UX

Mixed Methods in Research Workshop Series
The Erdős Institute
April 2023

Brief Review

Market Research

Market Research involves studying an industry to determine:

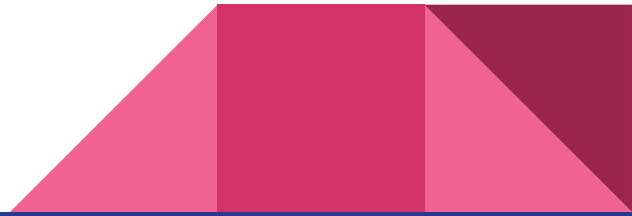
- What problems are facing the field
- How other companies have tried to solve these problems
- How your company can meet the need in a better way than your competition

The goal of market research is to **shape business development plans and product development**

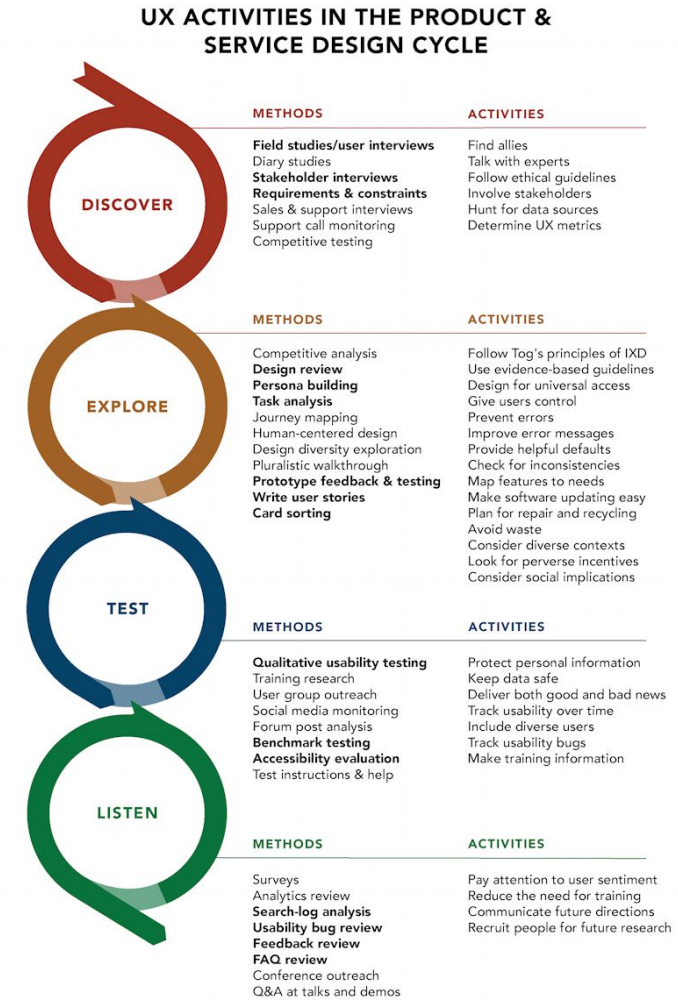
Interviewing

UX

- Research on **end users** – the people directly using the (digital) product
- Examples
  - Understanding end users (defining personas, user journeys, purchasing trends)
  - Discovering product requirements (determining features and designs to meet user expectations)
  - Analyzing digital products (clicks to completion, abandonment rate)
  - User interface design (graphic and website design, creating prototypes)



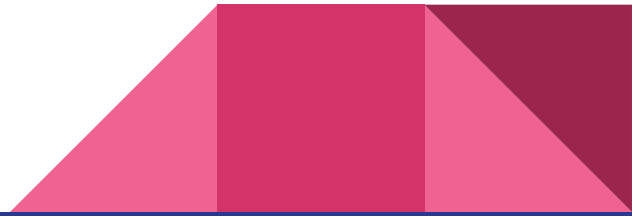
UX Methods



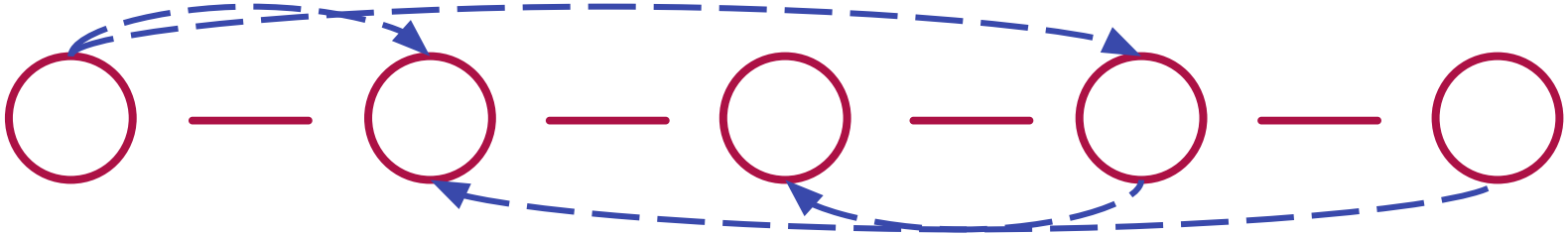
Link

Design Thinking

- Creative problem solving
- Focused on solutions
- User-centric
- Iterative – ongoing experimentation
- Goal – Reduce cost and time to market



Design Thinking



Empathize
Get to know users

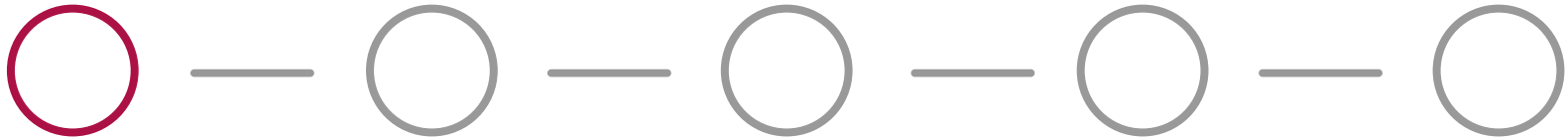
Define
Define problem in a user-centered way

Ideate
List all potential solutions; narrow down to a few

Prototype
Create a prototype

Test
Test prototype with users; get feedback

Design Thinking



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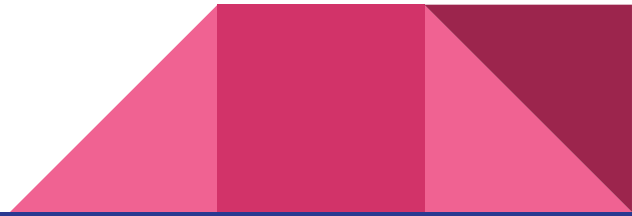
Learning from Others

- Talking to customers helps you understand their behavior
  - People stop using your product after about 5 minutes
  - The use case for your product differs than what you expected
  - People would pay extra money for new features

- Different types
  - User interviews
  - Diary studies
  - Focus groups
  - Panels

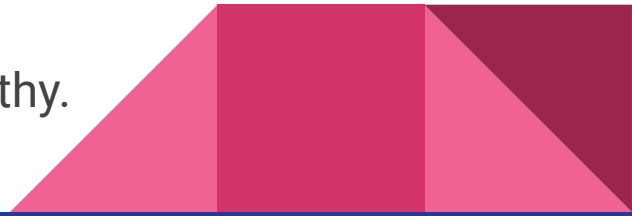


Learning from Others

Who	How
Colleagues (C-Suite, Data Analyst, Sales)	Problem Statement; Open Response
B2B Client: Employers & End Users	Focus Groups; Quantitative Surveys
B2C Client: User Market Segments	Group/Solo Interviews; NPS

User Interviews

- 1-on-1 sessions
  - Can include questions and answers
  - Have people use the product (e.g., app) while you are with them to find bottlenecks, etc
  - Can screen people beforehand
- Can be used at all stages of the design process
  - Before you've built anything
  - After you have a prototype
  - After you have released a version
  - Before releasing a new version
- Make sure there is a concrete goal for the interview
- Make the interviewees feel comfortable. Have empathy.

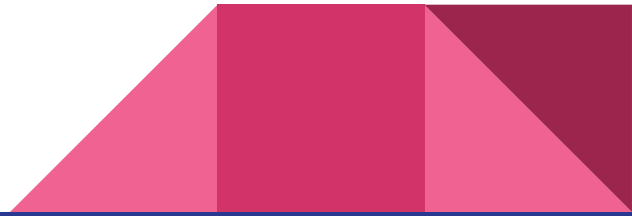


User Interviews

- Plan out all questions before the interview
  - Tell me about yourself
  - Why would you use this product? How often would you use it?
  - What do you (dis)like about this product?
  - How is this different from other products?
- Open ended questions offer more insight than closed questions
  - Closed: Do you use Uber?
  - Open: How often do you use ride-share apps? (Follow-up: Which ones do you use?)
- Don’t use leading questions
  - Leading: Why do you like Uber more than Lyft?
  - Not Leading: How do you decide between using Uber or Lyft?

User Interviews

- Summarize all results into a PP deck
  - Listen to the interview after you conduct it. Pull out common themes and how frequently the themes arose.
  - Use direct quotes to showcase your results
- Sections
  - About the users
  - High level takeaway on needs
  - Personas, problem statements, and supporting evidence
  - Product Value
  - Pain Points
  - Ways Forward (design / feature related)
  - Executive summary



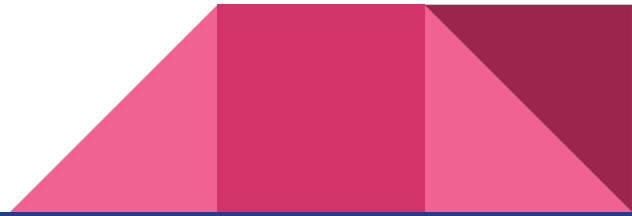
Usability Test

- Have people use the product (e.g., app) while you are watching
- The user is (sometimes) asked to think out loud so you can see their thought process
- The focus is often on people's behaviors – their actions when using the product

Link

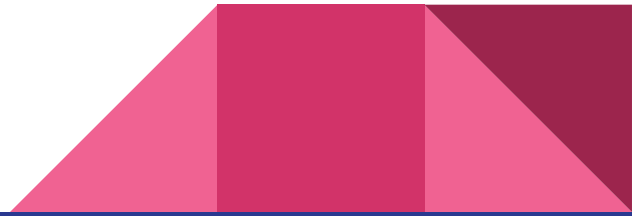
Diary Studies

- Longitudinal data collection (e.g., 1+ months)
  - In situ – participants write done everything that happened
  - Snippet – participants only record snippets of their interactions
- Product interactions
  - When do people use the product? For how long?
  - What are they doing when they use the product?
  - Is their opinion of the product changing over time? Do they use it less?
- Timeline
  - Talk to participants to get consent, discuss goals
  - Logging period (prompts are given to remind participants)
  - Post study interview



Field Studies

- You go to the participants to see them use the product as they would on a day to day basis
- Helps with big picture insights
- Not as directed as other methods – you observe and see what happens, rather than focusing on a particular goal
- Methods
  - Direct observations
  - Ethnographic research
  - Contextual inquiry



Group Interviews

- Group of (~6-10) individuals who meet together to discuss your product / service
- Interaction between participants is encouraged by the facilitator
- Participant selection is key

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Focus Groups

- One-time event – you get their opinions from a single session
- Individuals give input on (initial) stages of a study or product design or a marketing strategy

Panels

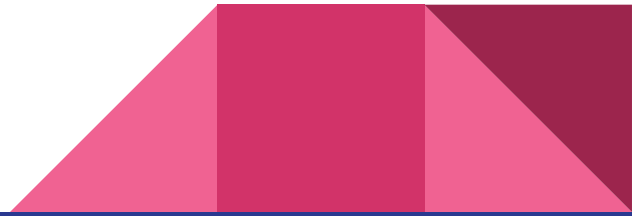
- Continuous – you meet multiple times to see how feelings evolve
- Can be trained at a task that requires subtle perception, like perfume evaluation

Tips

Debrief

Ask people questions at the end of the study

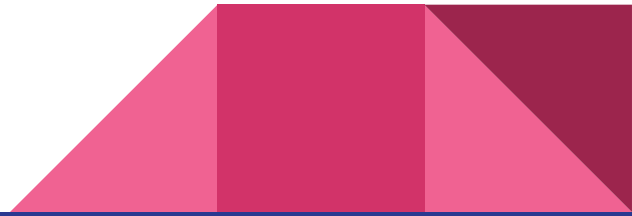
- Find out if they could figure out what you were studying (not good)
- Test if they understood
- Make sure everything is working



Tips

Beware of participant bias

- Question order bias
  - Example: people get bored and don't take the last few questions seriously
- Social desirability bias
  - People don't want to answer truthfully if they think others will judge them negatively for their responses
- Demand characteristics
  - People alter their response/behavior because they know they're part of a study
- Acquiescence bias
  - People agree with most questions you ask



Sampling Theory

Goal

Get a subset of people that accurately represent the population they are taken from

- Who are you testing?
- Why are you testing them?
- Who is your customer segment?
- What is the expected result? How does it affect the KPI?

https://dictionary.apa.org/random-sampling

Random Sampling

- A process for selecting a sample of study participants from a larger potential group of eligible individuals, such that each person has the same fixed probability of being included in the sample and some chance procedure is used to determine who specifically is chosen. The main value of this form of probability sampling is its positive impact on generalizability and external validity.

- **Example**
  Assign a unique ID# to each person that uses your website (easy, I know). Pick people for the study by using a random number generator.

https://dictionary.apa.org/random-sampling

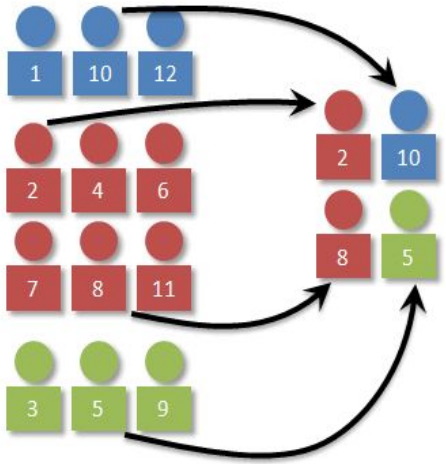
Non-Random Sampling

- Any process of choosing a subset of participants or cases from a larger population in which it is impossible to precisely determine each unit's likelihood of being selected
- Affects generalizability – your sample won't represent the population, but you won't know how different your sample and the population are!
- **Example**
  Have a "family and friends" trial period for a product before it is launched to the public.

https://dictionary.apa.org/nonprobability-sampling

Stratified (Random) Sampling

- The process of selecting a sample from a population comprised of various subgroups (strata) in such a way that each subgroup is represented
- You need a list of all people in the population with their associated stratum



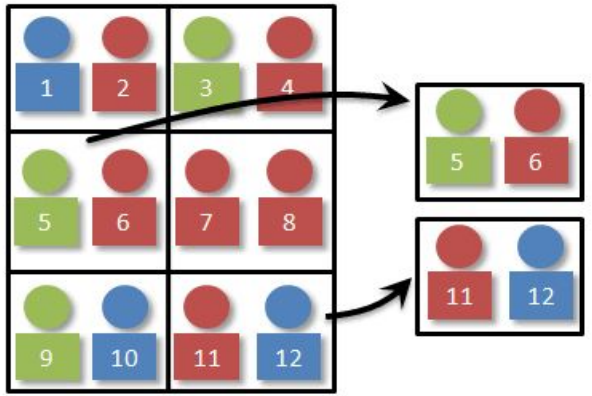
Examples of Strata:

- Gender identity
- Age
- How they found your website
- Purchase history
- Income

https://dictionary.apa.org/stratified-sampling
https://faculty.elgin.edu/dkernler/statistics/ch01/1-4.html

Cluster (Random) Sampling

- A tiered method of obtaining units for a study. A population is first subdivided into smaller groups or clusters (often administrative or geographical), and a random sample of these clusters is drawn. The process is then repeated for each sampled cluster until the required level is reached.



https://dictionary.apa.org/cluster-sampling
https://faculty.elgin.edu/dkernler/statistics/ch01/1-4.html

Convenience (Non-Random) Sampling

- Collect data from people who happen to be nearby and/or are available (students in your class, the next 1,000 people that visit your website, friends and family)

Volunteer (Non-Random) Sampling

- Advertising your study, paying people for taking your study, providing other incentives (like food) for taking your study

Snowball (Non-Random) Sampling

- Getting a few people from a certain network to take your study (e.g., your place of worship, your company, your Facebook friends.
- These first few people then spread the word to others in the network. Then the new people spread the word in the network, etc., etc.
- The sample size increases as the word spreads throughout the network.

Screening

- Ensuring that the participants meet certain criteria that enables them to give meaningful feedback
- Distractor questions conceal the purpose of the study

For video games:

- ***If you had two hours to spend on a rainy afternoon, what would you do?***
  - Read a book
  - Play a video game
  - Cook a meal
  - If ‘read’ or ‘cook’, exclude

- ***Have you ever played our game?***
  - If ‘no’, exclude

Group Project

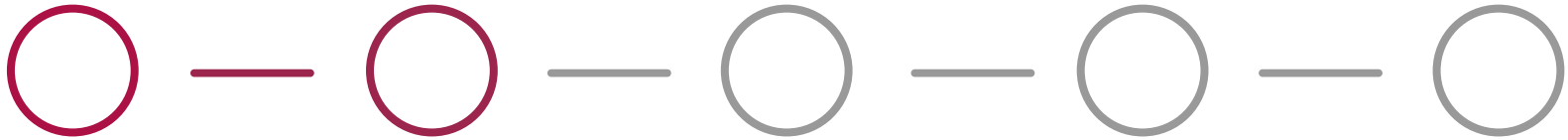
Website Conversion

You work for an online shopping company. Although many people view your website, few actually buy anything. Your task is to figure out why people are putting items in their cart, but don't go through with their purchase.

You are able to interview 50 people of your choice to learn about the users' experience with the website. How will you choose to interview them (focus groups, panels, user interviews) and why? How will you find your sample?

Persona Research

Design Thinking



Empathize

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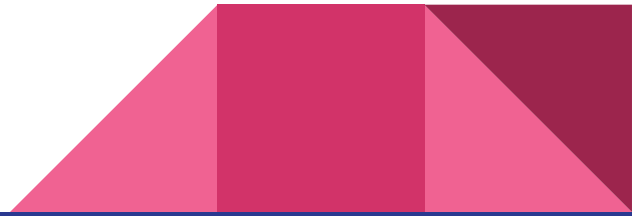
Persona Building

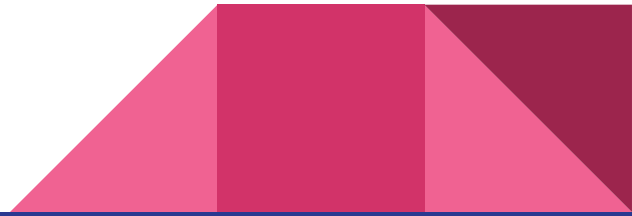
- **Persona** – *Who are you designing for?*
  Characters used to represent different customer types

- **Use case** – *What are you designing for?*
  Goals for how the product will be used



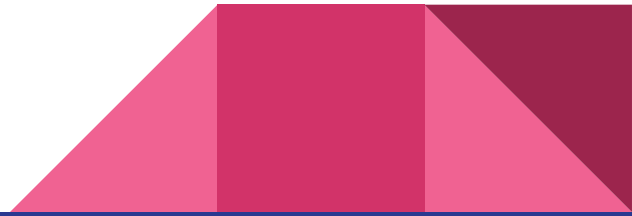
Persona Building

- **Goal:** Help product designers understand and empathize with target users
- Make sure personas resemble actual users
  - Conduct interviews
  - Get data about current customers
  - Aim for 3-5 personas



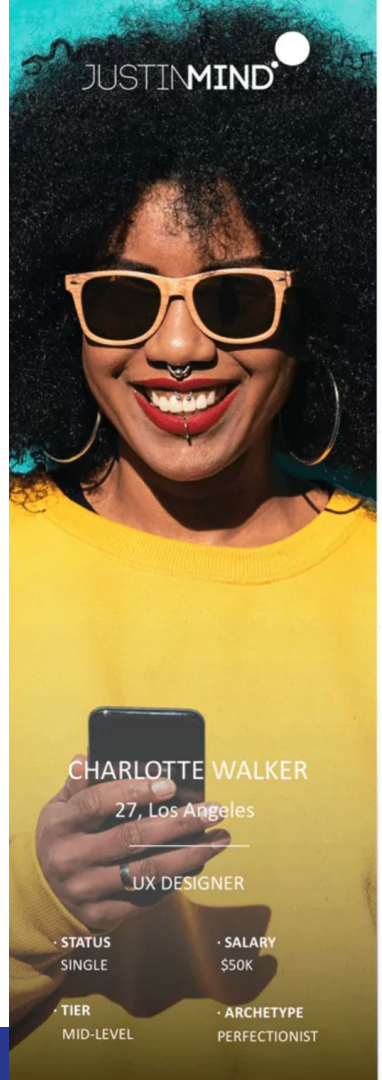
Persona Building

- Name
- Demographics (age, income, gender, location, occupation)
- Bio
- Personality
- Behavior patterns
- Pain points
- Goals
- Quote



Persona 1

[Example]



PERSONALITY

- Prototyping
- Interviewing
- Design Thinking
- Empathy
- Coding

BIO

Charlotte recently started a new job as a UX design in a mid-size bank. She moved over from the start-up world and is still getting used to all the changes, particularly the paperwork. She's excited to bring a user-focused perspective to the design department but nervous because she's the bank's first UXer.

Outside of the office she's a sports-mad psychology grad. She enjoys reading UX blogs and will sometimes go to UX-related conferences if they're nearby. She's also tuned into design channels like Dribbble.

"I want to help my team deliver great user experiences"

Motivations

IMPACT		PROMOTION	
TEAMWORK		USER NEEDS	

Goals

- Introduce user focused mentality and methods into traditional company landscape
- Improve usability of bank's customer facing interfaces
- Grow the UX team

Frustrations

- Getting buy-in for the new department's activities
- Dealing with more bureaucracy than in her old job
- Communicating necessity for change to development team

Behavior

- Overseeing builds
- Writing specs
- Designing features
- Meetings
- User testing

Influences

- CREDIBILITY
- COLLEAGUES
- TECHNOLOGY
- BLOGS/ FORUMS
- PSYCHOLOGY
- UI TRENDS

Frequently used apps

Justinmind · Google Calendar · PocketGuard

Persona 2

LISA MONTOYA

> “We must optimize our processes, implement new systems, learn to adapt. It’s worth the effort in the end.”

Age	32
Occupation	Software Architect
Status	Married
Location	New York, NY
Tier	Multi-use
Archetype	Problem-solver

Goals

- Discover new tools for communication, reporting, tracking and measuring
- Use small teams for large projects
- Update old frameworks to meet present standards

Frustrations

- Change is always met with resistance
- Learning curves slow down productivity
- Larger companies are more risk averse

Trusted Brands

patagonia, Audi, MOZ, NETFLIX, UBISOFT

Technology

- IT & Internet
- Design Software
- Mobile Apps
- Social Media

Motivations

- Ease of Use
- Creativity
- Problems Solved
- Price
- Updates

Bio

Lisa is the software architect at Blue Cable. She sees that larger companies have a difficult time implementing improvements. She wants to streamline communications and automate as many things as possible, to maintain an agile team.

Personality

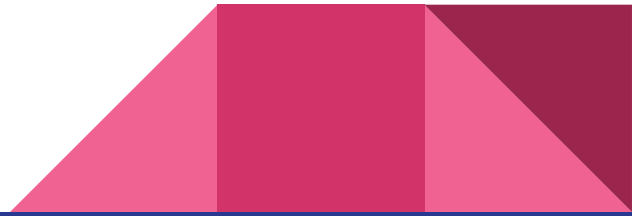
Introvert	Extrovert
Intuitive	Sensing
Thinking	Feeling
Judging	Perceiving

Example

User Segments

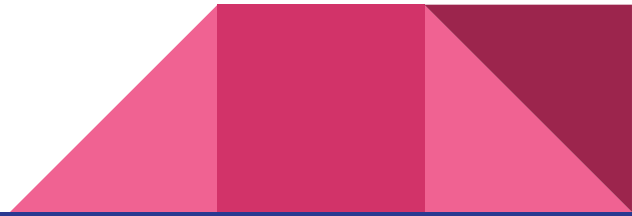
Segmentation

- Grouping the “market” (customers) into segments based on characteristics
- Should be based on real data (surveys, social analytics, purchasing behaviors)
- Discover trade-offs between different personas



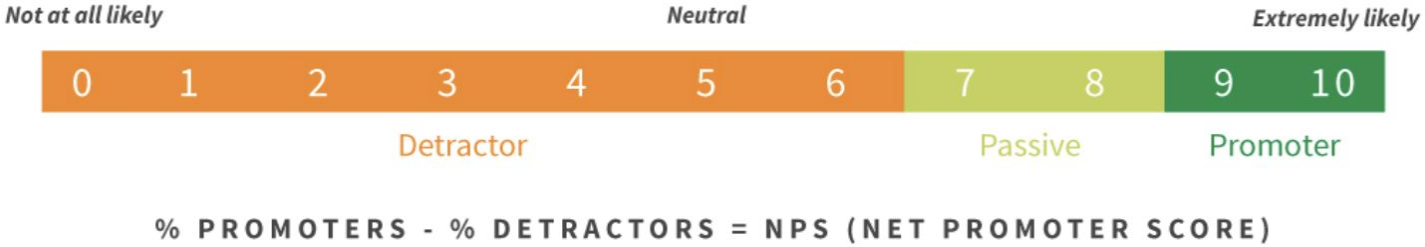
User Segments

- Demographics (age, gender)
- Psychographics (interests, attitudes)
- Technology (desktop vs. mobile, type of phone)
- Geography (location, timezone)
- Product behaviors (frequency of product use, purchase online vs. in store)
- Motivations (what do you (dis)like about the product?)



User Segments

Net Promoter Score (NPS)



Link

User Segments

[Link]

The resulting five segments proved attitudinally differentiated and demographically distinct.

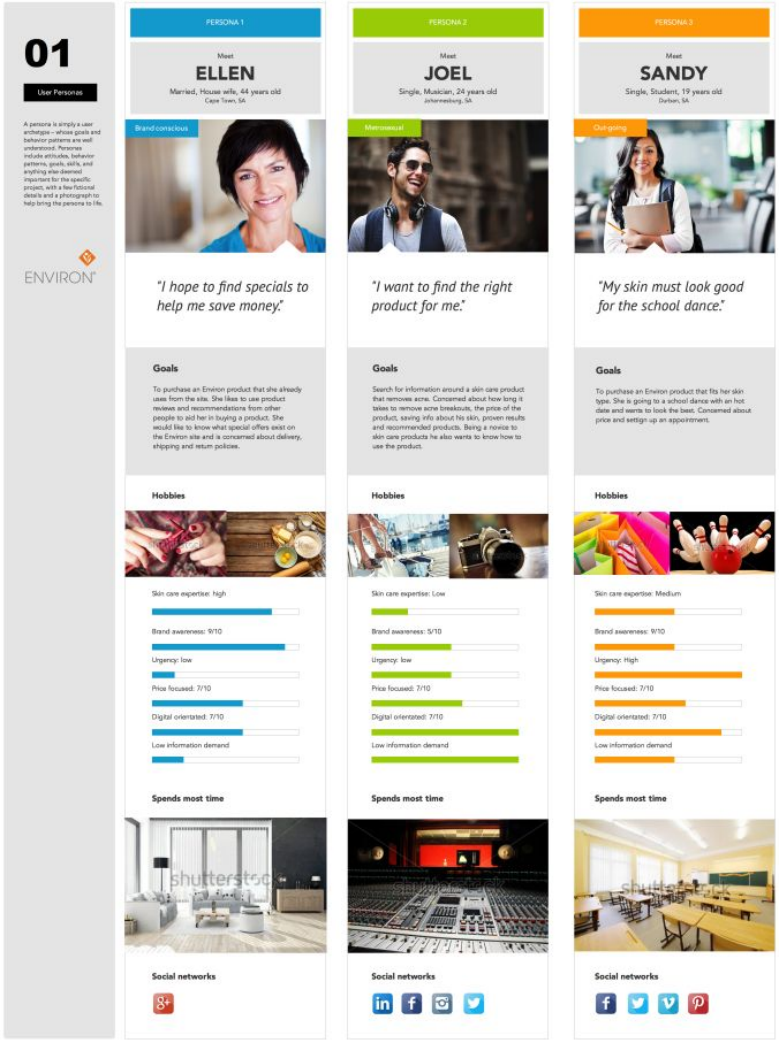
	Young Achievers	Concerned Moms	Financially Mature	Ho Hum	Solo Content
Demographics	Younger Skews male	Young, Middle Age Mostly female	Mature Skews male	Middle Age Mostly female	Mature Male and Female
Attitudes	Early adopters, technical Driven, Risk taker Price sensitive	Use social media, but not otherwise technical Don't know where to begin Price sensitive	Recognize value of insurance Confident about financial matters Least price sensitive	Late adopters Risk averse Not primary decision makers and not thinking about LI	Use social media Mistrustful of financial inst. Least interest in LI
% of US	20%	20%	30%	20%	10%
% of MetLife	50%	30%	10%	5%	5%
Lapse Rate	Low	High	Low	Medium	Medium
Value	High	Medium	Medium	Low	Low

Target
- *Large portion of market*
- *Right for business model*

Minimize Cost to Serve
- *Prefer face to face*
- *Low conversion*
- *Lower value*

CRM EXECUTIVE SUMMIT 10TH ANNIVERSARY MERKLE

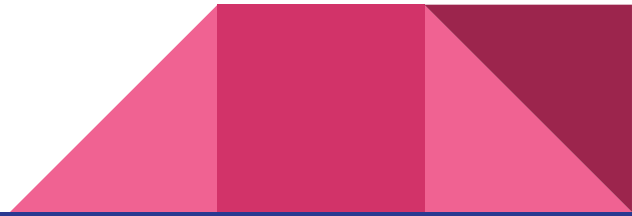
User Segments



[Link]

Use Cases

- Document (1) how people will interact with a product or service and (2) determine requirements a product or service needs to satisfy the users
- It’s a good idea to have a primary use case for each persona you create
- Helps prioritize items and establish a series of goals



Use Cases

- Use Case # 1: Name
- Description (1-sentence)
- Users (personas)
- Preconditions (what happens before the use case)
- Basic Flow
- Alternative Paths
- Postconditions (what happens after the use case)

Link

Use Cases

Name	**UC-8: Search and Replace**
Summary	All occurrences of a search term are replaced with replacement text.

Link

Rationale	While editing a document, many users find that there is text somewhere in the file being edited that needs to be replaced, but searching for it manually by looking through the entire document is time-consuming and ineffective. The search-and-replace function allows the user to find it automatically and replace it with specified text. Sometimes this term is repeated in many places and needs to be replaced. At other times, only the first occurrence should be replaced. The user may also wish to simply find the location of that text without replacing it.

Link

Use Cases

Users	All users
Preconditions	A document is loaded and being edited.

Link

Basic Course of Events	1. The user indicates that the software is to perform a search-and-replace in the document. 2. The software responds by requesting the search term and the replacement text. 3. The user inputs the search term and replacement text and indicates that all occurrences are to be replaced. 4. The software replaces all occurrences of the search term with the replacement text.

Link

Alternative Paths	1. In Step 3, the user indicates that only the first occurrence is to be replaced. In this case, the software finds the first occurrence of the search term in the document being edited and replaces it with the replacement text. The postcondition state is identical, except only the first occurrence is replaced, and the replacement text is highlighted. 2. In Step 3, the user indicates that the software is only to search and not replace, and does not specify replacement text. In this case, the software highlights the first occurrence of the search term and the use case ends. 3. The user may decide to abort the search-and-replace operation at any time during Steps 1, 2, or 3. In this case, the software returns to the precondition state.

Link

Use Cases

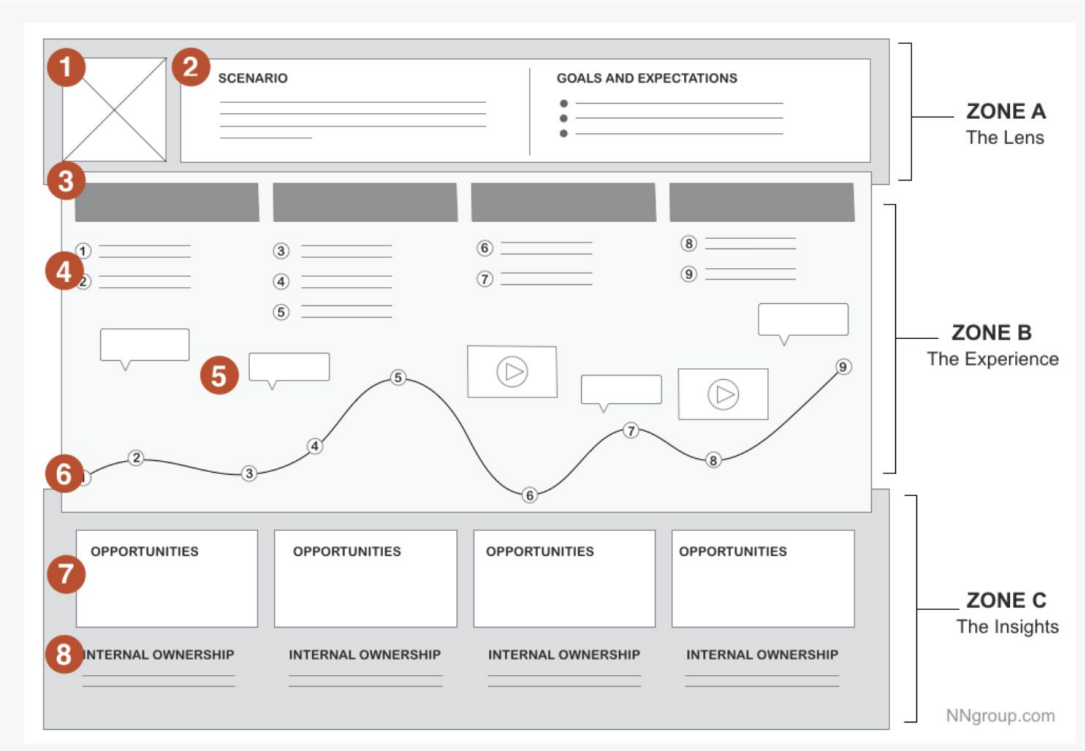
Postconditions	All occurrences of the search term have been replaced with the replacement text.

Link

User Journey

- Holistic view of the user's journey through using the product (touchpoints, channels)
- Actions, throughs, emotions as the user goes through their product interaction
- Insights, pain points, opportunities, plans moving forward

Link



You work for an online shopping company. Although many people view your website, few actually buy anything. Your task is to figure out why people are putting items in their cart, but don't go through with their purchase.

Create 3 personas that represent your target users (hint: use this website). Indicate how and why you used these personas to best represent your customer base.

Product Design

Design Thinking

Empathize
Get to know users

Define
Define problem in a user-centered way

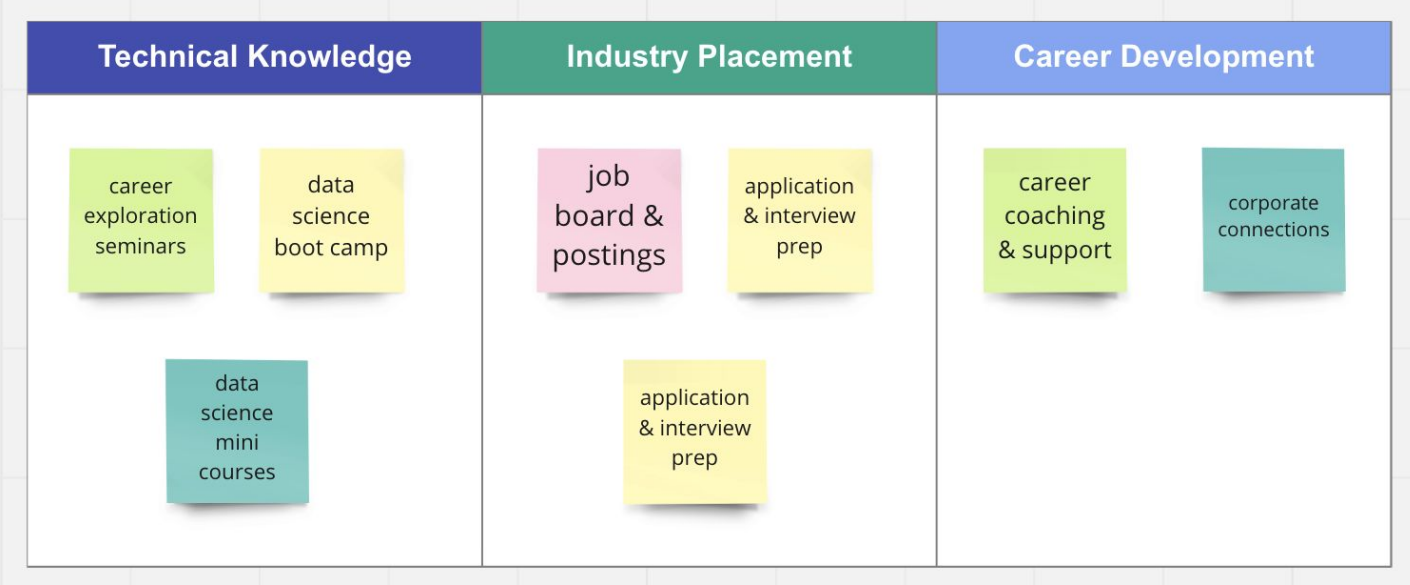
Ideate
List all potential solutions; narrow down to a few

Prototype
Create a prototype

Test
Test prototype with users; get feedback

Ideating

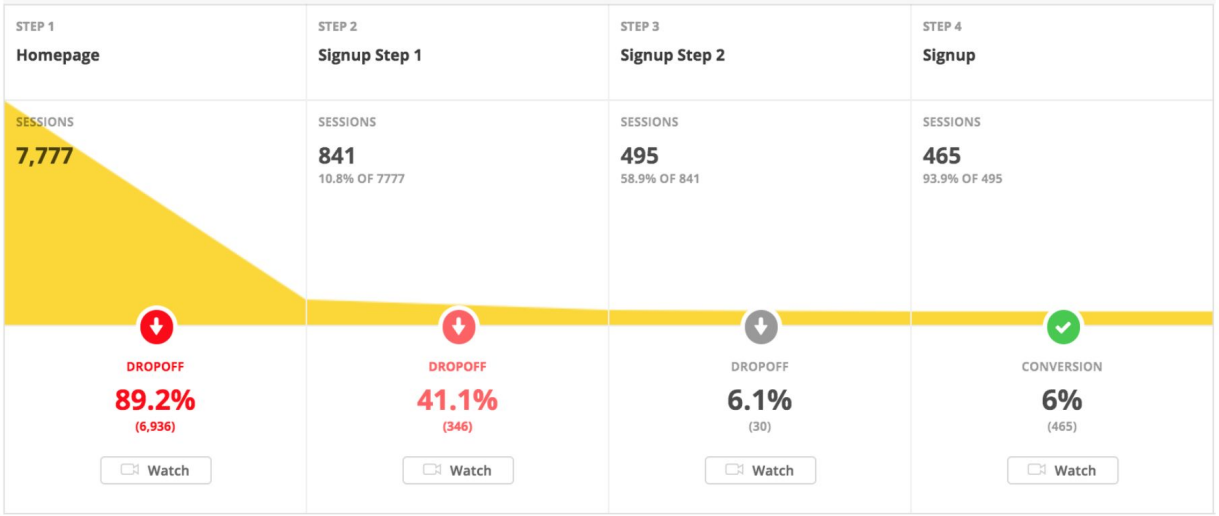
- Miro is often used for online whiteboarding among many members



Ideating

Funnel Analysis

Which website page do we want to focus on?



Link

Ideating

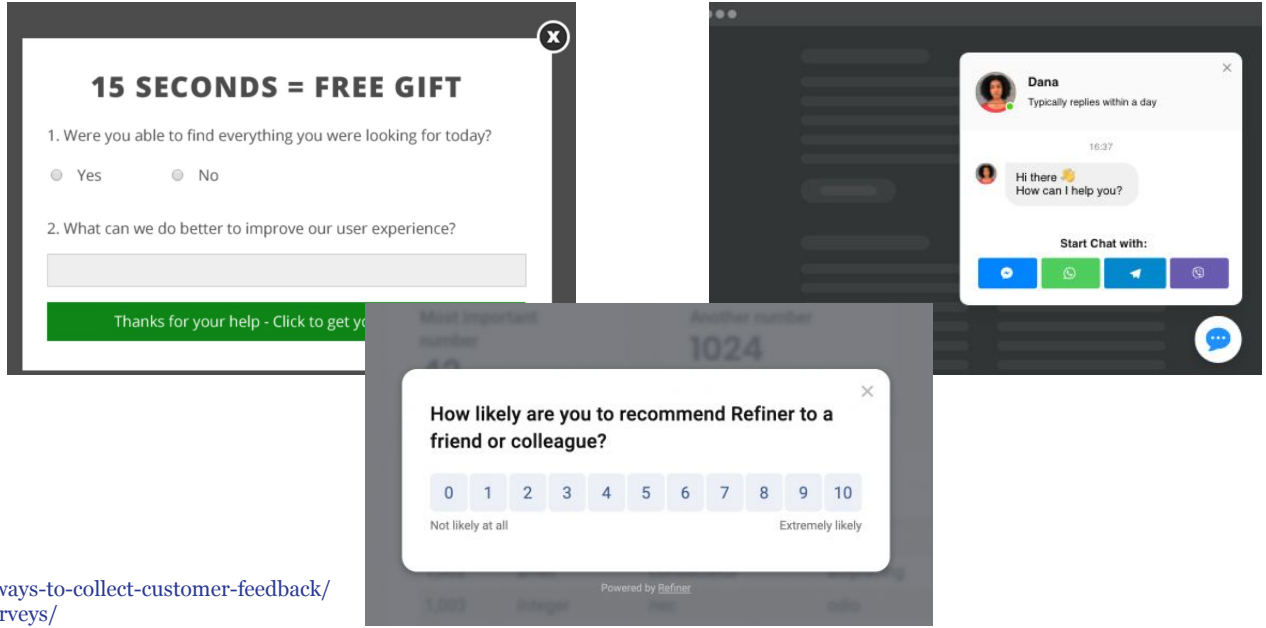
Heatmap

Which features of that page do we want to focus on?

Link

Ideating

User Feedback



https://optinmonster.com/best-ways-to-collect-customer-feedback/
https://refiner.io/blog/popup-surveys/
https://elfsight.com/all-in-one-chat-widget/

Design Thinking

Empathize
Get to know users

Define
Define problem in a user-centered way

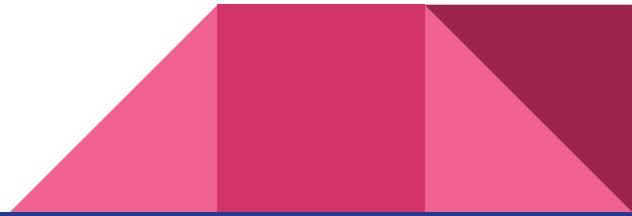
Ideate
List all potential solutions; narrow down to a few

Prototype
Create a prototype

Test
Test prototype with users; get feedback

Wireframing

- Show a product design at a structural level (usually for web / mobile apps)
- Should be tied to persona needs and user journeys
- Wireframing is done before a full scale prototype – it helps align all stakeholders around the product's scope and aims
- Can vary in **fidelity**
  - **Low fidelity** = a sketch of the final product that includes basic elements, but not much more
  - **High fidelity** = looks like the final product



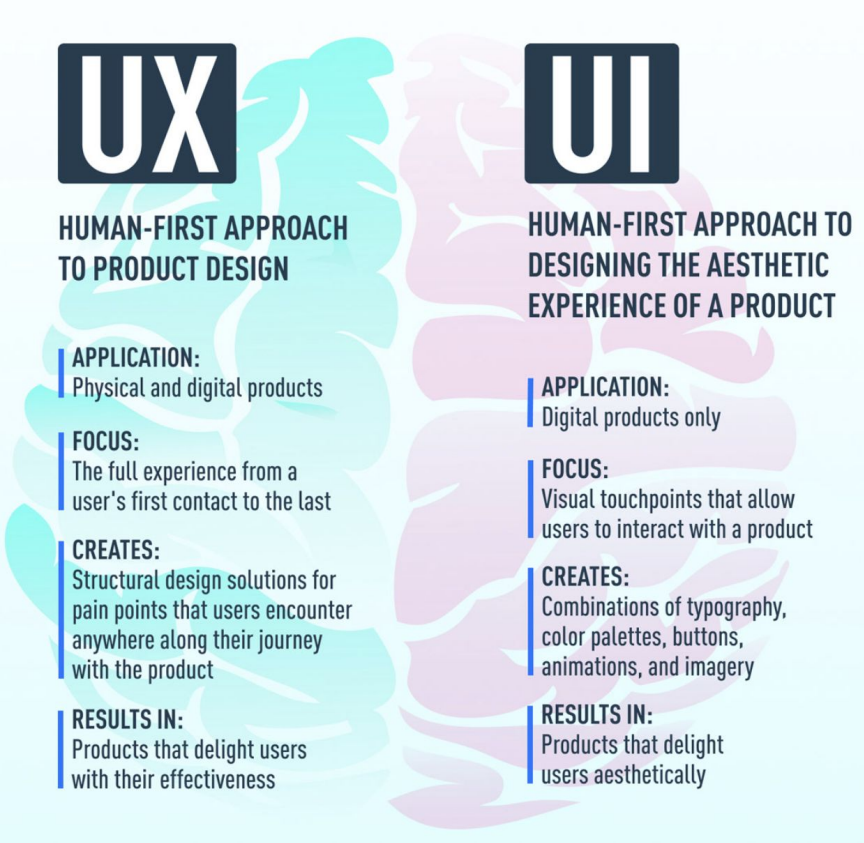
Wireframing

This brings up an important career note:

Many UX jobs are called UX/UI, for "User eXperience and User Interface"

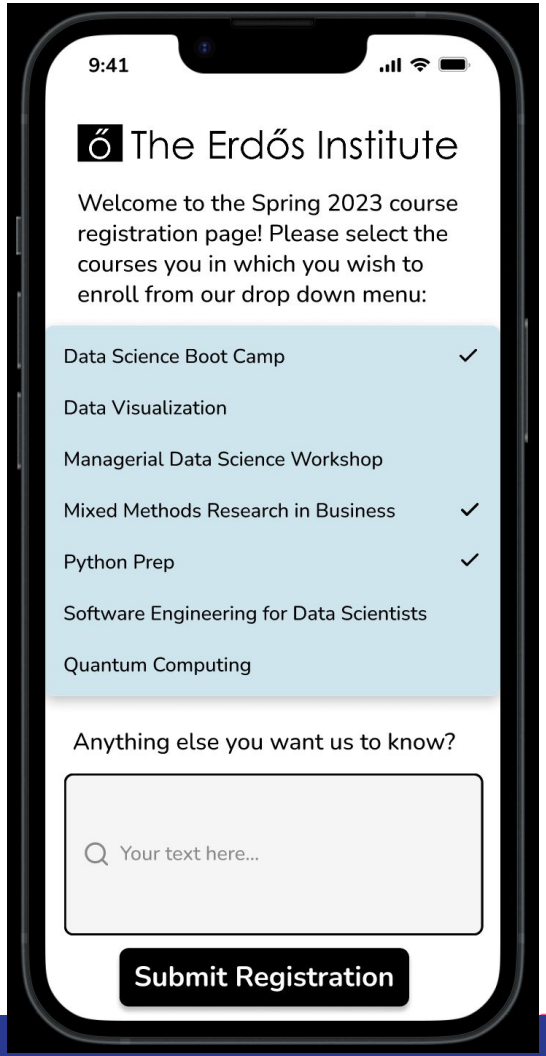
- The emphasis on UX vs UI will depend on each company.
- UI is only for digital products, whereas UX can be for physical or digital products.

Link

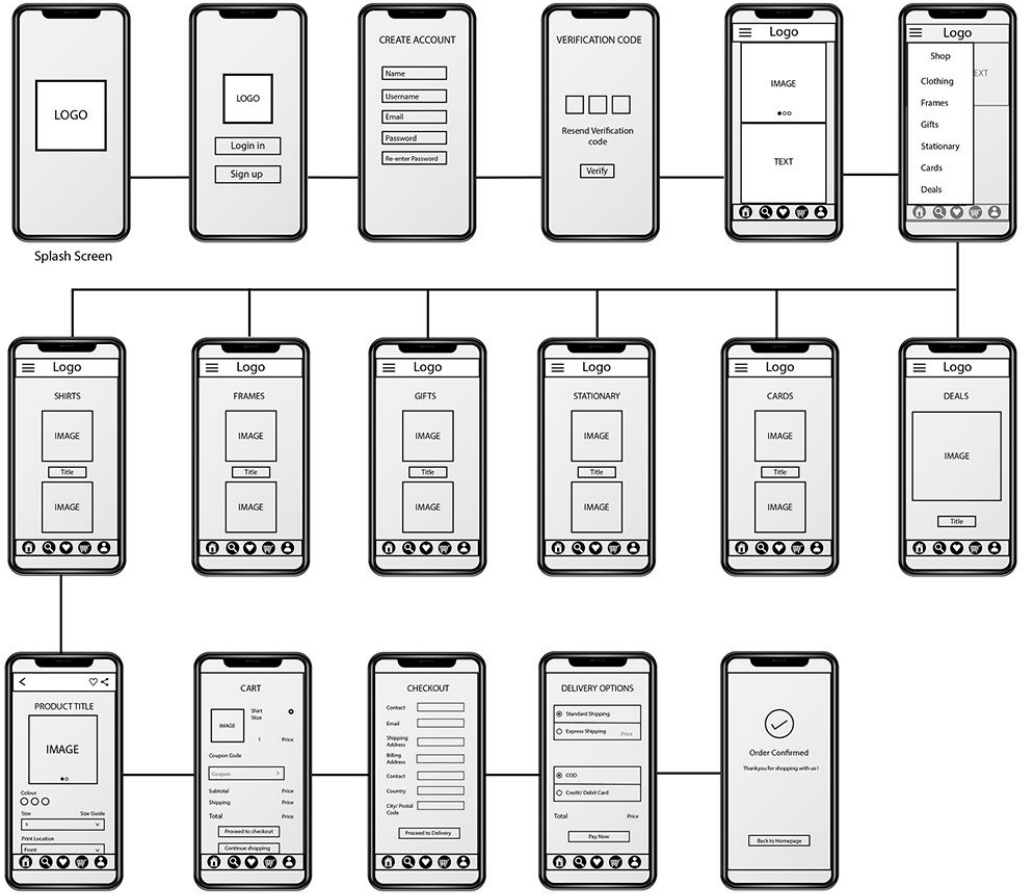


Wireframing

- Figma is often used for creating design prototypes



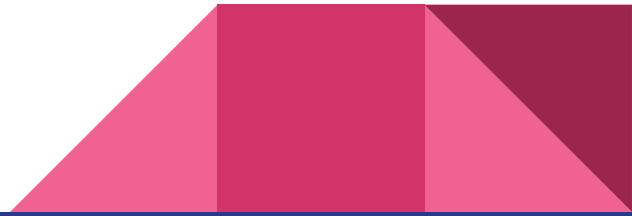
Wireframing



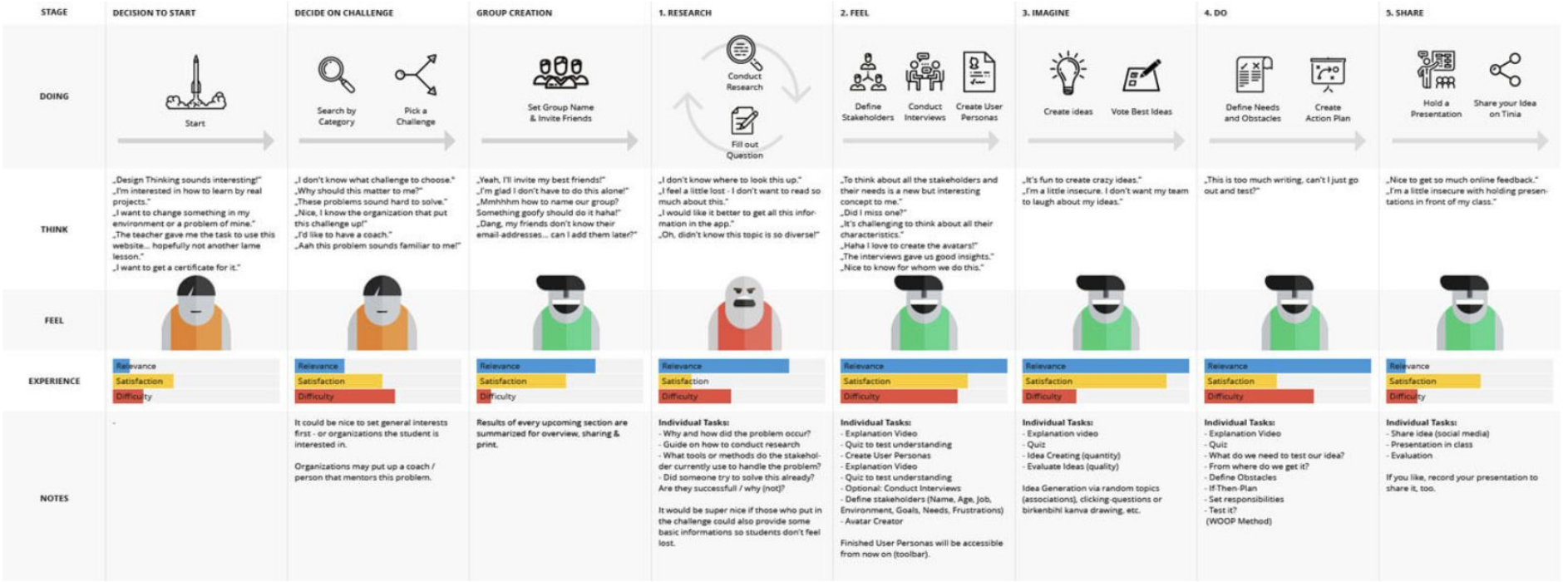
[Link]

Storyboarding

- Series of drawing that take you through the customer’s journey or interaction with the product
- Often used in advertising and marketing, but versions of storyboarding can also be used in UX/UI
- Includes scenarios, visuals, captions
- Want it to be memorable, engaging, and visually captivating



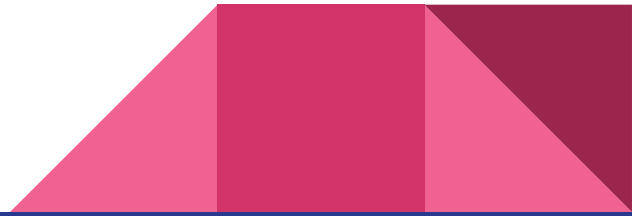
Storyboarding



[Link]

Rapid Prototyping

- Strategy that aims to create multiple prototypes very quickly
- Lets you innovate, design, and test multiple versions of a product
- Allows you to see how people react to your products and take their feedback into consideration before you have sunk too much time and money into a design that may not work



Design Thinking

Empathize

Get to know users

Define

Define problem in a user-centered way

Ideate

List all potential solutions; narrow down to a few

Prototype

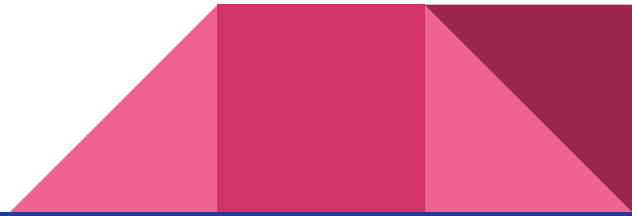
Create a prototype

Test

Test prototype with users; get feedback

Test

- Can repeat interviews or focus groups
- Conduct surveys (next workshop)
- Analyze data (next workshop)



So you want to go into UX…

- If you want UX/UI jobs, it's a good idea to build a website for a test case like this one – this is your portfolio project that will get you a job
- We'll use Moritz Oesterlau's website as an example
- Other good ones to check out:
  - Query formulation and auto-suggest (Microsoft)
  - Uber scooters (Uber)
  - Jamb (Finna Wang)

An Approach to Digitization in Education

An attempt to push forward future-proof education

Client	Student Project at CareerFoundry
Sector	Education, Design, Sustainability
My Role	Entire product design from research to conception, visualization and testing
Project Time	3 months

Intro & Competitive Analysis

TINIA is an online platform that enables students to interactively and playfully create solutions to real-world challenges through Design Thinking and based on the 17 Sustainable Development Goals.

Through this concept of challenge-based learning, a closer integration of society and school as well as a stronger awareness of the student's responsibility and ability to act is achieved.

It should be noted that this project was accompanied by a three-month user experience design training, followed by a fixed course plan and a digital implementation was planned. It helped me to deepen my knowledge in user experience design and to explore approaches to digitization of school lessons and to find out how impulses for modern learning can be set in accordance with the sustainability goals.

Competitive Analysis

So far, there were no comparable offers, so my research applied to products from the field of e-learning, preferably with a focus on challenge-based learning and the target group children & adolescents.

The creation of competitive profiles (in terms of marketing strategy, target market, core business, usability, layout, navigation structure, compatibility, content, design and performance) together with SWOT analysis helped to assess current offers in this area.

Also, general advantages and disadvantages of online courses and the question of how e-learning could be integrated into the context of conventional school forms was an important part of the research.

Opportunities and Challenges of E-Learning

Opportunities

OPPORTUNITY #1

Individual learning types

Through self-learning systems, the learning process can be individually adapted for each student. Studies have shown, for example, that students who were considered weak in the classroom, after a short time with adaptive, tailor-made curricula many were even better than the previous best in class. These students simply needed more time for the basics, which then led to better and faster understanding of the more complex follow-up topics.

OPPORTUNITY #2

Timeliness & availability

Outdated or incorrect information can be updated at any time. Textbooks would therefore be obsolete and materials could no longer be forgotten or lost at home. Insofar as there is sufficient Internet access, global availability is possible.

OPPORTUNITY #3

Self-organized learning

Through the on-demand availability, self-organization regarding time, place and topic becomes possible. The pure transfer of knowledge (know-how) takes place digitally, which gives the teacher more time to offer individual advice and orientation (Know Why). The knowledge broker role of the teacher shifts into the background in favor of the role as the student‘s companion and guide.

OPPORTUNITY #4

Interactivity and multimedia

Possibilities of interactivity and multimedia, through playful exploration of context, higher engagement, direct feedback and more empathy (for example about technologies such as Virtual Reality or the possibility to communicate easily with affected persons).

OPPORTUNITY #5

Lower costs

There is no cost to buy textbooks, which will also make it easier for financially weak families to access education. In addition, e-learning contributes to the saving of financial, human and time resources, i.a. by simplifying various processes for schools, teachers and students.

Challenges

CHALLENGE #1

Lack of acceptance

Low acceptance of the teaching staff (and some parents), since a change of teaching methodologies and, in general, often also a change in attitudes, including e.g. a higher level of trust is required.

CHALLENGE #2

Bad Infrastructure

Reasonable infrastructure, ie a stable Wifi and high-performance terminals are needed.

CHALLENGE #3

Isolated Learning

The high availability and flexibility results in less exchange with other learners and thus a weaker sense of community, which can lead to a loss of motivation in the long term.

CHALLENGE #4

Lack of media literacy

Success depends heavily on the respective IT and media literacy of teachers and learners.

Generally

Learning in the form of traditional teaching and e-learning both require self-discipline, motivation and acceptance of the methodology, whereby e-learning – insofar as it is used in isolation – relies more on intrinsic motivation.

Interviews & Surveys

With the knowledge of Design Thinking, E-Learning and the image of sustainable education according to ESD and the Sustainable Development Goals (SDG's) I conducted interviews with pupils and teachers from the grades five to thirteen.

Goals

- Which group constellation is preferred for the project work and why?
- What is the willingness to become active within the meaning of the SDGs?
- What support is desired from students and teachers?
- To what extent are digital tools already being used for learning?
- What about digitization at the respective school? What are the obstacles in school life?

Based on the responses received, I formulated questions for an online survey that was answered by 202 people (about 75% teachers, 25% students) within one day – of course this survey is not representative, especially if you still have the differences between younger and more experienced teachers and between the different age groups of students.

Findings from interviews and surveys

INTERVIEW INSIGHT #1

Students do not feel taken seriously

Students often do not feel taken seriously by teachers (and adults in general) and feel that they are unable to present their ideas to others.

INTERVIEW INSIGHT #2

Students want to have a noticeable influence

Many students think about local issues and many would seek a solution to them, as they are part of a motivated and "fit" group and their efforts have tangible impact.

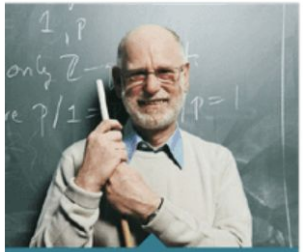
INTERVIEW INSIGHT#3

Students hardly know local role models

Few of the students surveyed knew people from their environment who are committed to society. They repeatedly wished the teacher in this role. Are not these models or are the young people e.g. not sensitized?

Building empathy

Using the quantitative and qualitative data from interviews and survey results, I defined the three target group profiles Peter (Teacher, 55), Sarah (Student, 16) and Tobias (Student, 13) to better empathize with my main user groups and prioritize goals according to their needs.



„Tinia should really enhance the lessons and be easy and intuitive to use!"

Peter

Age: 55
Job: Teacher of Math and Politics
Education: Master of Education
Family Status: Married, two children

Peter is a highschool teacher. He is very passionate about his subjects, but also he has high expectations of his students. In his free time he likes to go on vacation, listen to music and read. Peter doesn't use digital devices that much. He owns a smartphone, but usually uses it for phone calls and sms-communication only. Peter prefers to use his computer to browse the web, order books and to prepare work sheets for his class. He is familar with Word and Powerpoint and has basic knowledge of Excel.

Most times he likes to use computers for his classes, but often his students need to help him with troubleshooting. So Peter needs an app that is easy to setup and maintain. It should work on his outdated computer at home.

He would like students to learn by real problems instead of theory only. He thinks the connection of real problems with the class is very useful, but he has some doubts if technology will let him down in school.

Goals

- Engage the Class in learning
- Spice up Politics Class with Problem Solving
- Get the Status of a Modern Teacher

Tasks

- Teach students about Tinia
- Prepare a Problem Presentation
- Learn about Design Thinking
- Help students with their challenge
- Setup Account and Create School Classes

Frustrations

- Often he needs a plan B in case technology doesn't work as expected
- It takes too long to set up
- The software is complicated to use
- Cross-Device-Incompatibility
- Internet Connection Issues

How Tinia helps

Tinia takes over the time consuming task of finding suitable problem presentations for challenge based learning and also delivers the whole process & materials to conduct the lessons.

„I want to be taken seriously and really have an impact!"

Sarah

Age: 16
Job: Student, 10th grade
Hobbies: Swimming, Reading, Photography

Sarah comes from a suburban area. She likes to go out, take photos, meet with friends or to read a good book. Her main digital device is a smartphone she mainly uses for music, communication and simple games like candy crush. Currently she learns spanish with the app Duolingo. Sarah definitely wants to engage in solving social problems, but in school she experienced group work as time consuming and hard to organize.. also she is quiete insecure if she could have an impact, as she doesn't know any role models that successfully engages in such topics.

Sarah would like to connect with like-minded people to tackle social projects. At her school she feels left alone with this.

Often she has much homework to do, so the project has to somehow fit in her schedule.

Goals

- Learn something new
- Engage in social problems
- Fun Process
- Connect with like-minded people
- Help a friend so she's not alone

Tasks

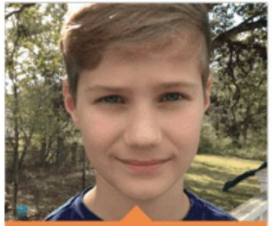
- Group Organization
- Conduct Research
- Conduct Interviews
- Create Ideas
- Create an Action Plan
- Hold Presentation

Frustrations

- „I know no people who'd like to engage in social problems - but something needs to be done!"
- „Students get graded individually, so even in group work there is much competition."
- „I would like to spend more time on it, but my day is full with homework..."

How Tinia helps

Tinia offers Sarah a structured process to develop solutions to local and global problems. She will get expert and community help on where to connect with like-minded people and how to expand her impact.



„Tinia should be fun and inspiring!"

Tobias

Age: 13
Job: Student, 8th grade
Hobbies: Football, Drums, Meeting with friends, Computergames

Tobias is a student at middle school. He likes to challenge himself, so he does a lot of sports and often meets with friends to compete against or cooperate with them in video games. His favorite game is Minecraft. His computer time at home is restricted to one hour a day, but he just got his first smartphone and tries out many apps and games.
In school teachers often talk about local and global problems, but the students just have to listen and repeat. He's a little angry about this, because he's interested in doing something, but teachers aren't inspiring and he really wishes his friends to participate so he wouldn't be alone.
„The school day is full with boring lessons, so Tinia should be fun and inspiring."

Goals

- Group up with friends
- Entertainment
- Challenge himself
- Engage in local problems

Tasks

- Group Organization
- Conduct Research
- Conduct Interviews
- Create Ideas
- Create an Action Plan
- Hold Presentation

Frustrations

- „Sometimes it's annoying that students have to help the teachers with troubleshooting digital devices."
- „Teachers aren't inspiring, they just want us to listen and repeat."
- „I don't know how to present my ideas so I get taken seriously by grown ups."

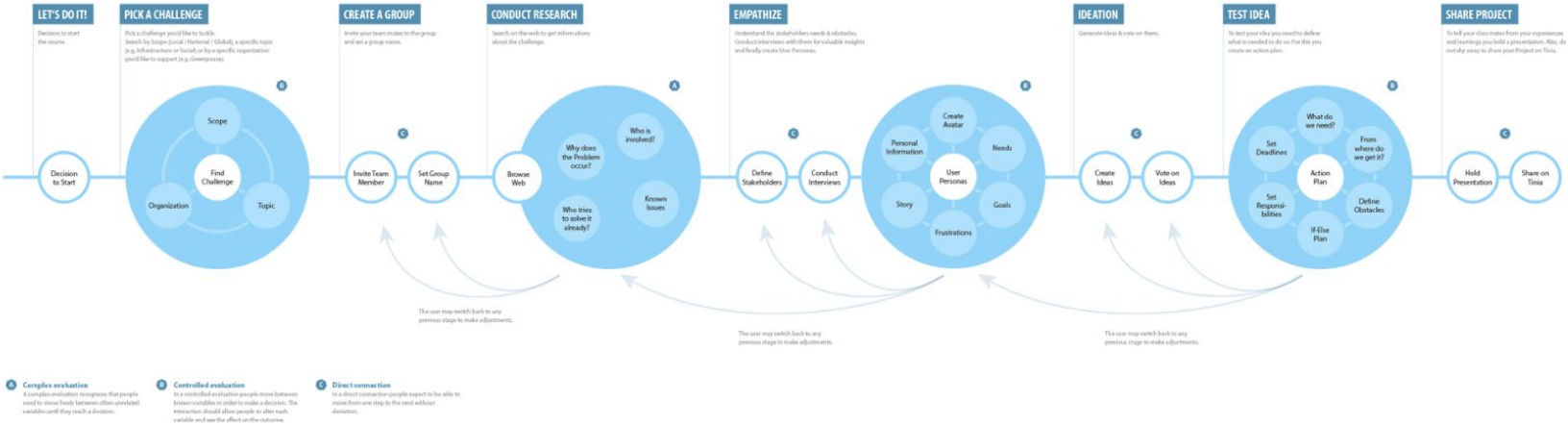
How Tinia helps

Tinia will help Tobias with presenting his ideas in a compelling way he'll be more likely to be taken seriously with by grown ups. He can group up with his friends so he's not alone.

Structure of the course curriculum

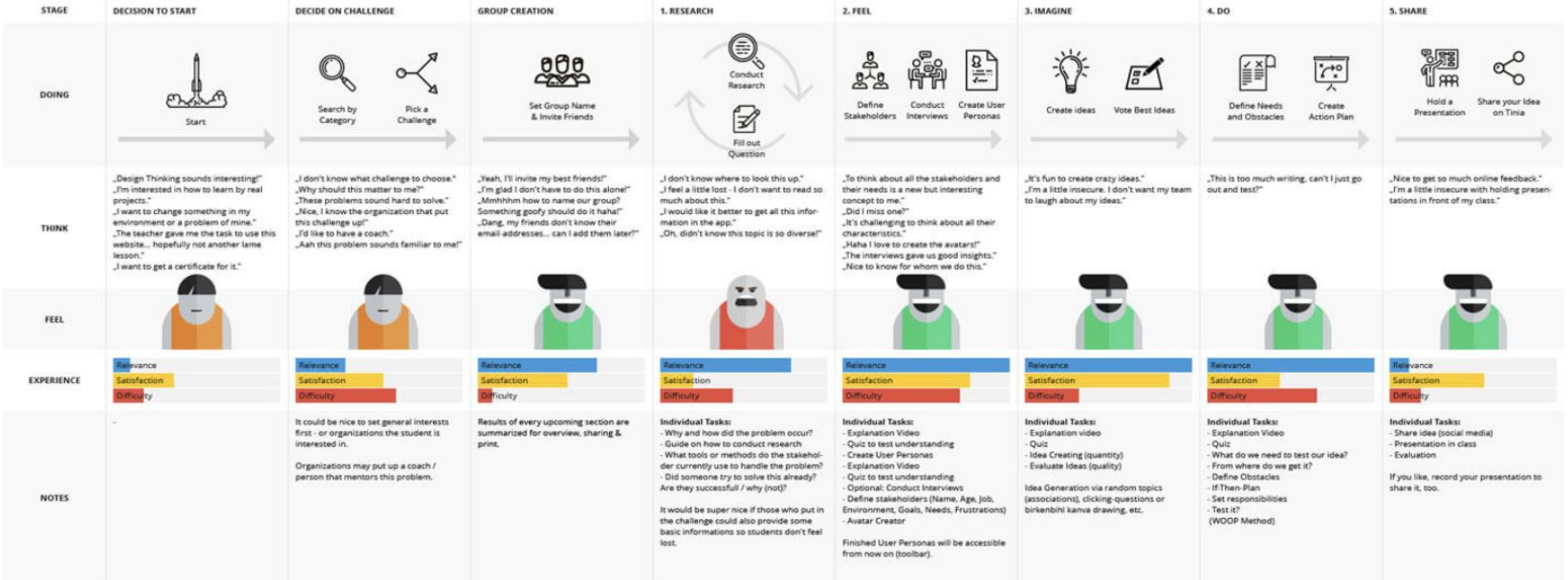
Task Model

In order to visualize and make more tangible the individual steps that a user makes during the course and its possibilities, I have created a corresponding task model.



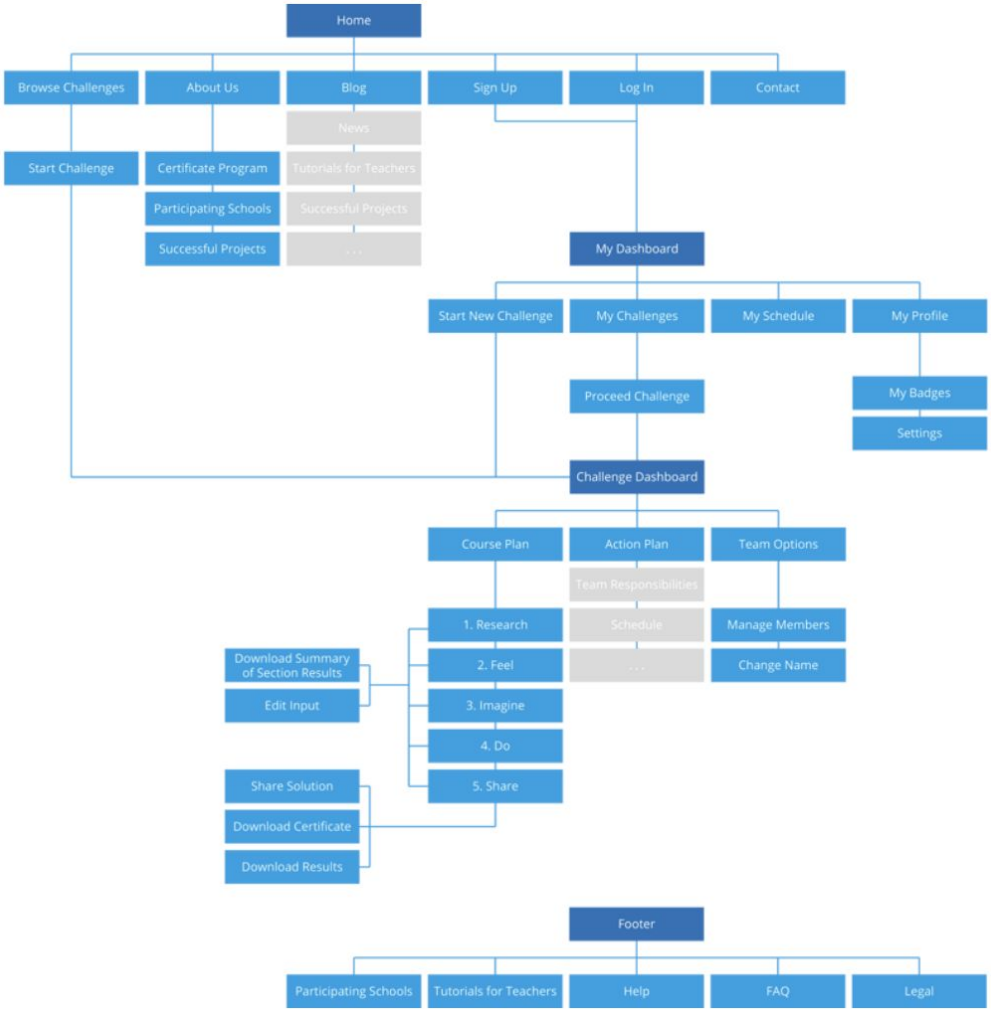
Customer Experience Map

A product-based journey map helped to better understand the course phases as well as the user and their experience in them. The originally planned syllabus was greatly adapted as there were unnecessary and unfavorable steps coming to light.



Information Architecture

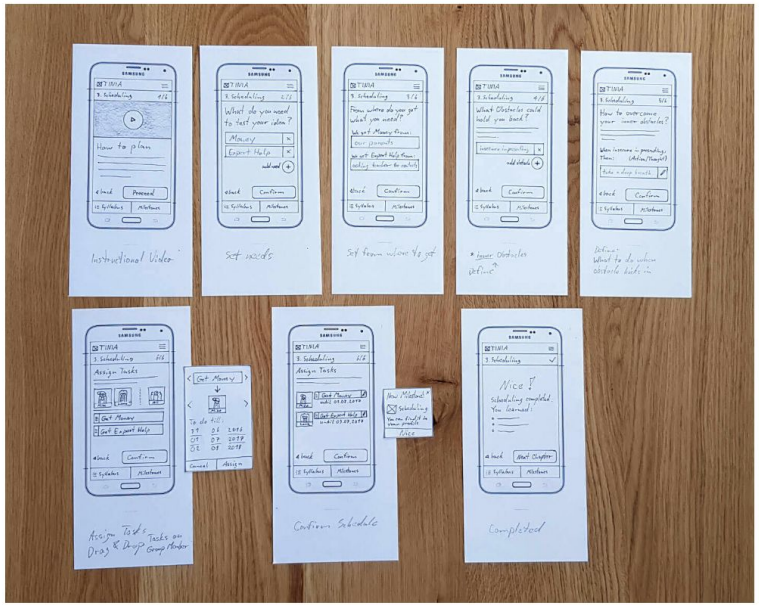
Based on the insights gained from the initial content audits, competitor analyzes and Card Sorts with potential users, I defined the sitemap for TINIA and then evaluated it via tree tests with potential users.



Wireframing, Prototyping & Usability-Testing

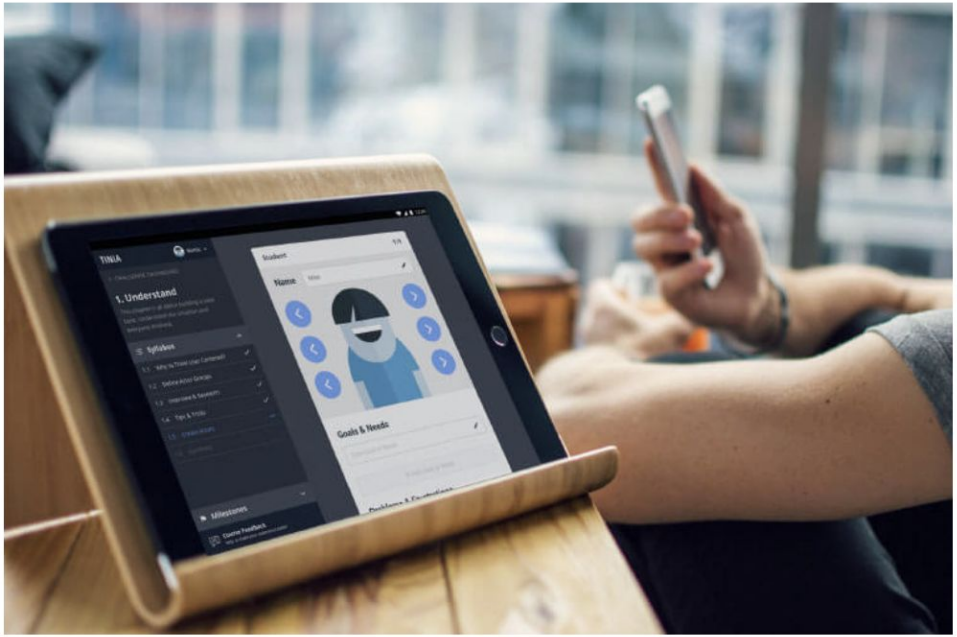
Paper-Prototypes

With low-fidelity paper prototypes, the planned syllabus and the general structure of the application could easily be tested in usability tests. Without much effort, adjustments could be made before going into the much more costly digital implementation.



Clickable prototypes

After some paper prototyping adjustments, wireframes, mid- and high-fidelity prototypes were created, which I supplemented with clickability using InVision. Again, user tests revealed small vulnerabilities in the structure of the user interface, in some formulations and interactions. In addition, the users asked smart questions, which led to further improvements.



Visual Design

The visual design was developed by iterating from mood boards and styletiles to the UI kit and finally to creating a first version of the style guide.

Color Palette

Primary Blue
#77AAFF
rgba(119, 170, 255, 1)
	Primary Blue, Shade
	#6091E6
	rgba(96, 145, 230, 1)
		Happy Background
		#FFD542
		rgba(255, 213, 67, 1)
			White Background
			#FFFFFF
			rgba(255, 255, 255, 1)

Warning
#FF4949
rgba(255, 73, 73, 1)
	Success
	#00DB9D
	rgba(0, 219, 157, 1)
		Disabled, Shade
		#ACB2BD
		rgba(172, 178, 189, 1)
			Disabled, Light
			#C2C6CC
			rgba(194, 198, 204, 1)

Add Input
#F2F5F9
rgba(242, 245, 249, 1)
	Sidebar Dark
	#172233
	rgba(23, 34, 51, 1)
		Sidebar Medium
		#293240
		rgba(41, 50, 64, 1)
			Sidebar Light
			#434B59
			rgba(67, 75, 89, 1)

Fonts

Aa Zz — Roboto-Bold

Aa Zz — Roboto-Regular

Text Styles

H1 Headline

Congratulations!

Roboto-Bold / 52 px / 68 px Leading / #293240

H2 Headline

Task Title

Roboto-Bold / 32 px / 40 px Leading / #293240

H3 Headline

Headline

Roboto-Bold / 24 px / 32 px Leading / #293240

Quote

„The future enters into us, in order to transform itself in us."

Roboto-LightItalic / 22 px / 33 px Leading / #434B59

Paragraph

We have no reason to harbor any mistrust against our world, for it is not

Roboto-Regular / 18 px / 28 px Leading / #5C5C5C

Button

Proceed

Roboto-Bold / 18 px / 24 px Leading / #FFFFFF

Buttons

Primary | Disabled

Warning | Danger | Success

Proceed | Confirm | Disabled

Progress Bar

3/9

Checkboxes & Radio Buttons

Input Fields

Type something

Knitting sweaters for fire hydrants

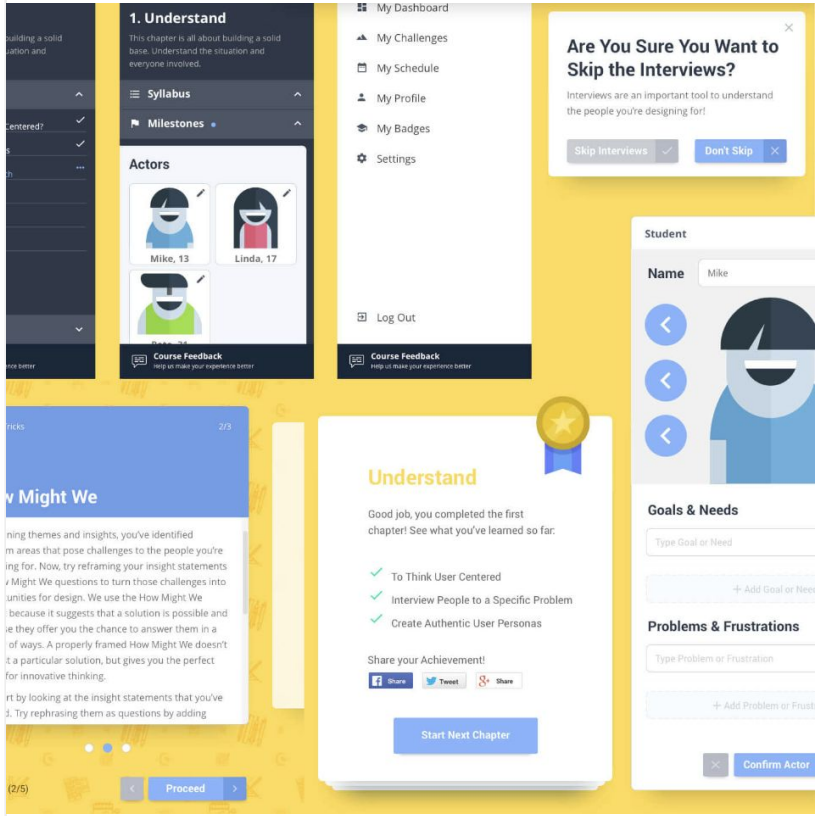
Delete Field

+ Add Actor

Idea

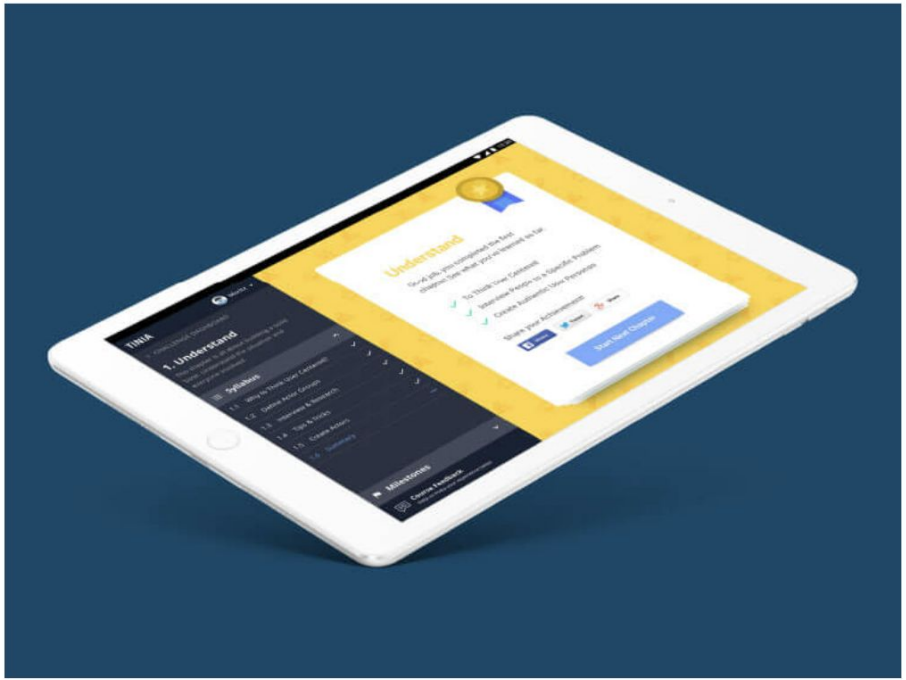
Idea chosen to test

Glyphs



A/B & Click Tests

To quantitatively review the usability assumptions, I did A/B and click tests, which confirmed my assumptions except for a few details. First and foremost, I tested the navigation structure on tablet and mobile, the wording of some actions as well as preferences regarding the visual design.



Conclusion

Digitization could revolutionize the entire education sector. Not for the sake of digitization, but because, as also highlighted in the research, thereby an important and profound social change is possible: The change from the teacher to the learning companion; as Gunther Dueck would say, "from the right to the true man"; from the rigid transfer of knowledge to the human companion through a time in need of orientation. In general, I see here the great opportunity of digitization, namely that it gives people the opportunity to become "more human" – a more empathetic, collaborative and social learning and working culture.

I completed the course in three instead of the normally planned nine months and chose my own project. Due to the complexity of the project that I chose and the demanding course plan, I was able to implement hardly any major adjustments to the concept in the short time. Also, the training provided a digital solution, where I can imagine as the first prototype also analogous materials to increase the acceptance and feasibility in schools.

Rather, it requires a change in attitudes and investment in a reliable technical infrastructure before the full potential of digital platforms such as TINIA can be harnessed. Of course, this is an interplay and requires digital solutions that are worth upgrading or questioning attitudes.

With the ambition to create a solution that can be adopted by schools, integrates sustainable development goals into school life and brings society and schools closer together, I was doomed to fail – the goal was far too vague and big. Also, I approached the project with too many strong ideas, which in retrospect was not conducive to reasonably responding to the research findings. My result is therefore rather an approximation and, above all, at the conceptual level requires further work, e.g. to facilitate a smarter group work.

It is also to be learned whether TINIA would prescribe a too strict course of Design Thinking, because Design Thinking is more of a mindset rather than a very concrete process (in terms of methods used). For this, it would need more experience from the field.

If there was more time available...

- Development of further user personas and Journey Maps / Task Models – in addition to the product-based Journey Map an experience-based Journey Map
- More research, as it's a complex and extensive topic with many factors (for example, technical and social challenges) and various stakeholders
- Further iterations / test phases, actually test the course plan in a real classroom

Learnings

#1 Big challenges require small steps
Take small steps, because big changes can not be brought overnight, especially not just by an application alone. Accordingly, develop more strategically meaningful and realistically applicable tools that steer in the intended direction.

#2 Be open to research and let ideas go
I thought too digitally and approached the product with too concrete ideas about the result, thus failing to correctly take into account some needs and challenges of the target group and thus unfavorably defined the minimum viable product.

#3 Journey Maps are my new best friend
Especially as it gets more complex, Journey mapping is very helpful, on the one hand to put a comprehensive process on paper and to uncover problematic and promising points, on the other hand to provide a basis for good cooperation for all stakeholders.

#4 Distribute polls via Facebook pages
More participation than expected, surprisingly many insights won and many answers to open questions received. Facebook pages with the appropriate fellowship and activity can quickly reach a relevant target group.

#4 Distribute polls via Facebook pages
More participation than expected, surprisingly many insights won and many answers to open questions received. Facebook pages with the appropriate fellowship and activity can quickly reach a relevant target group.

#5 Interview questions chosen unfavorably
Looking back, I would rebuild the interviews differently as I used too many questions where interviewees should imagine what the optimal solution might be (for example, "describe your dream school"). Especially through the book "The Mom Test" I have been able to uncover many of my mistakes. It would have needed further interviews with teachers and school management (as well as parents) to create a more complete picture.

#6 More substantive visual design
In the meantime, inasmuch as no visual language has yet been defined, I would define brand attributes in advance, which can be used to orient oneself with regard to the visual appearance as well as (linguistic) formulations – see my project for youth culture work.

You work for an online shopping company. Although many people view your website, few actually buy anything. Your task is to figure out why people are putting items in their cart, but don't go through with their purchase.

Communicate your findings about your customers to the corporate board using storyboarding. If there's time, follow the design thinking paradigm to offer strategies for ideating potential solutions to customer needs.

Thank You!

Contact Lindsay on Slack