: Ruben Santa, AppleWatch wires, Dribbble
High Fidelity

Source: Billy Kiely, Dribbble

Source: Anton Aheichank for Invision, Dribbble
Wireframe

Source: Eddie Lobanovskiy for Unfold, Dribbble
Prototype

Source: Anton Aheichank for Invision, Dribbble
Prototype

What does it look like? What is the I/O? What are its affordances?

Do:
- Refine your last prototype
- Research your design decisions
- Make a few different versions

Tools, References, Search Terms:
- Axure
- invisionapp.com
- prototypingtools.co

Don’t:
- Completely change something being implemented
- Be unprepared for critique

Before you move on:
- Make sure you’ve addressed anything from the previous iteration
- Expect implementation issues
BACKUP SLIDES
What is Lean UX?

● **Background**
  ○ many UX designers fly solo on a team of many programmers
  ○ involving others at every step of the way to make sure voice is heard and change is implemented
  ○ thus, best with startups and small teams

● **Design with quick turnaround**
  ○ through constant, quick feedback from boss and clients

● **Keep deliverables light and editable**
  ○ i.e. choosing the type of button and placement
  ○ not “overhaul this entire page”
Lean UX in class projects

The value of UX in class projects:

- Points!
- Your own portfolio, shareable
- CIC
- Pick it up again in future classes
- Do it fer real!

The usual workflow in class projects:

1. Syllabus, general course outcomes
2. Rough deliverable schedule
3. Ideation, team formation
4. Teaching and homeworks involving project management
5. Doing the project
6. Might have “client” meetings with the professor or TA
CONCEPT > PROTOTYPE > VALIDATE > TEST > LEARN > ITERATE

Concept

What did you do? What are you doing? What are you going to do?

Do:
- Communicate with everyone
- Strategize
- Scope

Don’t:
- Work in a silo
- Lose your way
- Overreach

Tools, References, Search Terms:
- Design thinking toolkits
- UX organization tools

Before you move on:
- Did you meet your goals last iteration?
- What should change?
# RECIPE 3 Improvement

<table>
<thead>
<tr>
<th>Activity</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find out something unexpected, create storyworlds and storyboards, and segment by themes</td>
<td>You are attuned to understanding and valuing participant and user experiences and resources and have learned where things go wrong and where they go right</td>
</tr>
<tr>
<td>Problem definition</td>
<td>You review and possibly reframe the service prompting you to consider what matters and why this is so</td>
</tr>
<tr>
<td>(Re)defining the proposition and creating an outcomes matrix</td>
<td>You identify and clarify what a service offers and compare the actual situation with what you think happens</td>
</tr>
<tr>
<td>Mapping the service ecology</td>
<td>You identify resources that might not have been obvious or viable before, and see opportunities to reconfigure resources in the service ecology to create value in new ways</td>
</tr>
<tr>
<td>Create blueprints for a future version of the service, that identify opportunities for change that are realistic to deliver to time, quality and budget</td>
<td>You understand where participant and organisational and resources are not well aligned or connected</td>
</tr>
<tr>
<td>Having reviewed these materials, you define and agree what next steps to take to implement your designs</td>
<td>You are ready to move towards gathering and costing resources and doing quick experiments to test your ideas</td>
</tr>
</tbody>
</table>
Validate Internally

How are you going to make your boss listen to you?

Do:
- Communicate with your boss
- Back up your design decisions
- Compromise together

Don’t:
- Think your way is best
- Be unprepared for critique

Tools, References, Search Terms:
- Presentation Tools
  - Keynote, Powerpoint
- Anything to help you make your point
  (Scholarly articles, prototypes, wireframes)

Before you move on:
- Did your boss explicitly agree or not?
  Get it in writing, if possible.
CONCEPT > PROTOTYPE > VALIDATE > TEST > LEARN > ITERATE

Test Externally

What did you do? What are you doing? What are you going to do?

Do:
- Establish a good relationship with your clients
- Test on every kind of customer
- Pick the appropriate kind of testing
- Set up and test in advance
- Record tests and results

Don’t:
- Test and then leave client out of the loop

Tools, References, Search Terms:
- Analytics and Metrics tools
- Usability Testing
- Google Analytics
- A/B testing

Before you move on:
- Compile results to present to rest of team
- Thank your testers, keep them in loop
Reiterate

What did you do? What are you doing? What are you going to do?

Do:
- Reflect on current progress vs. goals
- Prioritize changes
- Take time to refresh and get inspired
- Refine, branch, experiment

Don’t:
- Stop
- Start over/reinvent the wheel

Tools, References, Search Terms:
- Organize and document information

Before you move on:
- Prioritize changes and goals
Again, this is how you can integrate LeanUX in your class projects:
Resources

General Sources
● Smashing Magazine
● UX Pin
● UX Design Blogs to Follow Religiously

Design Inspiration
● dribbble
● awwwards
● behance
● Muz.li
Resources

Research

- Nielsen Norman Group
- Google Analytics
- oozled.com/resources/ux
- thestarterkit.info/group/ux