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Connecting Customers & Bicycles
Final Specialization

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Project Plan & Introduction

Specialization Outcome

As the 2020 Pandemic struck, the bicycling industry saw an explosion of growth the following Spring and Summer. Biking activity increased a whopping 253%, increasing the size of an already large market to grow by $10.5 Bn. Many people, especially young adults entering college, are looking for a new bike better than one they might have had as a child. Many are not sure what a better bike for them means, and they go to a Local Bike Shop to gain this knowledge and buy a bike better for themselves. However, many feel turned off by their lack of knowledge of the industry, lots of unfamiliar terms and jargon, shocking prices, and even rude employees. To face this issue, I will be creating a digital interactive experience aimed towards on-campus college students who are aiming to purchase a new bike from a Local bike shop. This experience should be engaging and gathers important preferences and information from the user to give them industry knowledge about bicycle types and components that are pertinent to them. It is important to educate them in a way that does not overwhelm, frustrate, or belittle the user and instead empowers them to make an informed buying decision in the setting of a local bike shop. Accomplishing this will include looking at the Bicycle Industry and using aspects of marketing, psychology, and information architecture to see what issues the users are facing and how to approach helping them.

Vocabulary

- LBS: Abbreviation for Local Bike Shop
- MTB: Abbreviation of mountain bike, a type of off-road bicycle
- Bicycle Genre: The category or subcategory that the bicycle industry has assigned to a bicycle, often defined by their attributes or purpose.

Methods

Secondary Research

- Article Review
- Comparative Analysis

Primary Research

- Interviews

- Observation
- Reflection

Ideation

- Persona Creation
- Journey Mapping
- Sketching
- Task Flow

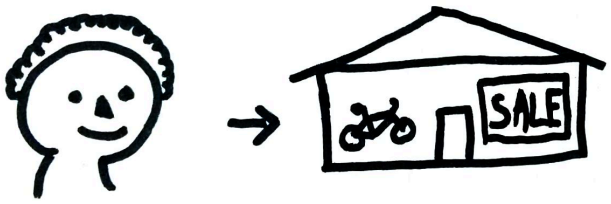
Evaluation

- Affinity Diagraming
- Heuristic Evaluation
  - Holladay, Matt. "The Eight Principles Of Information Architecture". Medium, 2018, https://medium.com/@hollabit/the-eight-principles-of-information-architecture-6feff11f907a.
- Competitive Analysis
- Storyboarding

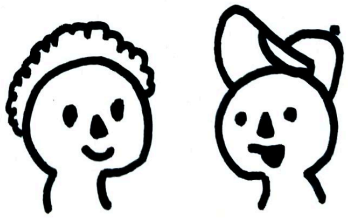
Testing

- Paper Prototype
- Clickable Prototype
- Bodystorming

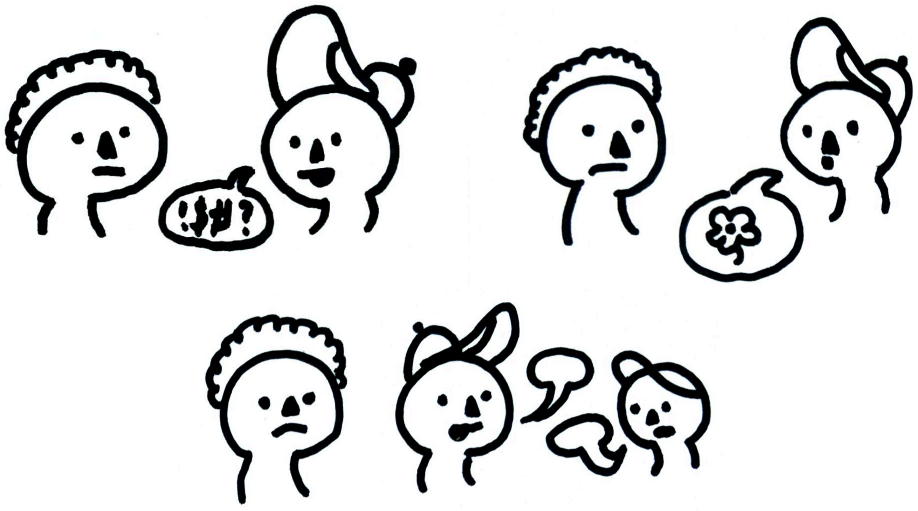
A Short User Story



Meredith is new Purdue and wants a bike to get around campus and explore the area. To get a new bike and support the local economy, she goes to the Local Bike Shop to buy one.



She goes and begins talking to a clerk and has a fun chat. He ask what type of bike she is in the shop for, and she replies that she doesn't really know.

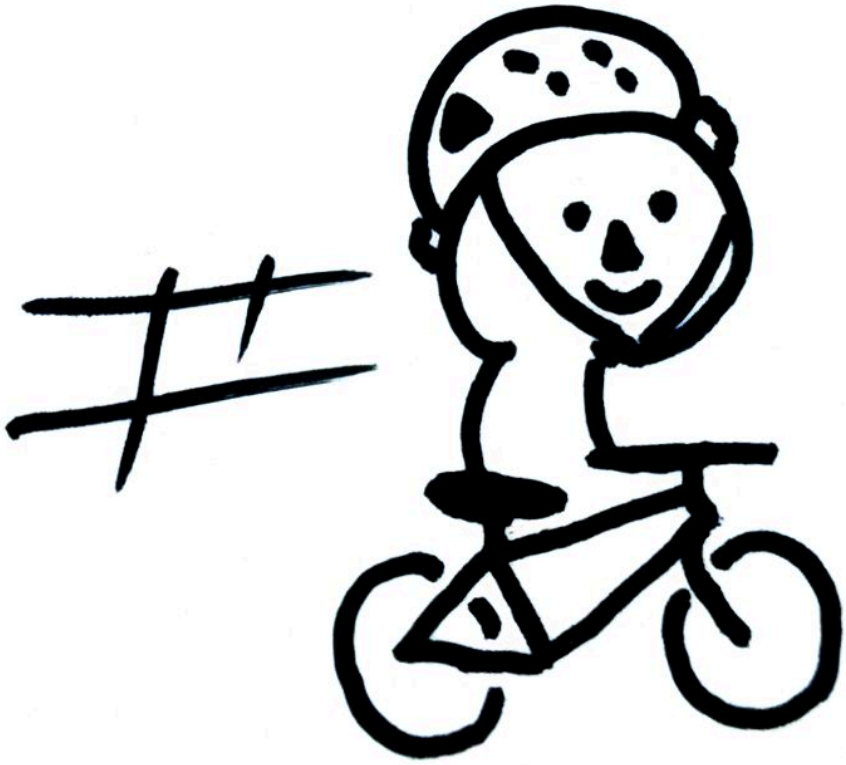


The clerk then tries to talk about they bikes they have, but begins to use **confusing technical lingo**, makes **assumptions about Meredith** based on her gender and lack of experience, and eventually **ignores her** to talk to a regular.

Disappointed but not defeated, she takes a look at a bicycle the clerk mentioned. She is **shocked by the high price** and sees no reason for it to be so expensive, and assumes the shop just wants to squeeze every penny out of her.

Meredith leaves disappointed, frustrated, and without a bike.

Detailed above is exactly the type of story I am attempting to remedy with my mobile experience. My aim is to **empower** the user with education and encouragement so they can go to a Local Bike Shop, understand what the clerk is saying, know what questions to ask, and leave with a bike perfect for them.

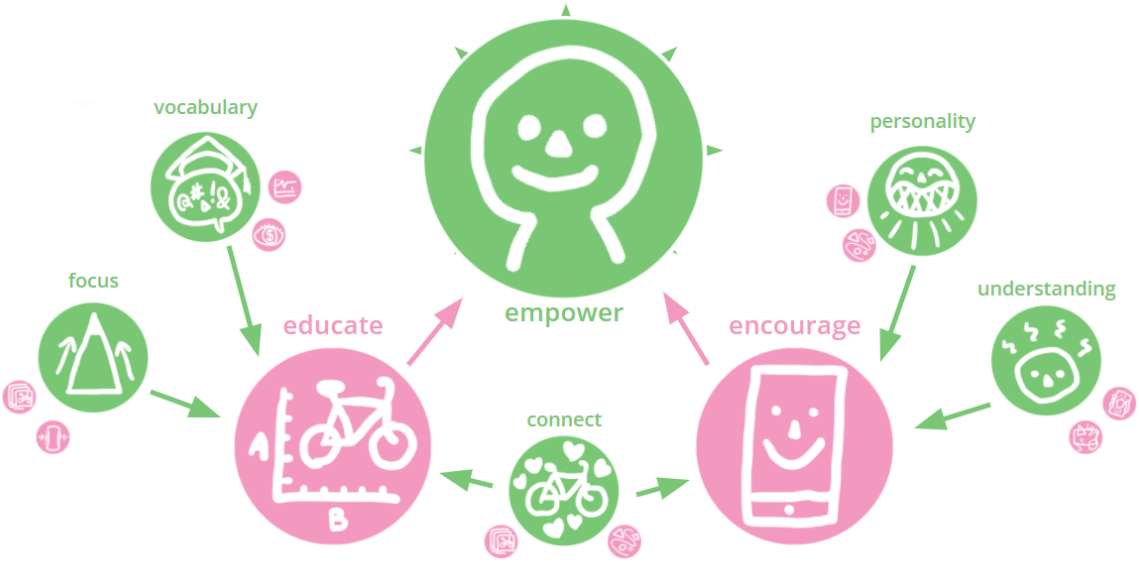


Design Scope & Overview

Design Goal: Empower Customers

The central goal of my design to is to empower casual consumers who are looking to purchase a new bike from an LBS to be able to purchase a bike that is right for them and avoid being belittled or mislead by the LBS employees. The primary method of doing this will be educating them on a focused set of information they should know when attempting to purchase a certain type of bicycle, including terms and components of said bicycle.

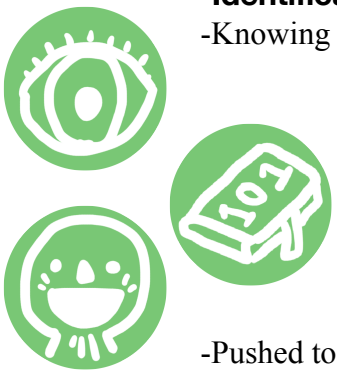
Guiding Principles



Through my research, evaluation, and testing, many insights have been discover which has led to a set of principles. There are a numerous amount of insights that are connected in a web of motivation, knowledge, vocabulary, sense of worth, and even trust. More detail into this web of insights and principles addressing it is discussed later in this documentation, but as an introduction the main principles that have guided my design are:

- **Create an emotional connection to what the User is learning about**
- **Be cognizant of the User's knowledge level and do not overwhelm or tire them out**
- **Focus on what the user needs to learn about and what they care about**
- **Listen to User and treat them with respect and encouragement**
- **Utilize the LBS experience this is supplementing instead of trying to replace**

These principles are in place throughout this experience to leave the user with **3 main takeaways** that should implant in them the **desired empowerment:**

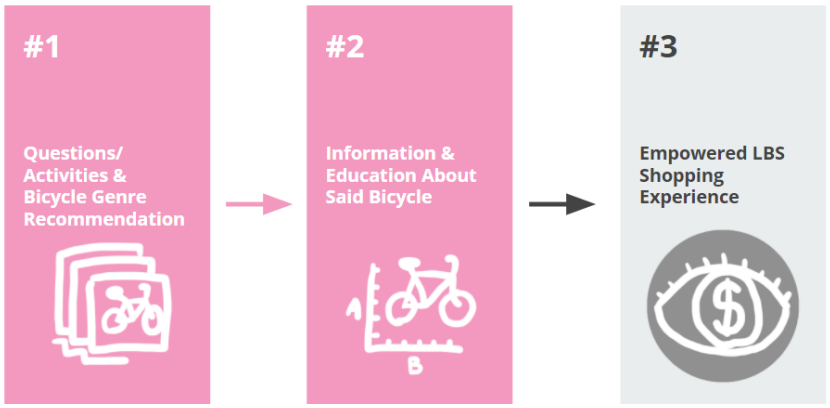


- **Identification of the recommended bicycle type**
  - -Knowing bicycle by both appearance and label.
  - -Answer to questions "what kind of bike are you looking for?" often asked.
- **Basic Information about recommended bicycle type**
  - -Basic terminology to use in conversation.
  - -Giving them a small but solid knowledge base.
- **Encouragement to communicate at the LBS**
  - -Pushed to ask questions.
  - -Given positive outlook on their role as a novice.

Design Overview

Medium: Mobile Application
Minimum Use time: 5 minutes
Maximum Use Time: 20+ Minutes
Context: Downloaded (1-4 days) before trip to local bike shop

To empower these consumers, I will be creating a two step mobile experience that empowers to user to go their local bike shop and communicate confidently with the employees and walk out with a bike perfect for them. It will be supplementing the LBS experience, not replacing it.



1: Question Section

This section is all about gaining information from the user, and using that information to set up the **education section.** For this semester, it has not been the primary focus but it is serving important purposes:

•**Narrowing** down the information the user is presented with

•Giving an **emotional connection** to the bike the user is learning about

•Learning what the **user prioritizes**

This section will accomplish this by asking the user a quick series of questions and/or activities. This will include gaining lateral info about the user as well and more direct questions. The user answers will be spit into an algorithm which will compute two things. The first being a type of bicycle to recommend to the user to learn all about, and the second being what attributes or parts the user cares about most and prioritizing those in the next section. This portion will be short, sweet, and simple and use more emotions and feelings than technical terms.

2: Education Section

This section has been the primary focus, and will be ore in depth and a little longer than the previous question section. It's main purposes are to:

•**Teach** the user about a specific recommended bicycle

•Order information presented to the user ranked by the **user's priority**

•**Introduce technical terms** about the bicycle that are useful to know when visiting an LBS

- Create a conversation like style for a casual and **user-led learning experience**

- **Provide 3 main takeaways**: Identification, Basic Information, and Communication Encouragement

The user will be introduced to their recommend bike, and see information about its top 3 attributes that make it right for them. Information will be presented in order of what the user cares most about, and as the user gets deeper into the parts and attributes of the bike more detail and technical info will be providing, letting the user get as much info as they want. However, this will still be a 5-10 minute experience that will not really be that in depth, but deep enough for a casual consumer excited by a new bicycle to become engrossed in. Any missing gaps in info can be filled by a conversation at the following LBS experience.

3: Personality

A small and recent addition will be a personality called “dot” that will act as a guide to the app. Their main purposes will be:

•Inject **fun and personality** to prevent a too technical or cold feeling

•Put in-depth terms into the context of **full sentences**

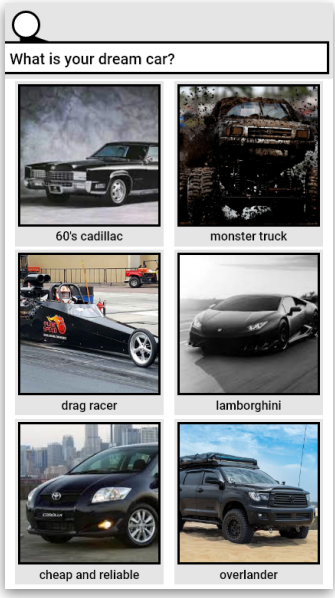
•**Encourage** the user to **ask questions** about what they’ve learned when visiting an LBS

- Using **positive language** towards the user and their recommended type of bicycle.

Dot will be present in both the question and education section, and will avoid pitfalls of similar digital personalities by only sharing their wisdom when the user asks them to. They will also be characterized as a “little dude” being very positive and encouraging towards the user, as well as using lingo often found in an LBS but in an understandable way.

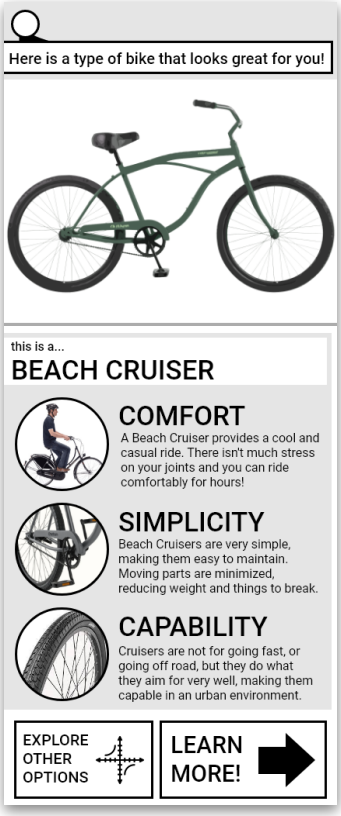
Design Overview: Mockups

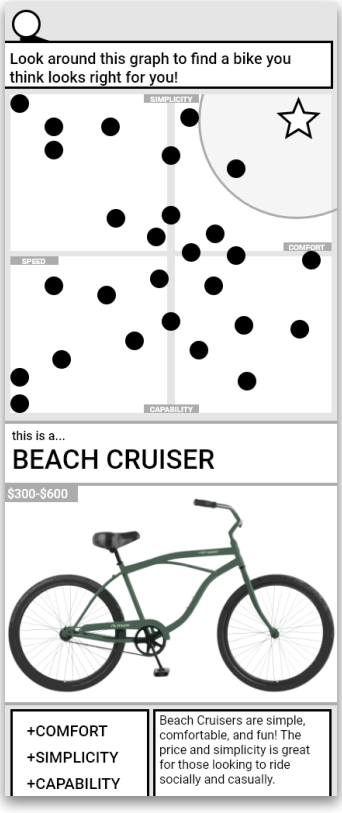
Question Section



Q1: This is an example of a question, being asked by the personality "dot" This question would take lateral information about the user's taste in cars and apply it to their possible taste in bicycles

Education Section

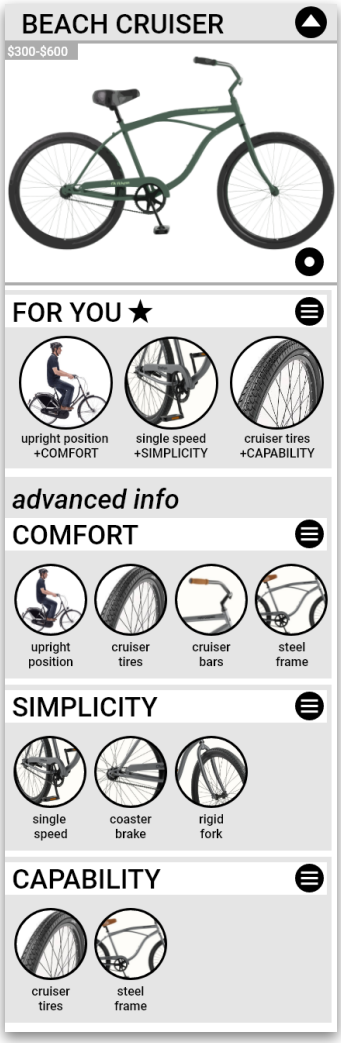




E1: This is the introduction of the bicycle recommended based on the data from the question section. This the where the user is first given the tools to ***IDENTIFY*** this type of bicycle. This comes from the large image of the bike, and the label underneath. From here, the user can *Learn More* to go to **E2A**, or *Explore Other Options* to go to **E2B.**

E2B: This is where the user goes if they are not happy with the recommend bicycle. They will be able to select bike other than one recommended via the graph, either one similar in the circle around around their starred bicycle, or one that is very different. This allows a more advanced user choice, and lets an exploratory one explore more bicycles.

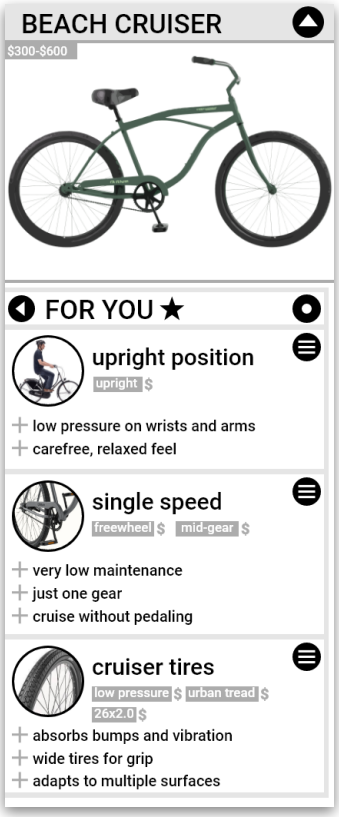
E2A: This screen welcomes the user to learning more about the bicycle. It acts as a disclaimer, and summarized tells the user "*this is just a quick summary of the bike, and LBS employees love talking about bikes, so please ask them questions*" This screen is meant to ***ENCOURAGE COMMUNICATION*** from the user.



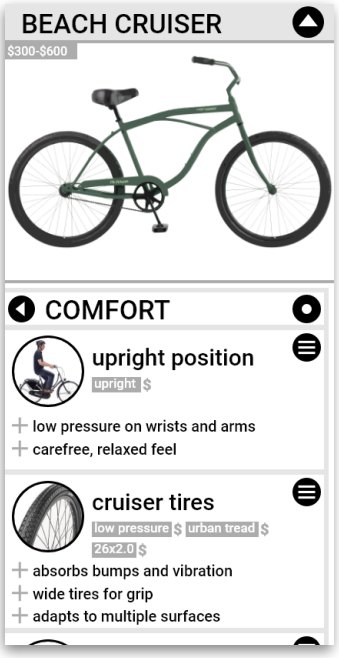
E3A: Overview of recommended type of bicycle. This acts as the "home screen" for the exploration of the bicycle. Information about the bicycle is divided by sections, ranked by priority to use. At the top is the FOR YOU section, the most important section for the user to know about. It contains the 3 defining parts of the bicycle, and the 3 corresponding strengths of the bicycle. Parts are introduced with both imagery and label. This quickly gives the user the ***BASIC INFORMATION*** about the bicycle.

Below are the sections corresponding to the 3 strengths of the bicycle. Like above they are comprised of parts of the bicycle, this time a maximum of 4. More information about all 4 sections can be seen by tapping any of the parts of the section headers.

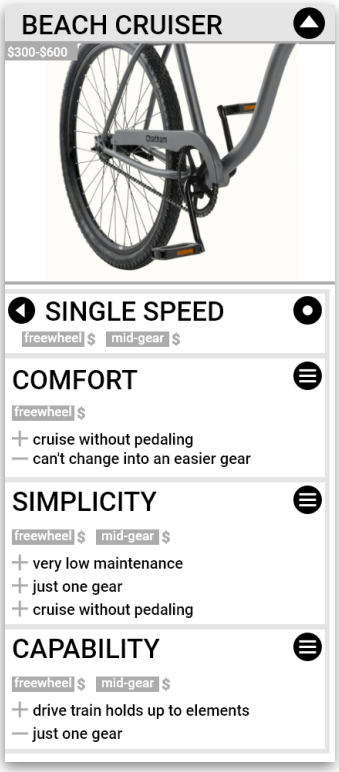
At this point in the experience, around 5 minutes in or less, the user has all the information they need to go into their LBS and get the bike they need. They can identify the bicycle, hold a conversation about it, and know to ask questions about it. However, many users wanted to dive deeper into the recommended bicycle, so more information that slowly gets more in depth as you scroll down and view detail.



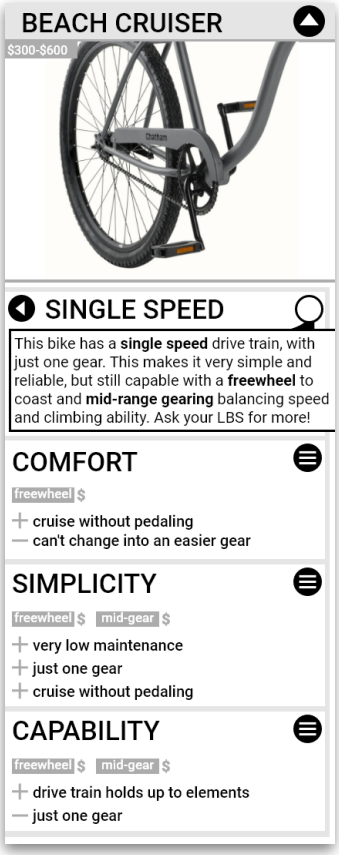
E4A: This is the detail screen for the FOR YOU section. It is divided by parts, and shows the effect those parts have on the bikes strengths in the form of bullet points. Tags are introduced to label the parts with certain important technical terms to introduce some of the words that might be used in their LBS. Parts can be tapped to go to the email screen to learn more about them.



E4B: This screen details the COMFORT strength of the bicycle. It shows information about the parts that add the the bicycles comfort, also ranked vertically by importance to user based off the question section. Works same as the FOR YOU detail screen, where you can tap on the parts to see detailed information about them.



E5A: This screen details the information of a single part, in this case the single speed drive train of a beach cruiser. It includes a new upper image of the drive train to help the user identify it. The details are broke up by the strengths of the bicycle, ranked by the users priorities. Information is given about how this part affects each strength, and this screen adds the possible negative affects this part could have on a strength, absent from the less in depth earlier screens. The user can select these strength detail areas to learn more about all the parts that affect that strength. For example, tapping COMFORT here would bring the user back to **E4B**.

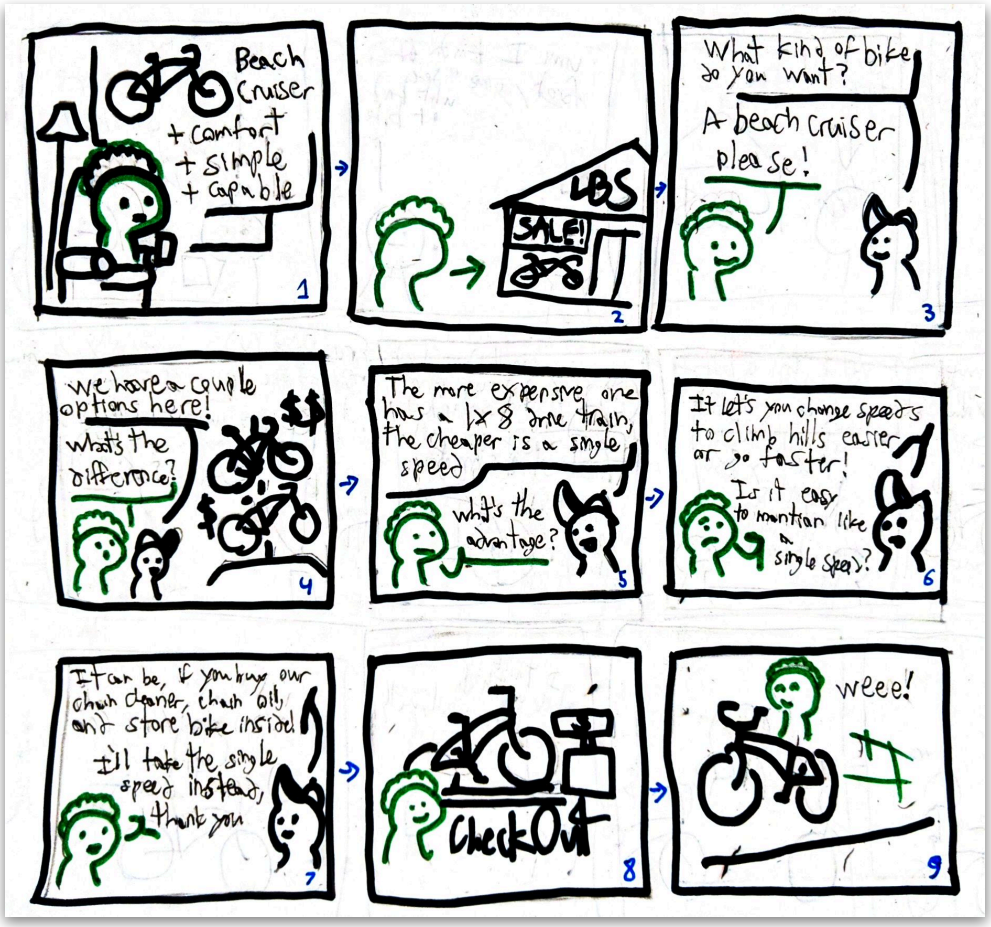


E5P: Here, the personality "dot" is activated to tell the user more about the single speed drive train. Dot used the tags stored at the top as a kind of word bank, using them in full seances to explain more about this part of the bicycle. Dot finished their statement to the set by encouraging them to ask more about this type of drive train when they arrive at their local bike shop.

From here, the user is free to go back and forth from detail screen to detail screen until they feel confident in their knowledge about the bicycle. Testing estimated this would continue until around 15-20 minutes or when the user has exhausted the information available.

Experience Storyboard

An Empowered Shopping Experience



1: User downloads and uses application before going to bike shop.

2: User heads to local bike shop to purchase a new bike.

3: User quickly and easily identifies type of bicycle they want to purchase to LBS clerk.

4 & 5: User does not know some information, but feels confident to ask the LBS clerk to learn more.

6 & 7: User uses the basic knowledge they learned to help ask question and decide between two bikes.

8 & 9: User purchases desired bicycle and takes it on an enjoyable ride home!

Research Goals

Prior Research Analysis

Prior to this semester, I had done some research activities about how users talk about, visually identify, and categorize bicycles. This information proved useful in understanding **my targets user's understanding of bicycles.** However, this research was not connected to the LBS experience, which is now where this project is aiming. Therefore I set out to use this analysis to not only get more of the user understanding, but find what research gaps needed to be filled.

Research Gaps

Through this analysis I was able to identify a number of research gaps, some more pertinent than others. The two topics I needed. To know most about moving forward were:

THE LBS EXPERIENCE
And what turns many customers away

MY USER'S MOTIVATIONS
And what separates them from users I shouldn't

Objectives Moving Forward

To close these gaps I set myself a set of questions to answer moving forward, and thought about how to answer them.

- Who Should I target?
  - What separates them from those I should not?
  - What are their motivations for buying a bike?
  - What pains them about the LBS experience?
- What is an LBS experience like?
  - What separates it from getting a big box bike?
  - What are the user's fears going in?
  - How does my target group act and facilitate themselves during an LBS experience?
  - What would make them feel more empowered and confident going into this experience?

In summary, what I need to figure out next was a **narrower target user** and getting in-depth with a **casual consumer's LBS shopping experience.** To answer these questions, fill these gaps, and gain more insights, I set out to do 3 things to finish this initial research.

Sketch out a set of competing personas to sift out my target user

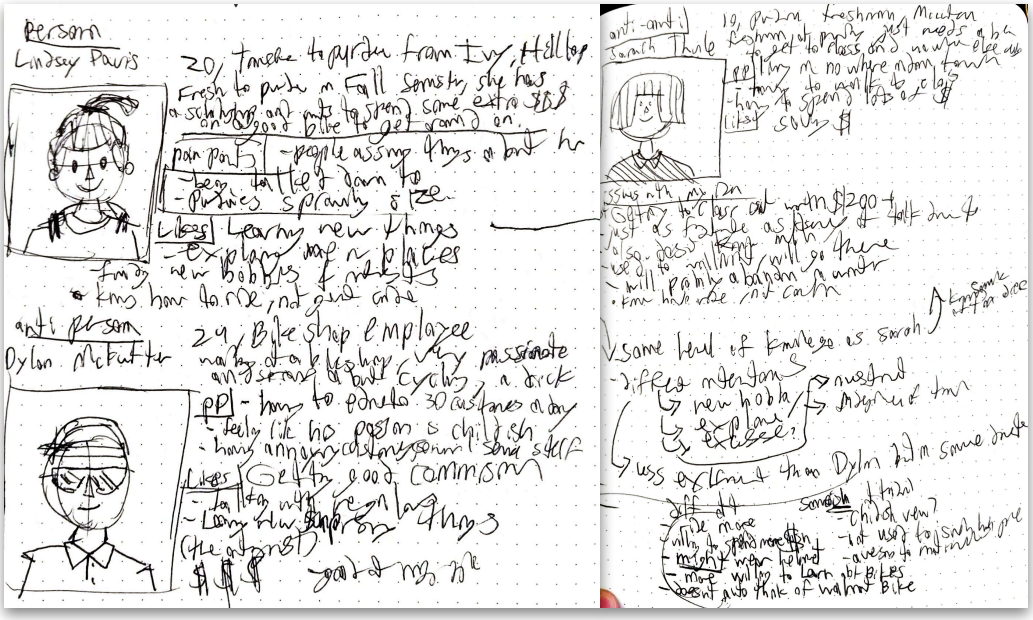
Observe an LBS Shopping Experience

Create and compare journey maps of different bike buying experiences

Target User

Narrowing my Target User

To start narrowing, I reflected on my prior research and who I did it with, swell as all the friends I had built and fixed bicycles for in the future, mostly college students. I also reflected on cyclist and coworkers I have had both at Jimmy Johns and Performance Bicycle. To organize these thoughts, I quickly sketched 3 personas:

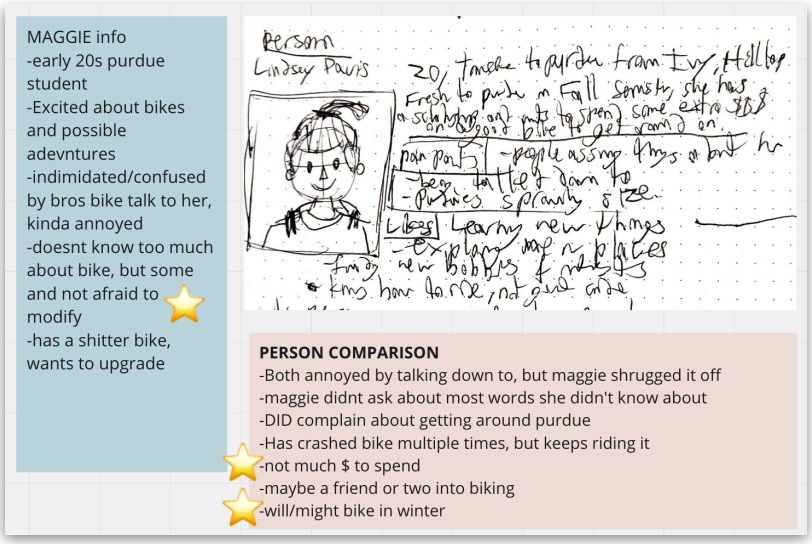


My target user, Lindsey, in top left, Sarah on the right, and Dylan at the bottom left

I created two anti-personas, Dylan and Sarah to compare to my target user persona; Lindsey. Dylan was a bike shop employee and avid cyclist, with a deep passion for the sport, and a tendency to get keep, in stark contrast with Lindsey. Sarah was a lot more similar to Lindsey, both being college students wanting a bike they can use to get to class. However these two created the contrast I really needed to narrow down to my target user group. These differences mainly came in Lindsey's and Sarah's respective attitude towards bicycles and cycling:

- Lindsey wants a bike not only to get to class, but to explore her campus and **possibly start a new hobby.**
- Both have little knowledge about bicycles and the industry surrounding them, but Lindsey is **curious to learn more**.
- Both need a bicycle, but Lindsey is slightly more open to **spending more for more quality.**

Persona Comparison



After I had made a journey map based on an observations of an LBS shopping experience, I not only compared it to my prior Journey map but also to my prior persona. I was able to spot some behaviors and attitudes I did not expect from Maggie based off my user group.

- Maggie was open and excited about modifying her bike
  - A lot of the accessories shopping was her thinking about how she could improve her current bike
- Maggie did not speak up much when using hearing terms she wasn't familiar with
- Maggie had friends like me and her brother that made her curious about getting into cycling, something I did not factor into my persona

Obviously I cannot use one observations to make wide generalizations about my user group, whoever these nuances and differences proved useful in my later ideation

To summarize, my target user is no more knowledgeable about bikes than the average person, but is adventurous enough to ride a bicycle in winter, and continue riding after a crash or two. This attitude is what sets my user group apart, and this helped me select who I would observe shopping at an LBS.

User's Understanding of Bicycles

Prior Research Review

Before the start of the Spring 2021 semester, I had done research into this topic, with the intended purpose of creating a design based on the insights from this research. I reviewed this past research to re-familiarize myself with my findings while de-familiarizing myself with my past intentions for the design. I also identified any gaps in my past research, and then went about filling those gaps, especially those in relation to the LBS experience.

Summary of Prior Research

This past research was mainly primary research, interviewing and conducting activities with friends and acquaintances, mainly college students who did not know much about bicycles.

Past Research Goals

- Discovering what attributes casual cyclists first noticed or cared most about when viewing a bicycle
- Questioning how people describe the ride and other "feelings" of their bicycles and connecting those to specific attributes/components
- Discovering how users describe bikes and how that differs from the vocabulary and definitions used by an industry professional
- Seeing how just seeing a bicycle without having it's attributes and components explained to a user can warp their perception of a bicycle

Methods

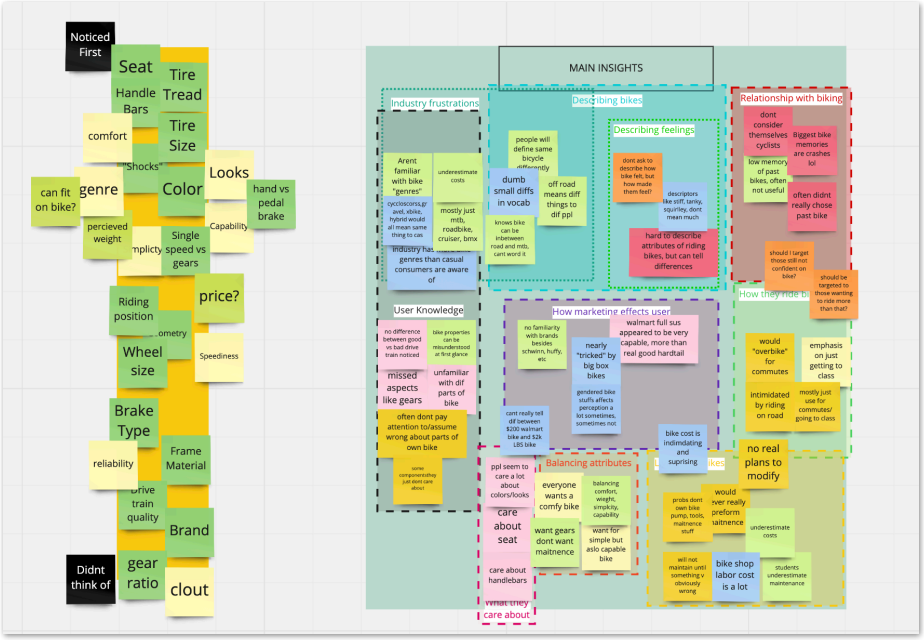
- Interviewing users about their past bicycles
- Presenting them with pictures of 12 bicycles and asking them to categorize, review, and identify perceived differences between them

The image set presented to users for the second method, and some of the questions I asked them:

- What bike seems most comfortable?
- What bike do you think costs the most?
- Which bike seems heaviest
- Where might you ride bike [A-L]?
- Can you assign a category to each bike presented?
- Which bicycle would you like to ride daily?

Review & Analysis

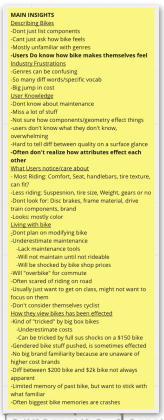
My primary method of analyzing my prior research and insights was to generate the major insights and points, and then categorizing them by affinity diagraming and ranking certain topics based on user priority. This allowed me to identify the major insights I found from the research, identify gaps in the research, and questions moving forward.



To the left, a ranking of certain components and attributes of bicycles based on how much my target user noticed and prioritized them. To the right, an affinity diagram of my insights and data from the prior research.

Major Understanding Insights

- Users cannot easily translate the physical attributes of how a bike ride
  - It is easier for them to describe their emotions felt while riding bike
- Comfort was this user groups first priority
  - Noticed handlebars and seat first, other attributes often went unnoticed
- Upon first glance, lower quality big box bikes are perceived as just as capable of more expensive LBS bikes
  - This attributed to users not understanding higher cost of LBS bikes, and without an explanation often resented the higher price
- My user group should not just be a student looking to get to class, but instead a student excited to get into biking but knowing little about it



Narrowing down took some effort

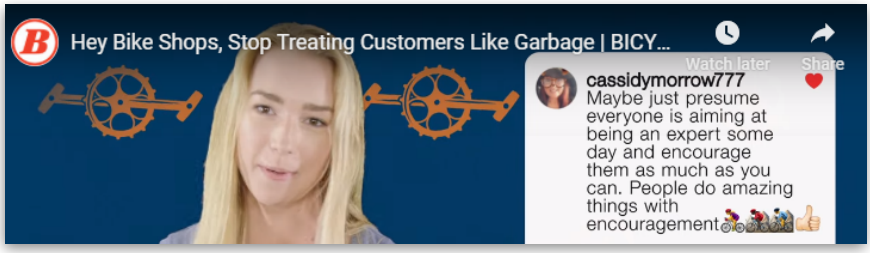
LBS Communication

Casuals Communicating with Professionals

To fill some smaller gaps in my LBS experience knowledge, I did a quick couple activities to gather some insights about how interactions between bike shop employees / industry professionals / avid cyclists and people inexperience or uncaring about the hobby can go wrong. This one-on-one communication is a big part of the LBS experience, and as my initial research showed it could do a lot of bad or good depending on how this communication went.

Reading Up

I have had my own experiences both working at and shopping in a bike shop, however I knew I should have a little more insight than that. To further this I read an article by bicycling.com entitled “Hey, Bike Shops: Stop treating Customers like Garbage” and an accompanying comment reaction video to gain a little more perspective.



A comment left on the article I read, highlighted in a comment response video

This helped paint an image of the LBS experience, and using this and my own LBS experience I created a quick Journey Map of shopping for a bike at an LBS, which I used later to compare to my observations.

De-Familiarizing Myself

I have had a lot of experience working with bicycles in the past years. I have built all of my bicycles to be custom made, I have built bicycles for my friends, assembled a large selection go bicycle tools, worked in a bike shop as a sales associate, and even currently deliver on a bicycle for Jimmy John’s. Needless to say, I have grown quite familiar with bicycles and the industry surrounding them, so I did some de-familiarizing to better understand what it is like to be a casual consumer communicating with an industry pro.

De-Familiarization: Questioning My Habits

"…sometimes u sound like a kid saying sketchers will make u run faster lol"

-Henri Heffron

I talk about bicycles to my friends and acquaintances a lot, who are often not near as interested in this silly little hobby as I. So I reflected on how I have talked to them about this subject, and even texted my boyfriend asking them about how they felt when I talked about bikes to him, what about it might annoy or frustrate them, and what I could do better.

De-Familiarization: Reflecting on the Past

In addition to talking to others about how I talk about bikes, I thought back to times when I did not know much about bikes, or had communication issues with those in the industry. This included times when my own bicycles where ridiculed by my bike shop coworkers, how I felt first getting into building bicycles, and more.

Communication Insights

•Women have many experiences being talked down to or excluded in bike shop settings

-Mansplaining is another common communication occurrence in LBS settings, even men mansplaining technical things to other men

- Assumptions are often made about the type of bicycle or level of expertise a customer is desiring based on appearance, gender, or body type
- Those uninterested rarely ask about terms they don't know, and instead just tune out
- Finding a balance between not assuming someone lacks basic knowledge, but also not mentioning terms or concepts that go over their head is important

LBS Shopping Experience

My Early Impression of the LBS Experience

At this point, the average LBS Shooting experienced for me seemed like you would enter the shop, look around cluelessly at a menagerie of $2000+ bicycles for 10 minutes until an employee stopped talking with a regular and blessed your peasant self with their presence. They would then talk over you, assigning random bicycles to you that they assume you want based of the color of your shoes, and scoff at any disagreements you bring up. They would explain that the brakes stop the bike, because of course someone like you wouldn't know, but do nothing to explain what a gravel bike, suspension rebound, or clipless pedal is. Obviously, this is a negative view, and I myself had had much more positive experiences along with my negative ones. However, this was the impression that many new customers had experienced and it is not surprising that this impression turned them towards ol' reliable Walmart. I needed to know more about this experience from the shoes of a casual customer, and then of course figure out how to empower them to challenge this experience.

LBS Shopping Experience: Observation

Planning and Preparation

I need to observe an LBS experience, so I chose to observe Hudson Bay Company in Wabash landing. I also needed someone to observe as they shopped around for a new bicycle. I chose my friend Maggie, a college student here at Purdue, as my participant for a few main reasons:

- She shared many attitudes and level of knowledge with my target user
  - Rides bicycle in cold conditions
  - Continues to bike even after being hit by car once
  - Has possible plans of bike packing with cyclist brother
  - Willing to spend more on quality items, like fresh produce for cooking, while balancing a college student's limited budget
- Maggie, being a woman, might experience mansplaining and interactions I would not
- I had built her a bike in the past and she owed me a favor

Observation

During Maggie's LBS shopping experience, she talked to 2 employees, one a sales associate and one seemingly the owner of the store. She took a close look at 3 bikes (2 Mountain Bikes and 1 Single Speed road bike) with different attributes and different price points. She was close to purchasing a used $100 single speed, but decided not and instead purchased a few accessories for her current bicycle. During all of this I followed her around and took notes on my phone, making conversation with the employees but trying not to answer any questions Maggie had and instead seeing how the employees approached them.

It was a fairly nice experience, and she felt slightly overwhelmed but welcome in the shop, besides one slight misogynistic comment at check out. She might even come back to buy a bike! Maggie made a few comments that stuck with me when I asked her about her experience afterwards:

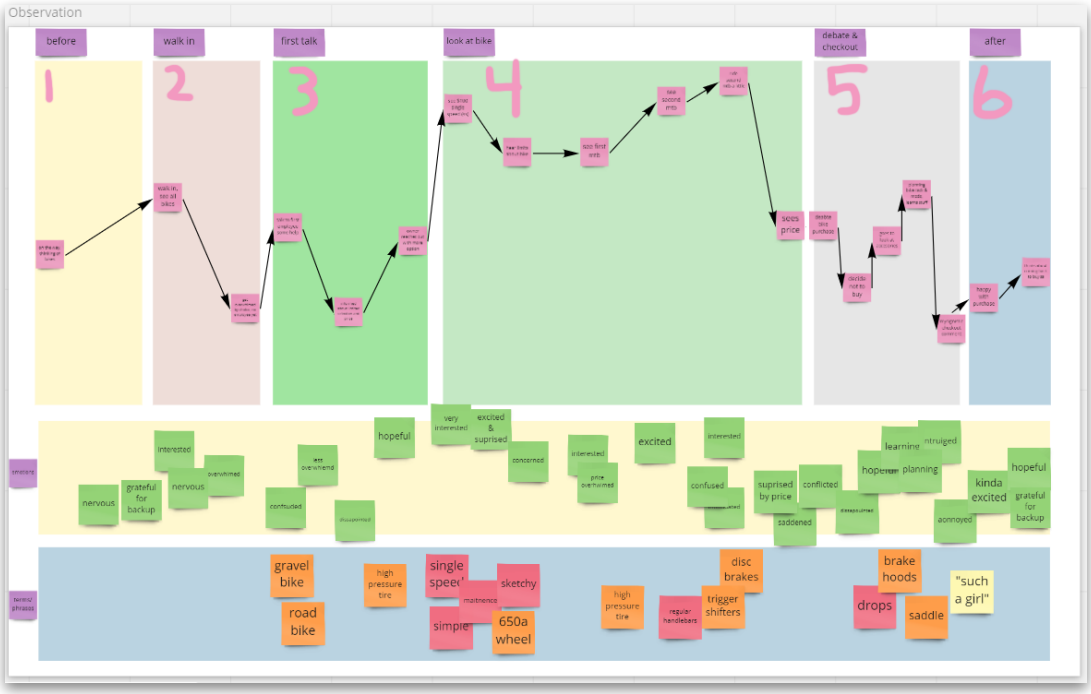
- She **appreciated the explanation of terms** and part she was unfamiliar with, however **did not remember much** of what she learned afterwards
- Maggie used a lot of hand gestures to create visuals when referencing back to bike parts
- She would ride both an mountain bike and skinny tired single speed to the same places
- She really **appreciated me being there as "backup"** and said it increased her confidence
- She noticed a bicycle had both front and rear gear options because of the gear shifter on the handlebars, not the presence of the gears themselves

One comment in particular gave me a lot more confidence in what I was designing, and how much it could empower a shopper; **Maggie said she wish she had a link to an online bike listing she was interested in to show to the employees so they could direct her to something similar.**

LBS Shopping Experience: Journey Mappings

Maggie's LBS Experience

Maggie's shopping trip came in 6 main segments, all of which had their ups and downs and came with their own emotions felts and terms heard. I graphed the interactions in terms of observed positivity or negativity of the experience, and also tracked the emotions and terms that came with these interactions.



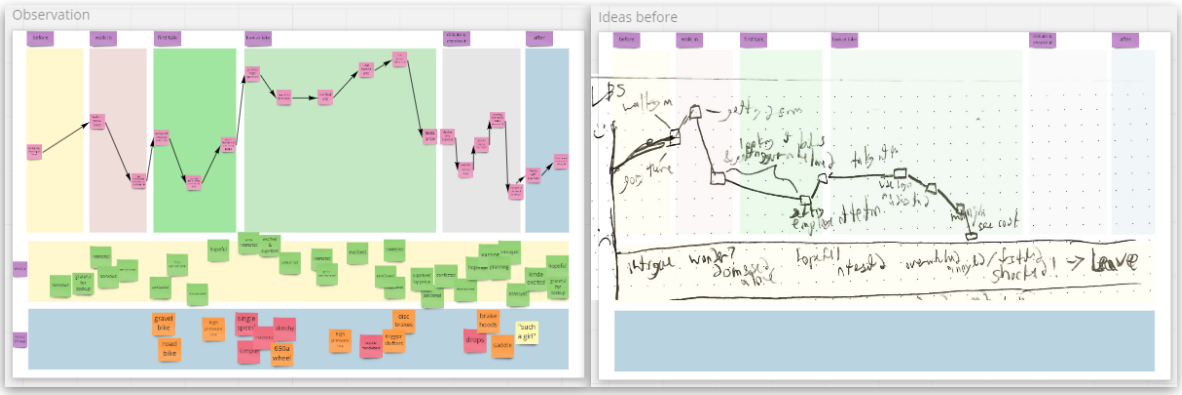
1. Before: Maggie is being driven to the bike shop, and feels a little nervous.
2. Walk In: Maggie walks into the bike shop and is slightly overwhelmed by the number of bikes in the entrance, and waits a while for the first employee to talk to her.
3. First Conversation: The first employee talks to her, ask where she wants to ride, and disappoints Maggie by talking about their limited stock for somewhere of her small stature. She is also shocked by the price of some of the bikes shown, and does not connect much to the single commuter bicycle he shows her.
4. Looking at Bikes: A second employee comes in, and shows Maggie other bikes in stock the first employee did not bring up. She is shown a cheap single speed which is very attractive to her, a $1000+ MTB she does not spend much time with, and a $550 MTB

that is well sized for her and takes a small ride on it. She wishes she could afford the second MTB, but is more attracted to the single speed for the price.

5. Continued shooting and Checkout: Maggie decides not to buy any bike, but does want to but some accessories. She debates what to buy, considering a backpack and a pannier for a possible bike packing trip, but decides to purchase a cheaper and colorful water bottle and bottle cage instead. The owner explains some aspects of other accessories she was looking at, like "riding on the hoods" on drop bars. She checks out, in which the owner remarks "You're such a girl, buying accessories before the bike" slightly annoying Maggie.
6. We leave the bike shop, and talk about her experience. She is excited by her new accessories, and hopeful at the prospect of maybe buying that single speed in the future.

Comparison To Prior Journey Maps

I had created a couple Journey Maps before my observation, as I developed my personas. One was an idea of what an shopping for a bike at and LBS would be like, based off my past experiences and reading, and one was of buying a bike at Walmart to compare. I did not get much out of this comparison, but I was able to compare this LBS Journey map to the one created from my observation, that was mostly based on the negative experiences I had seen from my own time working at a bike shop and from the article I had read. I preformed this comparison to help me draw make a bridge between my observations of a single shopping trip and more generalized insights. There were some interesting similarities and differences between the two.



The observation Journey map on the left, and the one created prior to observing on the right

Contrasting Journey Map Insights

- Even if a user does not buy a bike, then can be hopeful about purchasing it in the future or purchasing other bike related products
- The walk in can be more stressful than initially thought, especially if a user is not sure how to communicate with employees or wether or not to seek them out

- Conversation happens outside of just looking at bicycle to purchase, but at welcome, checkouts and accessory shopping as well

Shared Journey Map Insights

- Terms the user is unfamiliar with happens most when looking at a bicycle with an accompanying employee
- Looking at the price is often a big negative experience for the customer
- Using terms the user is not familiar with will not necessarily cause a negative emotion
  - At the same time, using technical terms the user does know tends to make feel better
- Debating wether or not to buy a bicycle right then and there is often a stressful and confusing experience

Major LBS Experience Insights

Reflecting on my own bike shop experiences, my own communication habits, journey maps, and observing someone in my target user group gave me some great insights to this space I had previously been unfamiliar with.

Avoid Assumptions
My users are unique and so are their

Balance Choice
Too much overwhelms, not enough disappoints

Backup is Empowering
Just a friend's presence makes a

Explain Politely
Appreciated even if not remembered

Informing Ideation

I now had a lot of insights and research to back them up, but now I had to use them. To do this I created a draft of principles, sketched some task flow and ideas to refine them, and then preform a comparative analysis to evaluate those ideas and principles.

Connecting to Outside Industries

Car Sales Industry

I wanted to draw connections from the car industry because there is limited writing about selling bicycles, but much more about selling cars. Both are selling vehicles to customers who aren't really experts, so drawing connect s between the two came naturally. My main goals were get insights on how I can ascertain a user's priorities with my questions section, and how best to communicate the "value propositions" of a bicycle to a user in my education section.

Readings

I looked at two different readings from two different perspectives within the car industry. One of an article covering a car dealer selling cars without a traditional showroom, and one from an experienced customer setting up a deal to buy a new car.

Interview with Car Salesperson

I Interviewed a friend who up until the past couple months worked as n ultra luxury car salesperson. I specifically interviewed a luxury car salesperson because many causal consumers view a bike $400+ (a price a majority of LBS bicycles pass) as a luxury item. I asked them a series of questions with the main goal of getting insights into how they understood what their customers wanted to hear about a car, how they went about justifying a pricer higher than a customer might expect, and how they explained both technical and more abstract things about the car to the customer.

An example if a car they had sold.

Car Sales Industry Insights

This look into the car industry proved pretty useful, especially the interview. I got a lot of insights, but the most major I could connect to selling bicycles were as follows:

- There was a general sense of distrust/competition the customer often had towards the salesperson, and if taken too far it would only hurt and not benefit the customer
- Salesperson could gain useful information about a customer's priorities and presences by observing their attitudes/belongings and getting lateral information from it
  - This could be used to prioritize what value propositions to talk to the customer about
  - Ex: If a customer comes in with a handmade Louie Button bag, talk to the user about the car's handmade leather interior
- Bringing down your knowledge level to the customers was generally a preferably method to trying to impress them with your level of knowledge
- Technical info (ie what kind of shocks a car has) is less important than the effect it has on the vehicle (ie a smooth ride with limited body roll)
- Justifying price to the customer is always very difficult, especially when the vehicle is not there physically to "speak for itself"
- A car salesperson really doesn't talk about the entire car to a customer, even if the sales process can take days.

Informing Ideation

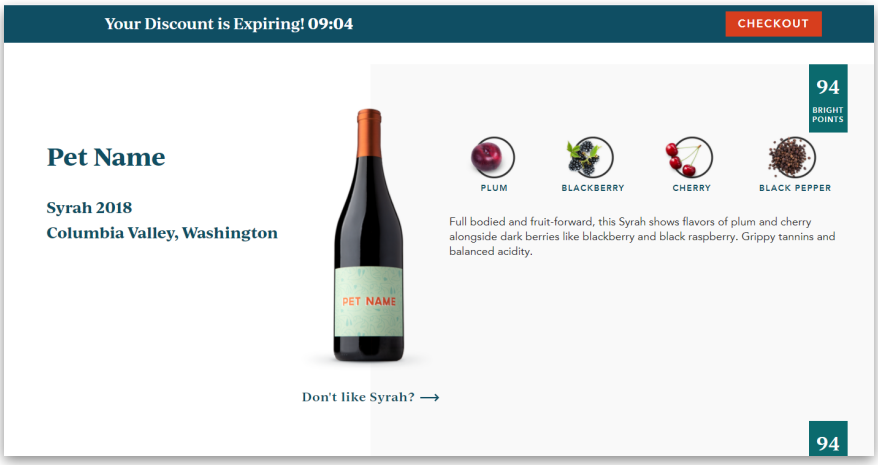
•The lack of connection to any specific bike shop would help reduce the customer/sale persons trust issue, as shown in my first round of prototype testing.

•Gaining lateral information from the user might help get more genuine answers from contexts a user might be more familiar with outside of bikes.

•If a car salesperson doesn't talk about every part of a car, my presale bicycle experience certainly doesn't have to.

Wine Quiz & Recommendation

A new trend has appeared in sponsored YouTube videos of companies that will ship you wine custom selected for you based off some basic information about your tastes. This seemed like a perfect experience to draw experience from because wine is something I know nothing about, so I could approach this similarity to how my users would approach my experience about bicycles. I looked at both Winc and Bright Cellars, both of which provide the same experience of a short quiz, and then showing you a selection of wine with some basic info about them.



A wine Bright Cellars recommended for me, paired with some basic info

Wine Quiz & Recommendation Insights

These wine quizzes were not the most in depth and a shorter experience than I am aiming to create, but I was able to draw some very clear connections to my own design and perspective from these designs and their quick and casual experience.

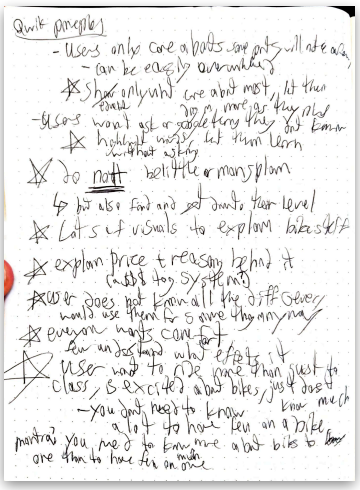
- Lateral info could come from similar things that a user might be more experience (relating taste in chocolate to taste in wine)
- A breakdown of flavors/ingredients was paired with a descriptive and more abstract paragraph about the flavor.
- They included an ability to regenerate a “best choice” wine.
- Generally very short and sweet
- Did not have to justify things like price
- Used some technical terms without explanation which left me lost

Informing Ideation

•The description of wine by flavor gave inspiration for breaking down bike attributes by parts in an overview of the bike.
•I could draw connections to vehicles or experiences. the user might be more similar with, like cars or possibly behavior while walking.
•Reinforced need to simplify my design
•Reinforced need to used technical terms sparingly and only with some explanation, context, or encouragement to learn more at LBS

Early Design Principles

Draft Principles



I started a list of principles as I went through my early research to get the ideation ball rolling and organize my insights by what was most important. I had a ton of insights, especially coming up from my prior research and from my observation. However, only some would actually be applicable to a design that a user would use *before* going to an LBS to empower them to buy the bicycle they want, not just the one the employee wants to sell. I had to narrow them down, and through my further research I did so.

Major Draft Design Principles

DO NOT BELITTLE THE USER

EDUCATE THEM ON WHAT THEY CARE ABOUT MOST FIRST

AVOID USING INDUSTRY TERMS UNTIL YOU CAN TEACH THE USER THEM

DO NOT OVERWHELM WITH CHOICE OR INFORMATION

USERS MAY BE SIMILAR, BUT THIER BICYCLE NEEDS ARE UNIQUE

Scoping Down & Refining

A Mobile Design

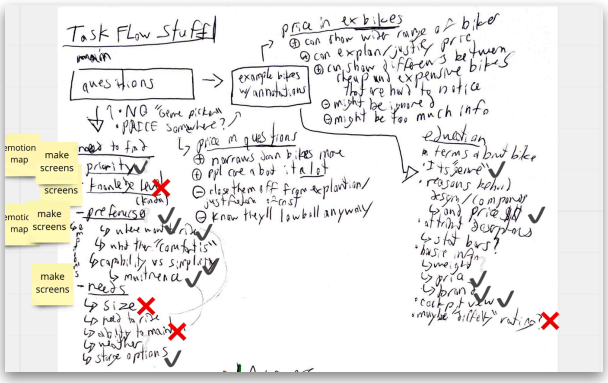
After my first milestone it was clear I needed to scope down. However, getting there threw a wrench in my gears. The two main components seemed so necessary for each other. My research had clearly told me that for the education section to be empowering, I first had to do 3 main things:

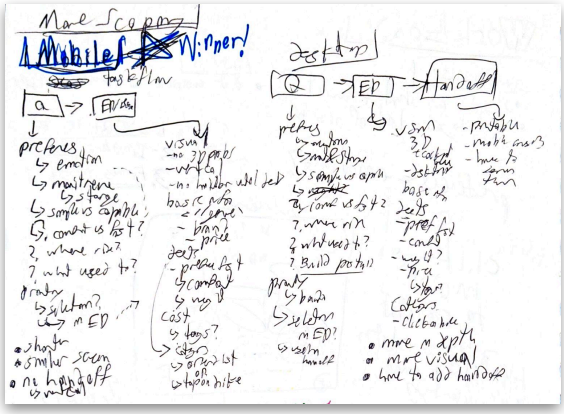
Narrow down to the info user cares most about

Create a connection between user and bicycle they are learning about

Identify emotions to later connect technical attributes to

I felt if this connection was severed, the experience would fall flat and prove useless for the user once in the bike shop. Additionally, there had to be some use within the LBS shopping itself, as my research showed all this info is very easy to forget. With that in mind, I had to think of other things it cut. I did some thinking and decided to break down my existing task flow into what I thought was most necessary, as well as what I thought I could accomplish. I also looked back at my main principles to ensure any scope down contributed more to those ideals than my original idea.





I cut what I didn't feel was necessary, and decided on mobile because it constricted the amount of work.

Doing this and going back to my principles led me to a simple scope down that would accomplish a lot. This was making the design a **completely mobile design** where the the education section doubled as the hand-off the user would take with them to the LBS as a backup tool. It may seem small, but this change did a lot for both decreasing the scope and re-aligning my design with my research findings. It both decreased the scope but also got me closer to an principle I had kind of forgotten about, making this fun and approaching for a casual user.

Decreases to only 2 sections

Constrain depth of work

Increase Approachability

Increase Empowerment

Mobile Consequences for Ideation

I had already done some ideation before I had chosen this narrower scope, and most if not all of it had been with the idea of using a desktop for the interaction. This was something I had just done without really deciding to do so, but the change in screen size and orientation was not the only difference I would have to compensate for in my new sketches and eventual prototype. The main things I kept in mind during the following round of sketches were:

- A smaller screen means I cannot rely on larger visuals
- I wanted it to be used vertically, while most bikes are pictured in landscape, as they would appear standing upright
- Mobile experiences should be short and sweet, so both sections (especially the questions) should be made more concise.

Reevaluated Principles

After some evaluation, ideation, and some testing, I realized that I need to shift my principles around. Some of this is new stuff, some is just organization, and some are ideas I have had in the back of my head that I realized needed to be brought to the forefront.

Be personable & fun

•Don't belittle the user
•Simulate a conversation
•Create emotional connection to a bike

Teach the user about what they care about

•Find out about what they care about
•Make user care about a bike

Users are unique

•Find out about what they care about
•Treat them with respect

Empower and encourage the user

•Focus on info that will give them confidence
•Use positive language

Prepare for LBS, don't replace

•Not necessary to explain everything
•Encourage user to engage with LBS employees
•Keep things short and sweet
•Lead to questions to ask LBS

Impact Of Re-Evaluated Principles

The re-focus of my principles lead my following ideation, research, and evaluation in a few key directions:

- Making sure the experience is fun and positive
- Focusing just as much if not more on encouragement as the education
- Incorporating more psych and connections to sales
- Focusing scope down to a quicker and less dense experience

Three Main Takeaways

Purpose

These 3 main take aways came from my need to make the purpose of my experience clear to the user. I had all these principles that are meant to come together to empower the user, but they were too subtle and too scattered throughout the experience. Besides, user's don't care about leading principles if they don't know what to take away. That in mind I laid out these 3 things to give to the user:

Identification of Bicycle

The first question often asked at a LBS is "what kind of bike do you want?" I want to give the user the tools to easily answer this question and get the experience started off on the right foot.

Basic Knowledge

A lot of technical terms go flying around a bike shop, but a small amount of knowledge about the bike you want can go a long way. It can help the user be aware of what they don't know, know what to ask, and identify important parts of their desired bike. This is just a small amount of info though, nothing overwhelming,

Communication Encouragement

Bike shops can be very intimidating and the last thing a customer wants to feel is annoying because they are asking questions. However, asking questions at an LBS is a great way to learn, and the employees working at them love talking about bikes. I just need to let the user know this

Prototype Testing & Evaluation

Paper Prototype

I wanted my first round of testing to be quick and versatile, so I created a set of paper mockups of mobile screens to test. The creation itself wasn't exactly quick, but the paper-ness made it more approachable.

Goals

For this round I wanted some quick and dirty feedback and evaluation, mainly on the education section. I had some questions, but this was mostly to create connection to the education section. I needed insights on these aspects that simple heuristic evaluation cold not provide.

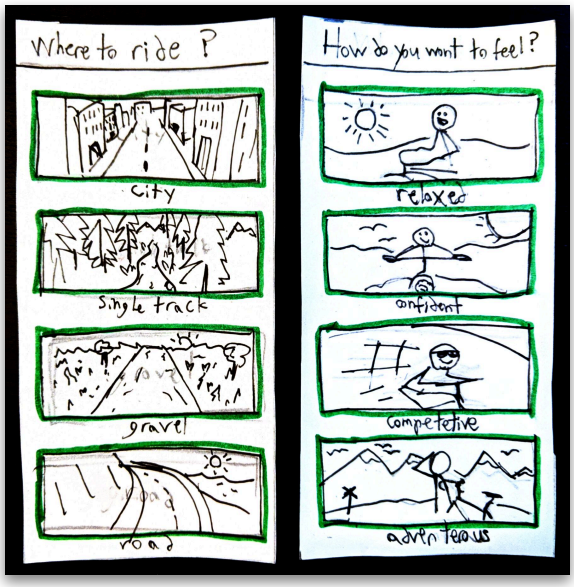
- See if the organization structure of the education section I came up with was appropriate
  - Could it be used to explore a bicycle's attributes before hand? How might this change during the LBS shopping?
  - Is it useful and empowering in an LBS shopping experience?
- Estimate how the visuals on a smaller screen might effect the experience
  - In what ways can smaller visuals be utilized?
- Inform the further ideation of the question section
  - What info was most necessary to gather?
  - What emotions would be best to connect bicycle attributes with?
- Did it give the user more confidence?

Protocol Overview

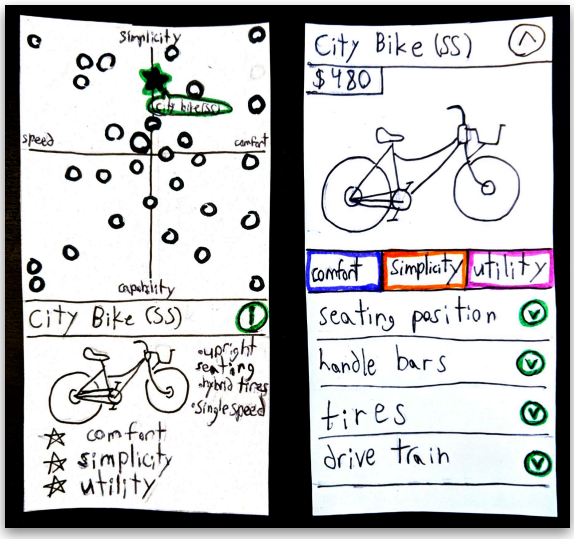
This was a simple test. I explained the purpose of the "application", and asked the test users to think out-loud as they went through it. This prototype would be focusing on the education section and using its insights to inform the question section. However, I wanted a proximal feature of the question section to build that connect to emotions and the bike itself. So, this test would start with a quick set of questions to make the user feel like this bike was picked especially for them, but in reality the bike example featured in the following paper protocol would be the same no matter what. This allowed me to both build those connections and contract this prototype quickly and easily. They then went through the screens, both in person and over miro, to their hearts desire. From here we body stormed an LBS experience, with me acting as a bike salesman attempting to sell them a similar bike to one recommended, and them acting as a customer who used the application before shopping.

Screens

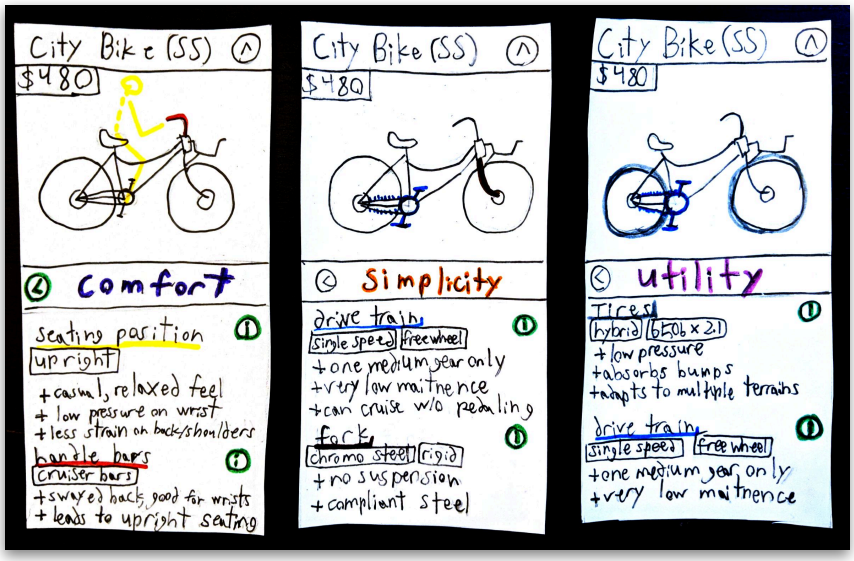
These are paper screens I quickly made to represent a couple questions and a dip into toe education section, including the graph, overview of bike, 3 main attributes, and a few specific parts.



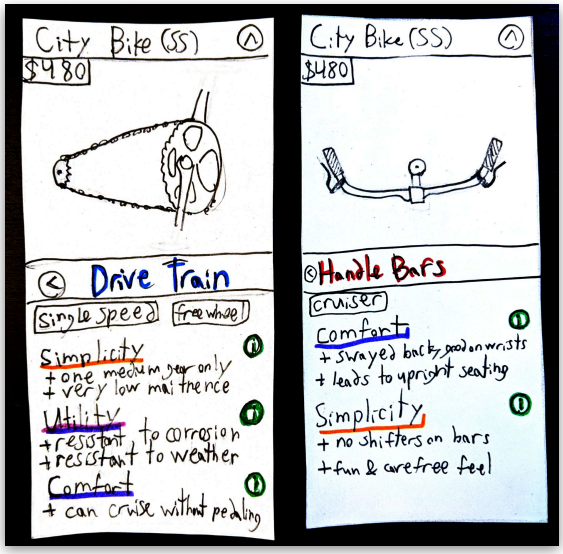
A quick pair of questions used to connect the user to the upcoming bicycle recommendation. Both are simple for the user of this prototype, but use visuals to help convey emotions and utilize stick figures instead of pictures to keep the imagery from possibly instilling a bias in the user. (ie. No women or road bikes, or difference in gear/ clothing)



On the left, the graph screen where the user is taken after the questions. A city bike is recommended, and the user can elect it to view a more in-depth overview. This overview, on the right, shows the price of the bike, the 3 main attributes of the bike, and a scrolling list of parts at the bottom. Each attribute can be selected for more info, or the user can select a part to get more info about it, possibly in response to hearing it being brought up by a LBS employee.



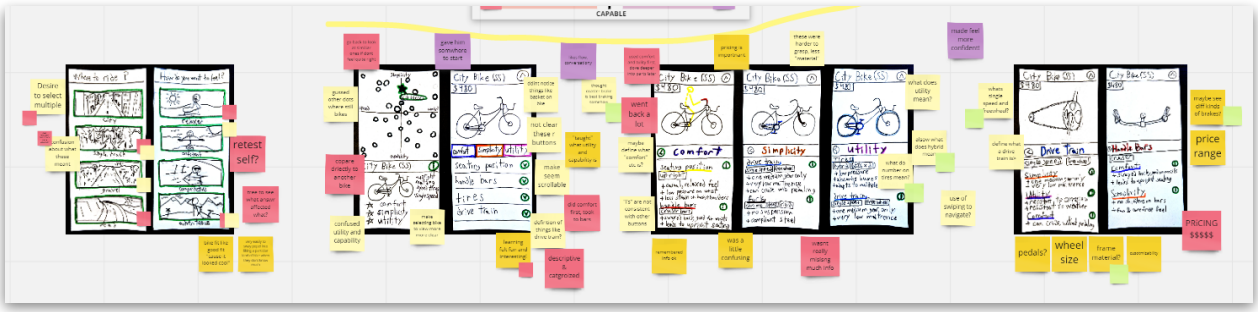
Here are the 3 attribute screens, each with a list of the parts of the bicycle that mainly affect said attribute. These parts are highlighted on the render of the bicycle above, right now by color but this is subject to change. Information about these parts, like size or material, is followed by their effect.



Here are just two of the screens detailing the parts on the bike, and what attributes they contribute to. Just like selecting parts from the attribute details screen, you can select the attributes they effect from here.

This ability to dive deeper from attribute to part to attribute and further should hopefully create an experience that allows and encourage the user to explore this bike, how it works, and give them the knowledge and terms to navigate an

Paper Prototype Testing Results



Notes of prototype testing

Testing Insights

This quick round of testing gave me a lot of insights! I was able to test two friends who had limited knowledge about bicycles, one in person and one through a miro version of my paper prototype and an online game. Through the protocol, questions afterwards, and some casual conversation about their bikes to see how they talked about them, I was able to gain a lot of insights.

- **The users felt trust** in the app because it was not tied to a specific bike shop
- **Pricing** is often the #1 concern before any parts
- Things like "capability" and "utility" meant different things to different people
  - The attributes were also less concrete than the parts to the user
  - The bike overview screen was a little confusing as well
- Did not really use the paper prototypes that much during LBS body storming
- They generally were satisfied with amount of info, would not have minded more
  - Some extra information requested however would not be every useful in LBS scenario (ie pedal material)
- Home Screen layout was a little confusing
- **The conversation style flow worked well**
- Typically explored the education section for **5-10 minutes**
  - Often asked me questions during, not just about app but bike and it's parts
- Terms used later in context of LBS body-storming were made clearer when used in **full sentences**

Informing Ideation

This quick round of testing gave me a lot of important insights ta\hat shaped further ideation. It took some time and thinking to get it all compiled, but there were a few particular ways it steered the ship.

•More focus on supplementing the LBS experience and letting conversations with an employee fill gaps the app leaves empty.

-This allows me to consolidate the experience of the app and take advantage of the confidence I am attempting to give to user

•Injecting more fun and personality into experience

-The prototype felt a little cold and even though users found it enjoyable it did not seem the most encouraging

•Keep conversation style, but reorganize task flow

-The attributes felt too abstract, while dividing by parts was too in depth

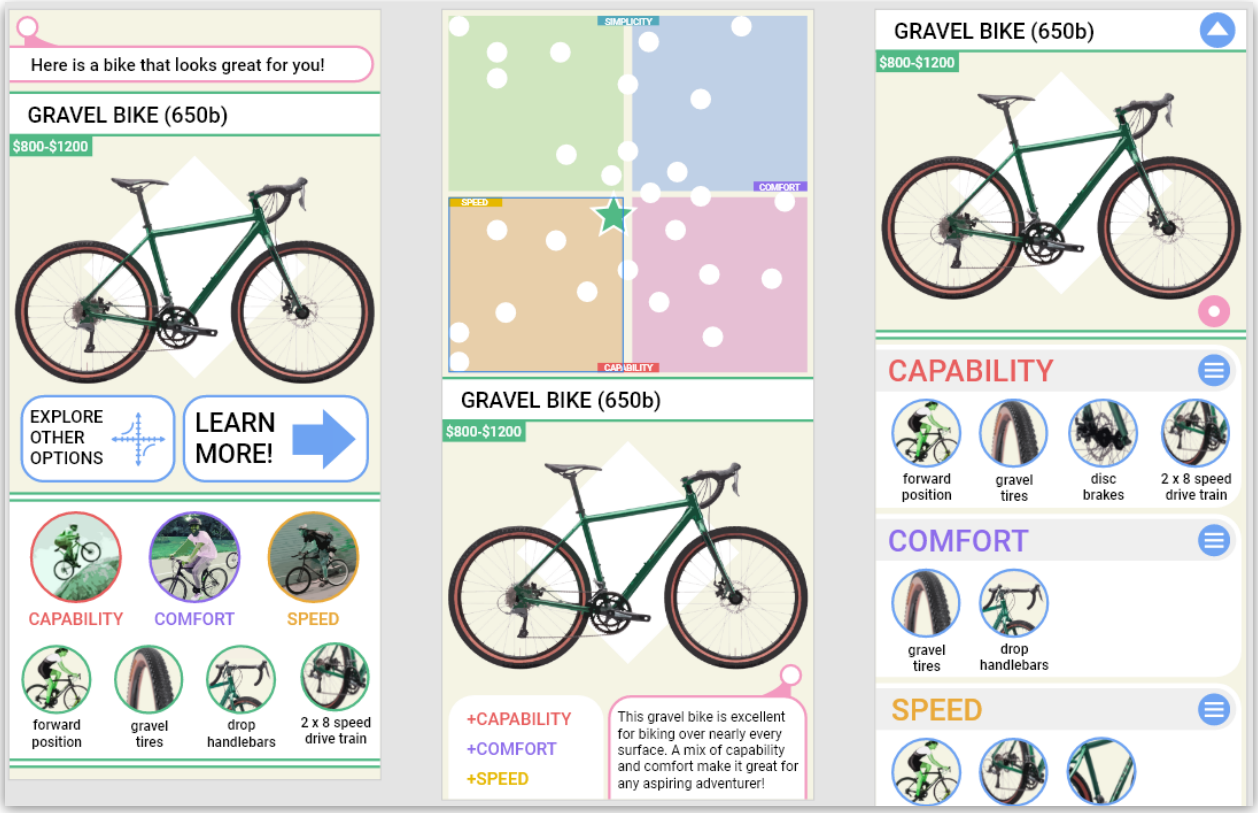
Digital Testing and Evaluation

Clickable Prototype

Goals

- Test changes and additions to prototype
- See how users interact with a midi digital mockup and having to read text and visuals at a mobile scale
- See how new screens effects through-line and the conversation flow of experience

Screens

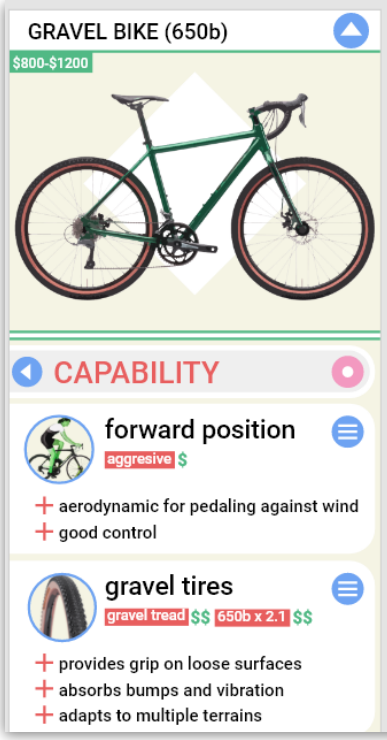


1: A welcome to the bike

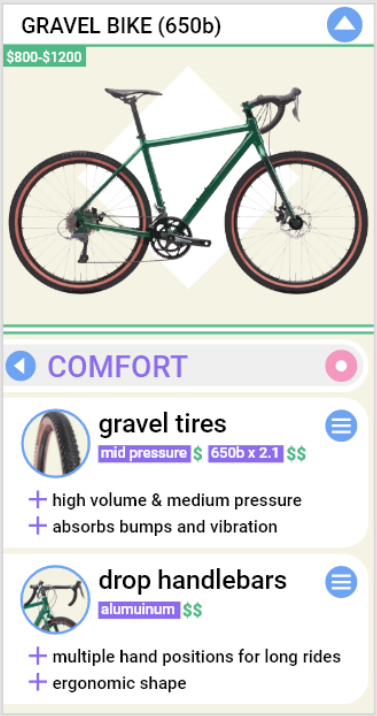
2b: The Graph screen, where a user can select a different bike

2a: The Bike overview screen. Gives basic info about recommended bike

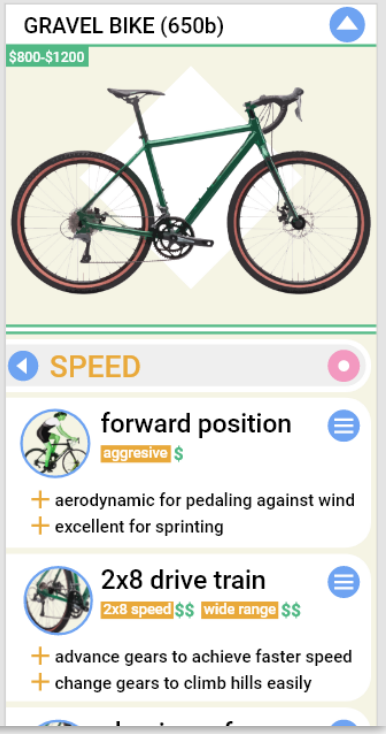
These first 3 screen are the “welcome” to the recommended bike, the first allowing you to learn more in screen 2a, or choose another bike in screen 2b.



3a: An overview of the bikes capability and what parts affect it

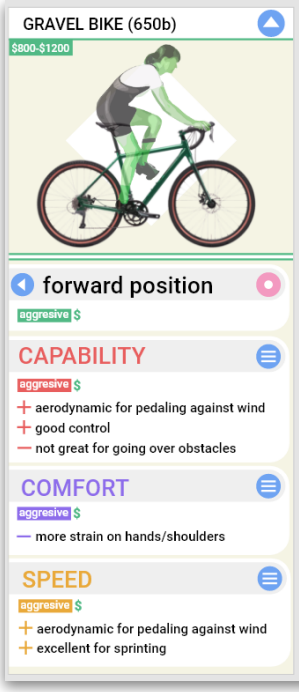


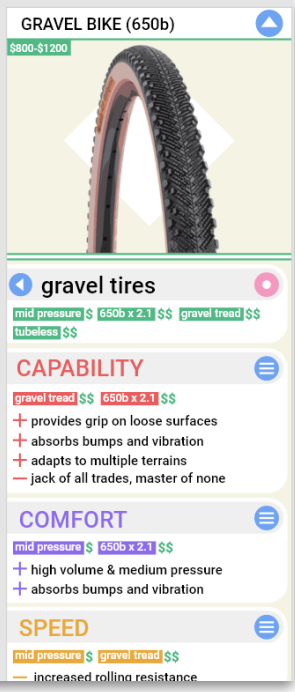
3a: An overview of the bikes comfort and what parts affect it



3c: An overview of the bikes speediness and what parts affect it

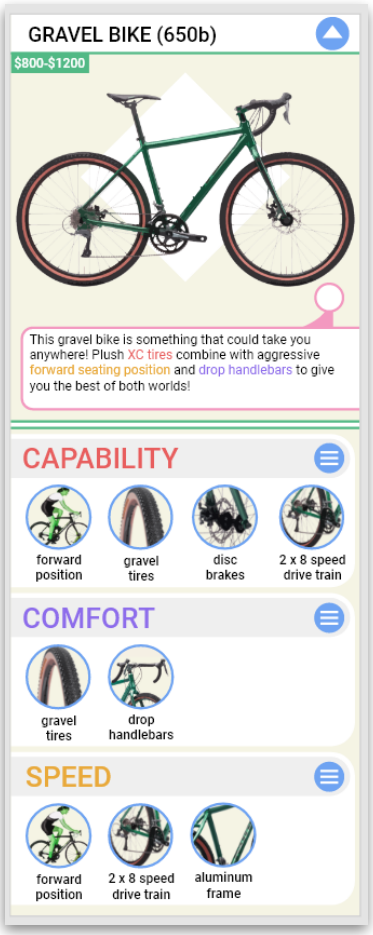
The next set of screens show how the app covers the attributes of the bike, giving detail as to how the parts sown in the overview effect said attribute.

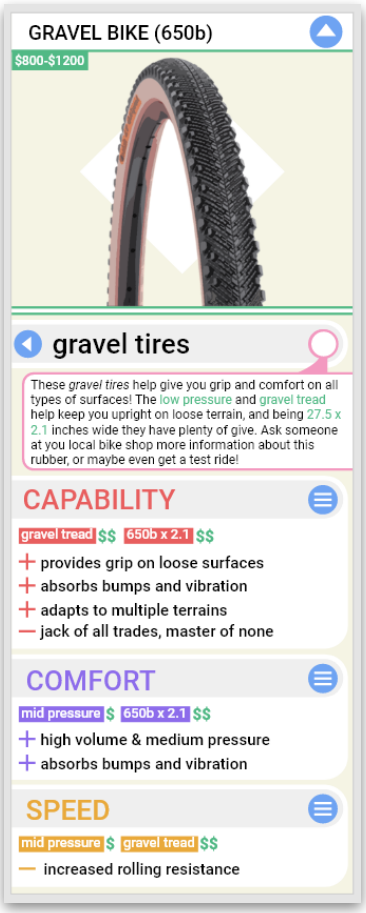




4a and 4b: Screens show detail about the forward seating position and gravel tires on the bike respectively.

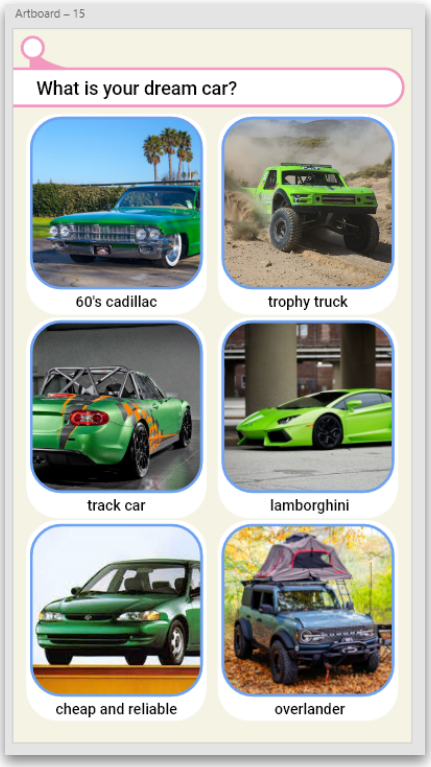
These screens show more info and detail about the parts. It also flips the organization pattern, now showing the part and all the attributes it affects, and the effect it has on them.





2ad and 4bd: The bike overview screen and gravel tire detail screen with dot having been activated.

This is an example of how dot is being used within this prototype.



Q1: A question attempting to gain lateral info from the user from a context they might be more familiar with than bicycles; cars.

This is one of the questions screens used in the prototype. For the prototype these questions will be placebo as I only have time to create the overview of one bicycle type, but in the full experience these questions will have a lot of input and the bike recommended and the order of the information displayed.

Testing Insights

This testing was done with my previous observant participant, a couple months after the observation. I explain do to her the purpose and context of the application, asked her to think aloud as she went through it, and then asked her to reflect on her past LBS experience and how this might affect it. There were two run troughs, one simply having her interact with first few screens, and then looking at the bike overview screen and expressing what she would interact with. The second was more guided as I asked her to start from the beginning and reach certain screens to see how usability and visual communication had improved.

Insights

- When asked she said she would have downloaded this application a **couple days ahead** of time (before going to buy bike).
- Claimed she would want to spend around **20 minutes** exploring the information about a recommended bicycle.
- Wanted a quick comparison at the welcome screen, of maybe 3 bikes, to be navigated by swiping
- Conversation flow was understandable, but could add some more clarity
- Was not exactly sure sure what she took away from test besides basic info about bicycle.

Informing Ideation

Before this prototype test I had already been making some changes based on feedback from a past milestone. The testing confirmed some of this feedback, but not all. This led to some influence on further ideation that led to my final rounds of mockups:

•Make a quick and clear **through line** in the application

-Less subtlety

-More clearly explain **3 main takeaways** and draw attention to them

•Users want to spend more time exploring than my intuition told me, compensate for this

-Give them desired info, but keep emphasis on most important basic stuff

These insights and effects gave me a few ample rules to follow the last round of ideation that followed: ***No subtlety, and oversimplify until it hurts my expert side.***

Ideation Evaluation

Comparative Analysis

I preformed a comparative analysis with the goal of seeing how my early ideas stacked up to similar things that are already out there. This helped me see if I was repeating any mistakes they made, and helped me think of both design decisions to avoid and take inspiration from as I interacted with two online bicycle finders.

Reading: REI's "How to Choose a Bike"

This first one was not an interactive design, but just a reading designed to guide you through choosing a bike for yourself.

Negatives:

- Started with the bicycle genres, something casual consumers have little understanding about
- Did not use many visuals and instead used a lot of text and outside links
- Often the wording was vague and not very descriptive or helpful for a casual consumer

Positives:

- Was divided into 3 clear sections; Type, Balancing Price and Performance, and Fit
- Including bike fit, which is very important to making a bicycle feel comfortable
- Generally avoided highly technical jargon

Interactive: Trek Bike Finder

This is a short and basic Bike finder designed by Trek and made specifically to sell Trek Bicycles using their website.

Negatives:

- Not much choice nuance
- A lot of vague wording
- Restricted only to Trek Bikes
- Some negative implications with their visuals
- Budget choice at end, before looking at bikes
- Bike information pages are not guided towards casual consumers

Positives:

- Short and Sweet

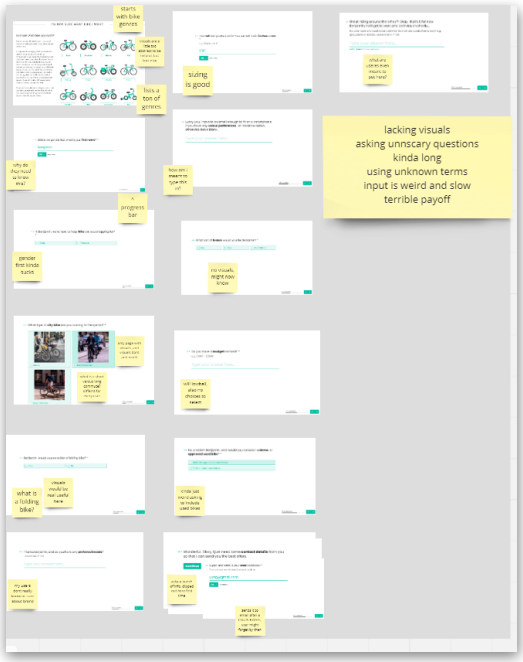
- Lots of Visuals
- Questions adapt to different selection trees
  - Seem to be guessing the user's knowledge level based on the type of bike they want to ride (negative?)
- Limited technical terminology
- Utilizes a progress bar

Interactive: bikeZaar Bike Finder

This is another online bike finder. It is not connected to any specific brand, and instead is connected to an email service to ding you bicycle listings.

Negatives:

- Very limited visuals
- Begins with selecting bicycle genre
- Connected email service is slow
- Asks for a lot of unnecessary contact information
- Uses technical words randomly
- Abstract bike art is pretty but not helpful or descriptive for user
- Feels very long, a lot of screens that aren't very engaging
- No real payoff in end



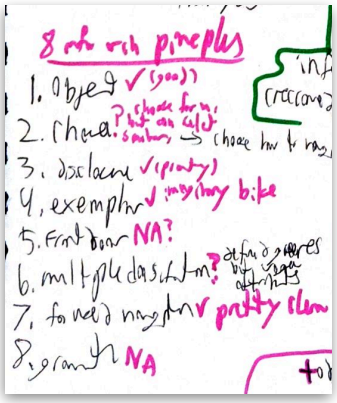
Positives:

- Utilizes Progress bar
- Not tied to one brand
- Has option of used bikes

Comparative Analysis Insights

- These are not designed to work with a bike shop
- Imagery is very important
- Giving user option to select multiple choices might improve vagueness
- Progress Bar is smart
- It can be easy to wear down user, must be engaging or short, preferably both
- If I use art/rendering, they must be detailed enough to be informative
- Have to make education segment feel like a satisfying payoff

Annotative Evaluations

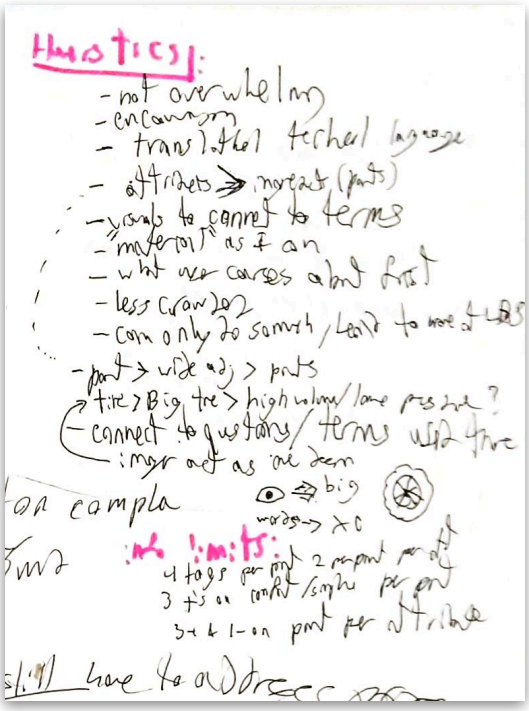


After sketching these ideas, I used the basic ideas of heuristics as well as the 8 Principles of Information Architecture to annotate flaws and advantages of my contrasting ideas, often in pink, which you can see in the following sketches. Other sources of evaluation stemmed from my readings

Through the use of these 8 principles on the left, I saw that the areas I still have to achieve more in where choice and multiple classification. I hoped to get more choice coming from the question section, and add some more classification as I dive deeper into the education. However, I was doing great on other principles. Especially the Exemplar principle, because my education section is all based around examples of bicycles.

Setting Heuristics

To assist in my ideation and to allow my self to evaluate my ideas as I created them, I created a list of heuristics to guide my ideation. These are informed by my main principles and insights from testing and research.



These heuristics changed and flowed as I went through my project, learned new things, and changed priorities. Here are the major ones of my most recent sprint of ideation:

•Information and words cannot be too dense

•Use of imagery is important, but cannot be too small

•Always list what users care most about first

•If an LBS can explain employee can explain something, cut information about it and encourage user to ask LBS about it

•Ground the attributes to make them feel more "material"

•Always use positive encouraging language

•Do not completely rely on color coordination

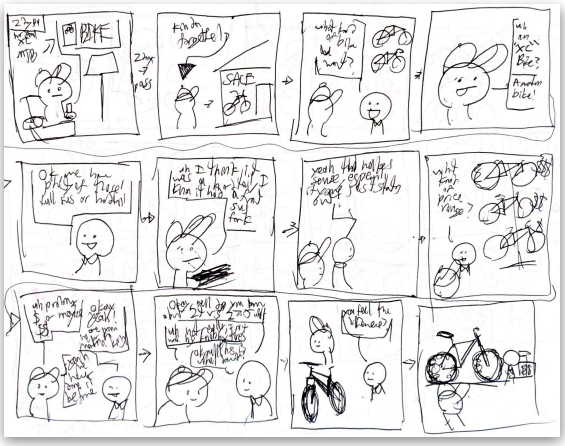
Storyboarding as Ideation and Evaluation

Goals

Following my final presentation, I had some loose ends to tie up when it came to my design. I had been able to test it, and bodystorm participants going to a bike shop after by playing pretend with those I tested with, but I would not feel good about convincing a friend to spend hundreds of dollars on a bike for the sake of my project. I also got a lot of feedback in the form of questions asking how this would actually effect the shopping experience. To answer this, and to predict if my takeaways empowered the user like I hoped, I did some story boarding. I played around with a few scenarios that would play out at an LBS after a user has used my application:

- 2 Forgetful users going into shop
  - 1 asking the LBS clerk to help jog their memory (a)
  - 1 using their phone to remind themselves of info (b)
- A user coming in for a bike the shop does not have in stock and having to look for an alternative (c)
- A user having to deal with a rude clerk looking down on them for their choice in bicycle (d)

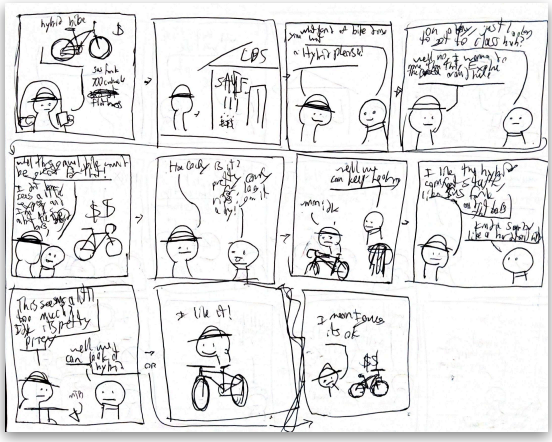
A



B

C

D



Story Boarding Insights

I got a decent amount of insights from these storyboards, and its was fun to be able to use both my expert side and novice side to take up both sides of the conversations within these storyboards. Overall, this exercise didn't really give me any answers, but gave me directions. To what questions I should look to answer in further testing. Some main takeaways were:

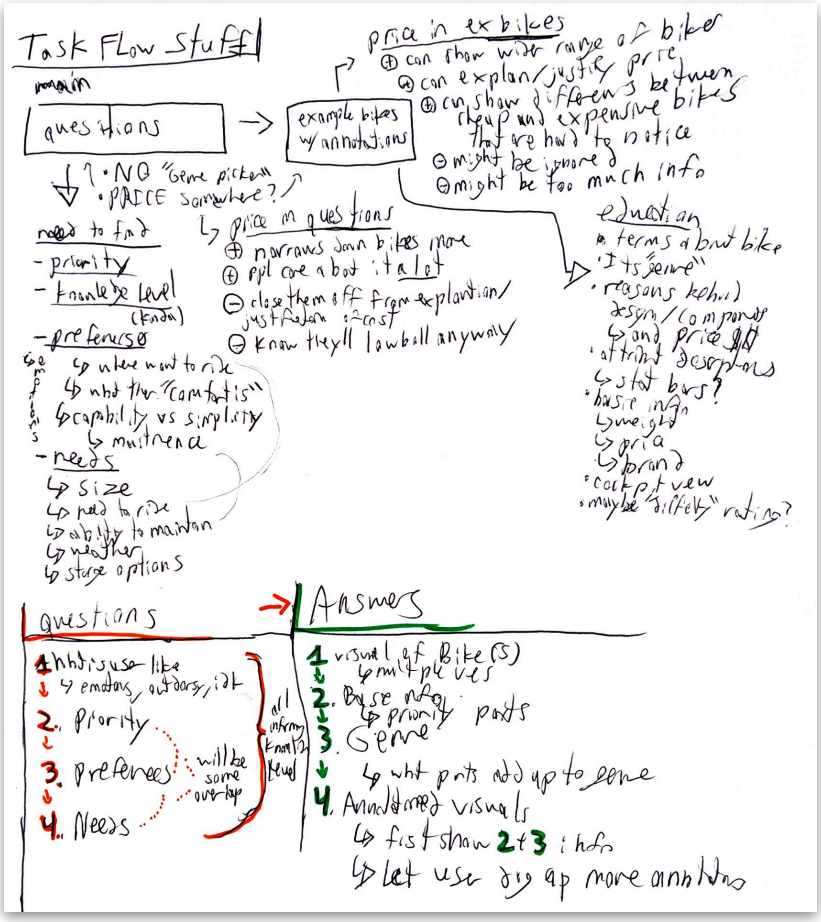
- My experience does not take in modifying bicycle, which might be necessary
  - My research showed that more than I thought were open to modifying bicycles, but often did not think about it in the moment
- The list of defining parts under "for you" might be a pretty good way to identify alternatives for bikes, but it is hard to say
- The app's positive attitude towards their bike might help counteract a clerks negative attuned towards it
- Doubtful that alternative bikes proposed by clerk would be less expensive than one they were seeking.

Task Flow

Early Ideation

Going into ideation, I used all the design principles to create a simple structure for the design I wanted to create.

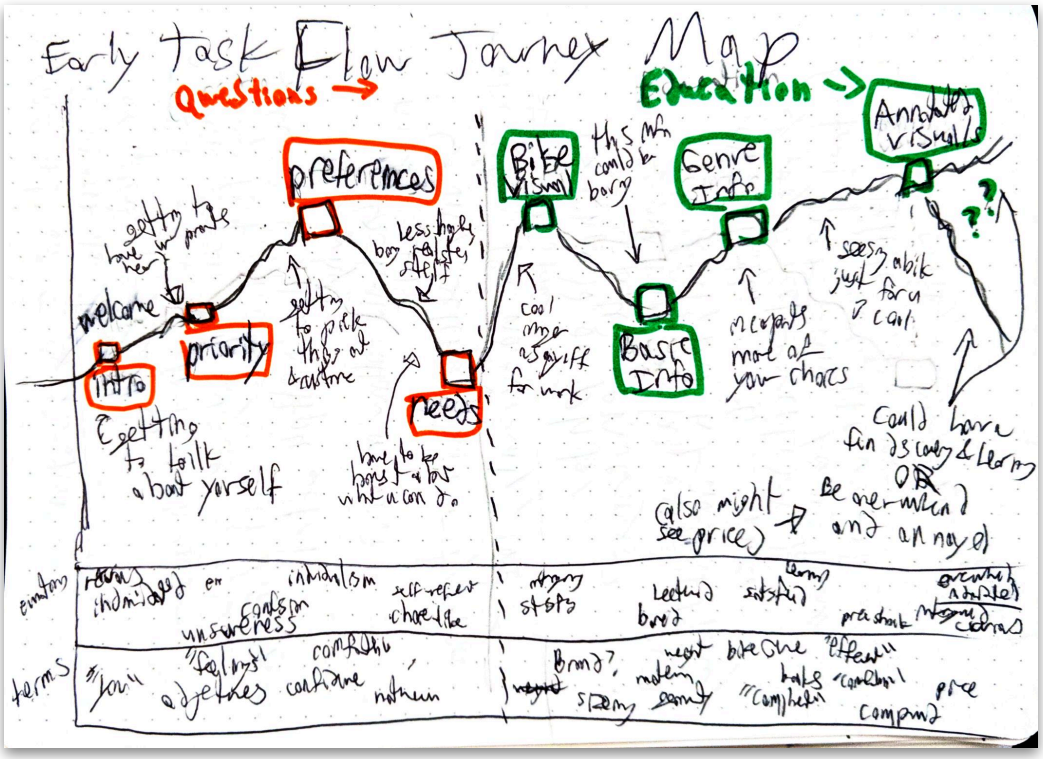
1. **Questions:** Gathering info to inform what type of bike is right for the user, and how to inform them about that bikes features and attributes
   i. Find the users **knowledge level**
   ii. Rank the user's **priority** of what parts of a bike they pay the most attention to
   iii. Find the user's **preferences** of how they want their bicycle to feel and operate
   iv. Find what the user **needs** the bicycle to do
2. **Education:** Explain what makes this bike right for them, frame this in a way that educates the user about the bike and empowers them to buy one from an LBS
   i. Visual of bike(s)
   ii. Basic info
   iii. Bicycle genre and attributes
   iv. Exploratory annotated visual of bicycle



Rough sketches of how this task flow might work, and narrowing down exactly what the questions need to ask

Task Flow Journey Map

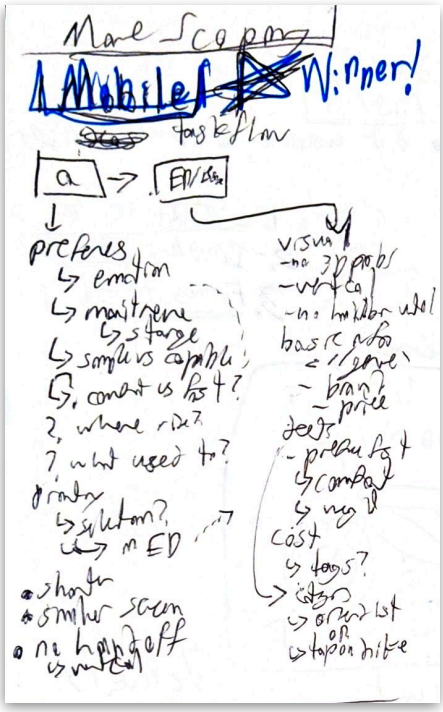
I wanted to evaluate how this task flow might help the user and fit into their overall journey, I created a journey map of this very early task flow.



To help this evaluation, I compared this to the journey map of my observation experience of the LBS to see where it shared high and low points, and see if it was repeating some of the same mistakes LBS make. This was not the best comparison, as my design is *not* meant to replace an LBS experience and instead supplement it, but I was able to draw some insights from this comparison:

- LBS experiences have technical terms peppered throughout, while I am trying to avoid that with my task flow. I am not sure if this will overwhelm the user with a bunch of terms they haven't seen before appearing, or allow them to learn them more easily as explanations will be more readily available.
- You can feel and ride a bicycle at an LBS, something not available during my design, so I will have to deal with bicycle "feelings" differently.
- My design has a very clear division between questioning and learning, which could be an advantage or a detriment compared to an LBS.

Early Mobile Task Flow



When scoping down, I broke down a task flow of a desktop to hand off experience, and a fully mobile experience. I liked the break down of the mobile experience better since it felt more connected to the following LBS experience, and had a much more reasonable amount of work connected. It was more concise to fit the mobile context, and only consisted of two main stages, the questions and the education.

Questions Section

This section is a to simpler than past, and I cut out a lot of the information I felt necessary to gather. This hurt to do because one of my main principles was to not assume too much about the user, but I needed to make this reasonable to complete, and I only cut what I had already gained a lot of information on from my research. This was the knowledge level of the user and what part of the bikes they notice first. I also cut things like the sizing of the frame, since that is something that would be discussed in an LBS anyway. This left me with just getting their basic preferences and needs for a bicycle, a much more realistic task.

Education Section

The education section would now be designed to be used both before going to an LBS to explore the parts and attributes of a recommended bicycle and during the LBS shopping experience as a backup tool for both knowledge and emotional support. This change made it simpler than past designs, but I had to make sure thatches section could be both easy enough to use during a conversation with an LBS employee, and exploratory enough for the user to engage and learn about a bicycle beforehand.

Ideation Insights

A major part of this task flow, something I learned from the Journey Mapping and observations, is that reaching the empowerment I desire requires the steps of this experience to work in tandem.

- If the questions fail to connect the user to the recommended bicycle, they will not bother to learn about the bike

- If the education fails to engage the user, they will learn little about the bike and just forget what little they learn
- If the education does not provide backup information and confidence inside the LBS, the user will falter at the climax of the journey

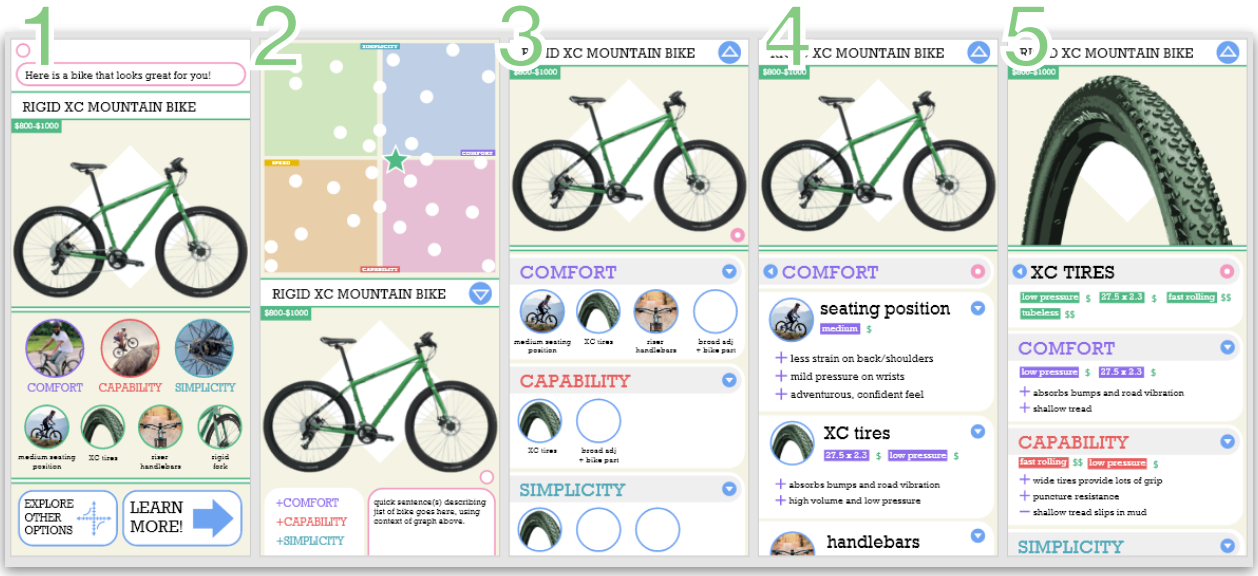
This makes the task flow very critical to the success of this design, and this is something I would keep in mind when continuing to ideate up it, the questions, and the education.

Further Ideation of Task Flow

Overview

Going into mockups, my task flow both expanded and solidified. The major insights and principles leading this were:

- A conversation style flow of information
- Not overwhelming the user
- Introducing them to terminology in context
- Supplementing an LBS, not replacing



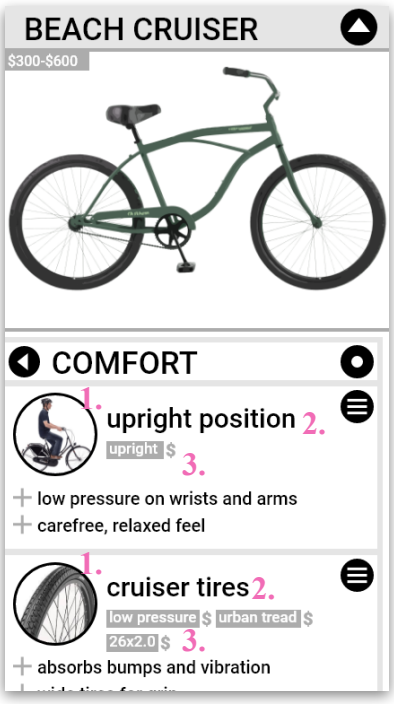
These screens show the basic task flow of the education section, the part mainly focused on during my ideation

1. **A welcome screen to the bike,** allowing user to learn more about bike or explore other bikes. This now precedes the graph screen as it could easily overwhelm the user right after the questions, but still allows them to explore other options if they wish.
2. **The graph screen** is now optional, as it could be overwhelming and a general consensus from my testing is that user's trusted the app and would go with first recommendation.

3. **Overview of recommended bicycle.** A user could glance at this and take away most of the information they need to know, with imagery of parts being categorized by the attributes they effect. Users can select an attribute section from here and learn more about the pats that effect it listed below.
4. **Attribute detail screen.** This screen gives more information about the attributes by showing how the listed parts affect said attribute. From here the user can learn more about this specific parts
5. **Part detail screen.** This screen shows details about the parts, including all the technical tags and attributes they affect. It also includes further detail by showing the negative affects they might have. From here users can learn more about the attributes the part affects.

Translation Hierarchy

With new mockups came a very specific translation her achy utilizing imagery, labels, and technical tags. The purpose of this is to slowly introduce the user to words so they get the basic context of them, and allow them understand enough to ask questions about the terms or using the terms once in the LBS.



1. Imagery: This is the image in the circle, or picture above on the part detail screen. The user should be able to recognize this no matter what words they use to refer to it as. (Ex: a picture of an mountain bike tire will be recognized by people who call them big tires, MTB tires, or off-road tires)

2. Label: This is the label below the image, often a somewhat technical or specific term for the part. This connects the imager to what it would be called in an LBS, teaching the user that. (Ex: a user sees a picture of what they call an "off-road bike tire" sees that it is labeled as an "XC tire" and connects that the bike industry term for those types of tire is "XC tire"

3.Technical Tags: These are the tags connected to the bike parts. They have limited explanation, but are connected to the part in a way that gives the user enough context to utilize that in an LBS conversation. (Ex: The user further learns that these are not just XC tires, but fast rolling and tubeless XC tires. They might not know what tubeless or fast rolling means, but know they know those are attributes they can ask about)

Conversation Flow

As shown in the task flow overview, the user can switch from looking at attribute to part to attribute to part. This is in place to copy the flow of a **conversation** about a bike. This is important and implemented for a few main reasons:

•This is a **natural way** to walk about an object, and hopefully will make learning about the bike feel more like a **conversation with a friend** rather than a lecture.

•You have a conversation about a bike when buying it at an LBS, so this conversation should **prepare and help the user feel more comfortable** having a conversation about they bike at an LBS since they have kind of had one already.

Creating a Through-Line

Goal

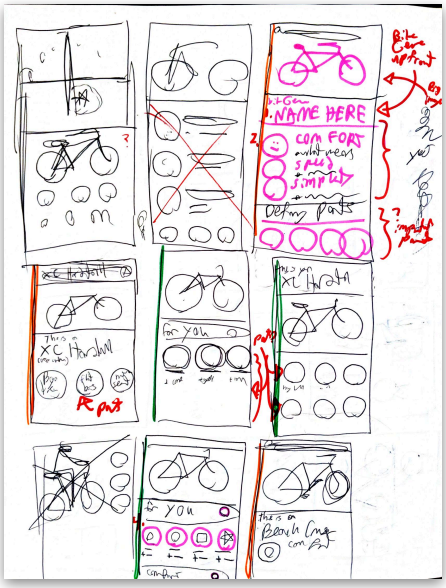
After another round of testing and feedback from a milestone crit, I realized my task flow needed to be more focused. The conversation style was good and all, but it was not clear to the user what they needed to take away before being ready to go to a bike shop. I started a redesign with the purpose of creating a through-line that quickly and clearly gave the user 3 main things:

- The ability to identify the recommended bicycle type at the store
- Basic info about the bike to act as a knowledge base during conversation
- Encouragement to communicate and ask questions

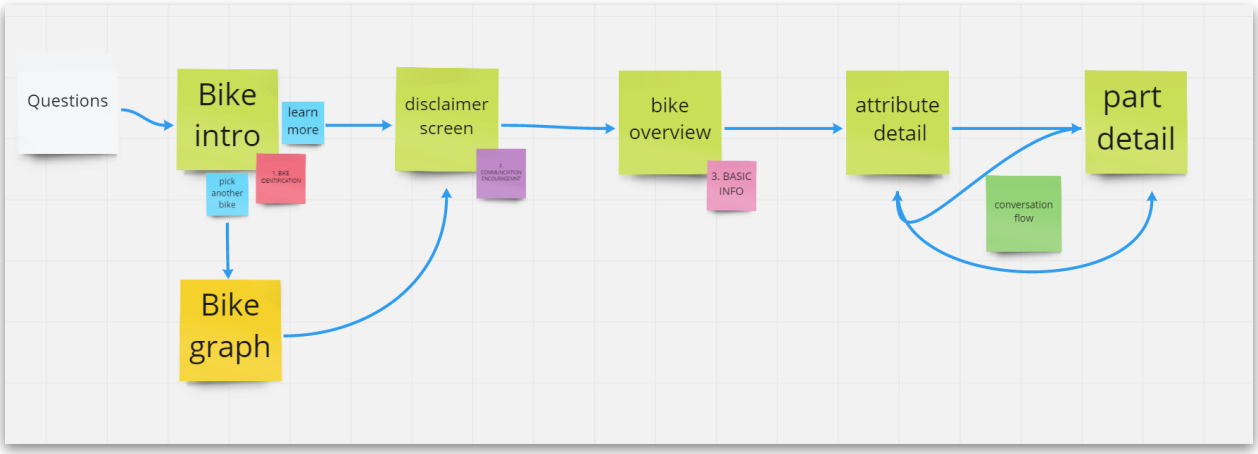
Sketches

I did some sketching to figure out how I could implement this through-line, and came up with some basic ideas:

- Emphasis on name and picture of bike
- A disclaimer telling the user this is just a summary experience
- Asking the user to ask questions
- Have the 3 main takeaways being the focus of first 3 education screens
- A for you section the emphasis the basic info



From here, I was able to get a basic idea for how the task flow should look, as displayed below:



Balancing Info

The first sections, from questions to bike overview, would take less than 5 minutes for the user to get to, and would give them the 3 necessary takeaways. However, from testing it showed that my users were not satisfied with this. This was for 2 main reasons:

•LBS bikes are pricy and could be a **serious investment** for a college student, so they wanted to do their due diligence and learn as much as possible

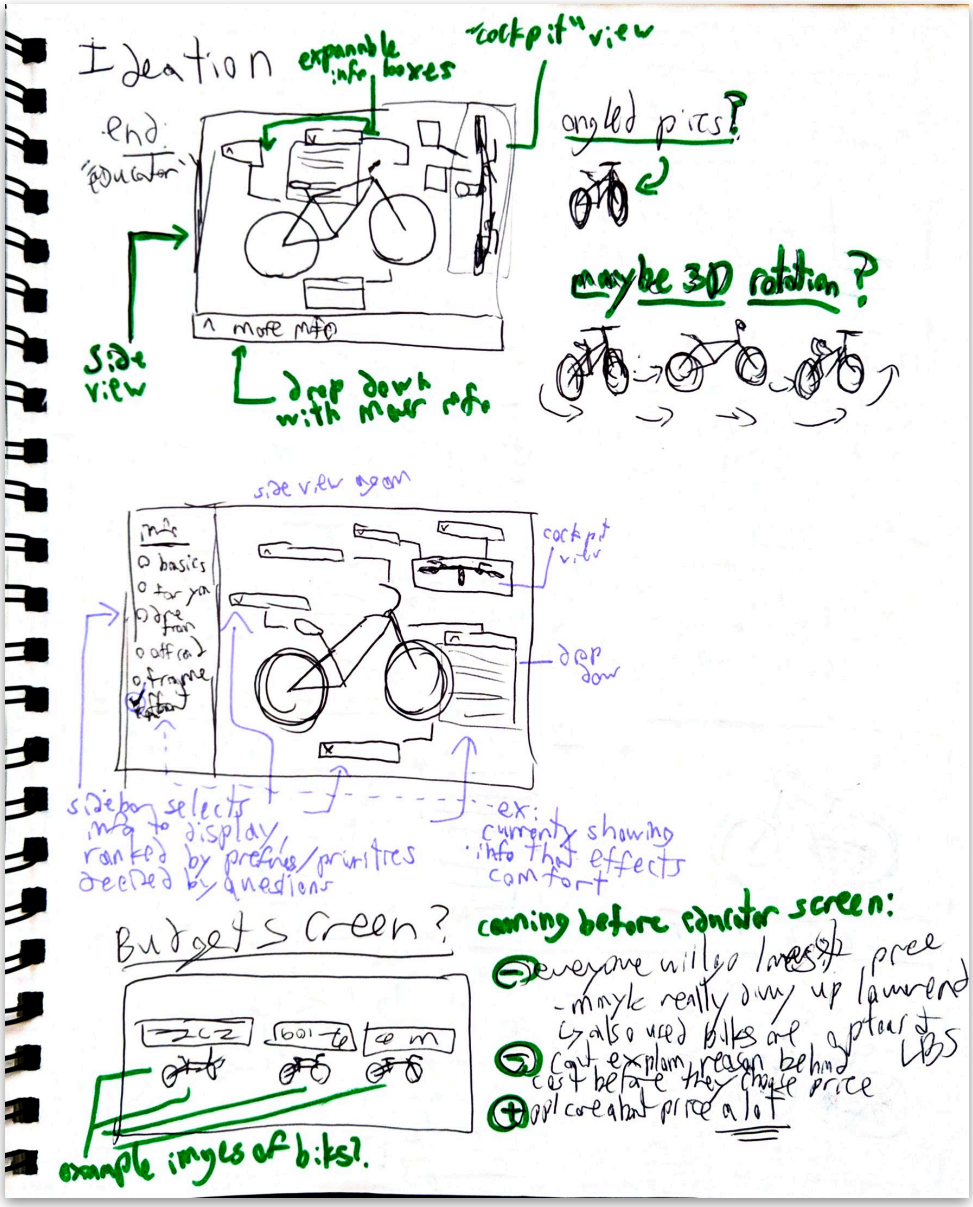
•They were **enjoying learning about "their" bike** and found it kind of exciting because it might be a bike they end up owning.

It seemed like my users wanted to keep learning, and some mentioned they would just keep exploring until they ran out of info.Because of this, I kept the conversation flow between the attributes and parts that was better for more in depth information. This comes after the main through-line is completed, so I do not think it will take away from that.

Education Section

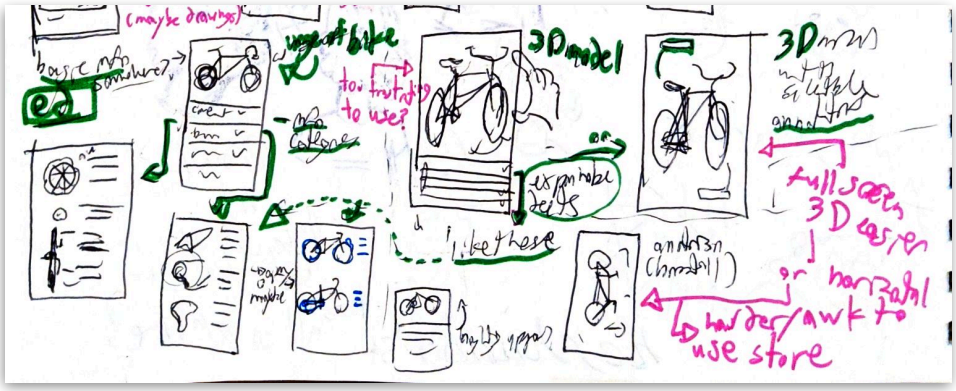
Early Ideation

I did not have many ideas for this section when starting this project, which is good because I have not been primed and the sky is the limit. This also makes starting ideation difficult, so I threw a bunch of ideas on paper and did my best to evaluate and annotate focusing on the principles of not belittling the user, not overwhelming them, and using what they care about most to focus the education. I also used the 8 principles of information architecture as I created these sketches.

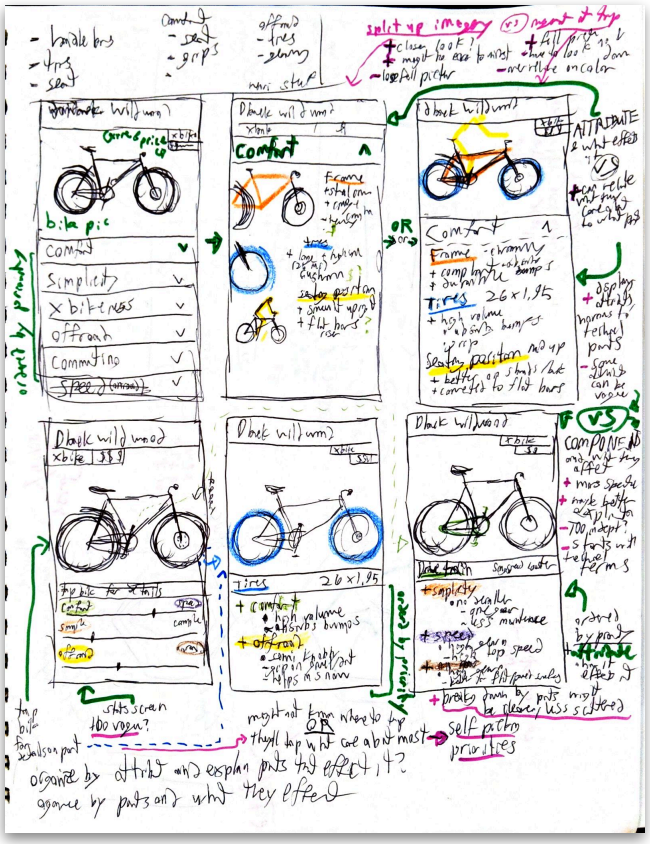


Mobile Ideation

It took me a while to reach this mobile based scope down, but once I did I had a ton of ideas for how the education system could be used both to learn about a bike and provide backup once shopping.



It was not long until I had a lot of ideas down, and in these ideas two organization methods of the information about the bicycle began to form. One was where the user could see the various **attributes** of the bicycle, and see what parts affected that attribute. The second was that a user could select a **part** of the bicycle, either from an image or a menu, and see information about that part and what attribute it affected, either positively or negatively.



To the right, you can see the first option above, with a menu breaking down the various attributes, listed in order of priority based off user inout from the questions. Below, you can see the second option, where a user selects a part form the the visual of a bike, and it describes the basic information about said part (ie diameter width, and tread of a tire) along with the attributes it affects. The main visual is complimented by a slider based ranking of the bikes complexity, speed, and terrain capabilities.

Choosing an Organization Style

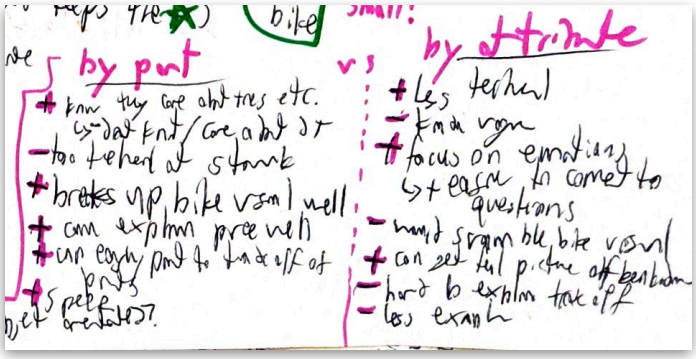
I wasn't sure how I should organize this education section just yet, but I had at least two main styles of organization:

By Attribute
User selects attribute poignant to them and explores what parts of bicycle affect that attribute and how

By Part
User selects a part of the bike important to them and explores what attributes this part affects and how

Comparison

Somewhat thinking these where contrasting ideas, I compared them to each other using basic heuristics and how they affected the information architecture.



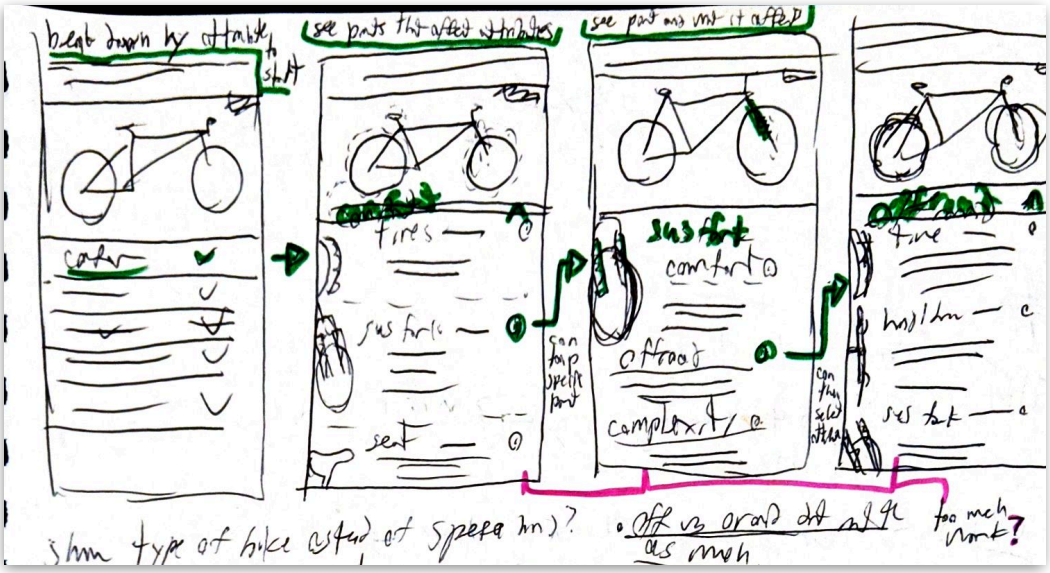
A heuristic evaluation of both by part and by attribute

By Part led to a more specific learning experience, but was more technically demanding for the user.
By Attribute was more vague and painted less of a picture, but felt more approachable.

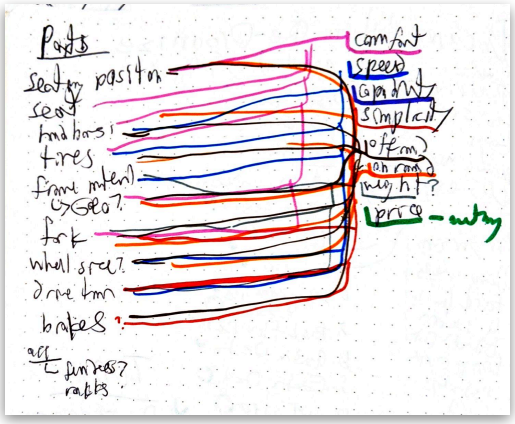
On major point was the fact that this would also have to be used in an LBS while talking to an employee, and I was not sure which method would prove better for that.

Combination

Feeling unsure of which to pick over the other, I tried my hand at combining the two organization methods by having one naturally lead into the other. This resulted in an experience that felt very exploratory and could allow the user the dive in and see the connections both between parts and attributes and a very whole understanding of the bike itself.



With this combination came the fear that this would increase the amount of work beyond what was reasonable for me. To explore this I broke the work down by the connections I would have to draw between parts and attributes.



In either case, by part or by attribute, the same connections would have to be drawn to explain how parts affected attributes. This meant that if I made the combination of the two methods I wouldn't have to do much more work bedsides designing both a screen that listed an attribute and what parts affected it and a screen for listing a a part and what attributes it affected. This did not feel like much work at all, so I decided on this organization method for the creation of my paper prototype.

Ideation Insights

These sketches involved a lot organization and exploration of how to visually connect the bicycle and its parts with the user. More things needed to be explored later, like conveying reason for cost, and a way to help define some technical terms, but for now I was trying to find more about the broad strokes. Some major insights that came from this ideation where:

- Visuals of bike could not be directly interacted with as reliably on a mobile screen
  - Unless I make use of 3-D model or zoomable render, which feels like maybe too much
- Organization of Education should encourage exploration in one context, but allow for quick access to information in another
- Visually connecting attributes/parts to the bicycle is important

- For increasing engagement
- Also for showing user the “big picture” of how bike came together

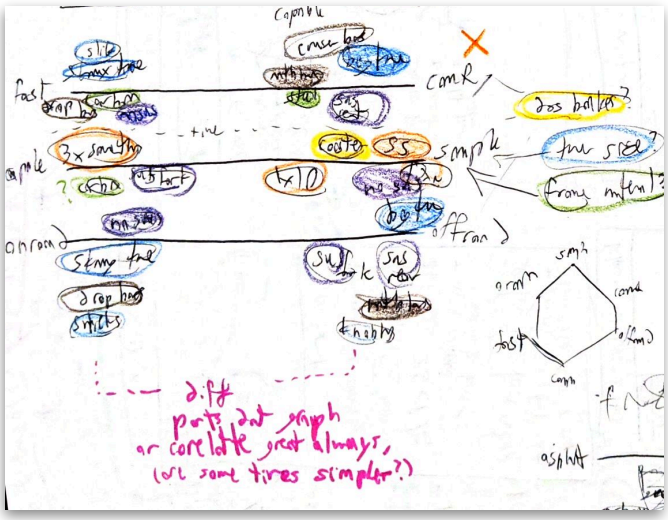
Education Data Visualization Ideation

Graphing Bicycle Genres

Soon into ideation, I decided that the bicycles that would be used as examples would not be a specific make or model (ie. Santa-Cruz Hightower Carbon+) because 1) there are way too many makes and models and 2) LBS's usually only carry a few brands, so a specific bike might not be too helpful. With this, I decided that the example bikes the app would recommend would be a prime example of various bike genres. However, I needed a way to visualize these in an intuitive and engaging way.

Attributes to Graph

I wanted to graph entire bicycles, and I wanted to use attributes that had a kind of trade off to them. This was because everyone wants a comfortable bike that is very fast and they can take anywhere, but such a bike is not possible without sacrificing one attribute or the other.



Everyone also wants a lightweight bike, one that is easy to maintain, and is capable in any situation. This led me to narrow down to 3 main dichotomies:

- Simple vs. Capable
- Off Road vs. On Road
- Fast vs. Comfortable

I utilized the graph to the left to see how different bikes and different parts of bikes effected these 6 attributes, and found that often things did not match up well.

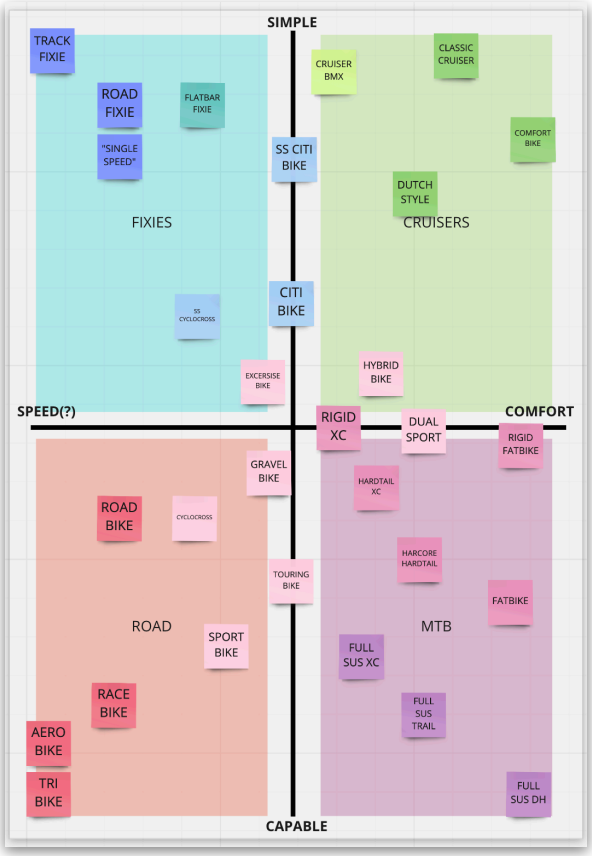
Eventually I cut off road vs inroad once I decided on a graphing method, leaving me with just **simplicity vs complexity** and **speed vs comfort**. This was because in and terrain and complexity graph, there would be next to no bikes.

Graphing Method

Through some early ideation and inspiration from how some bike retailers described their bicycles, I narrowed down to two main methods of graphing these bike genres according to attributes.

4 Attribute Method

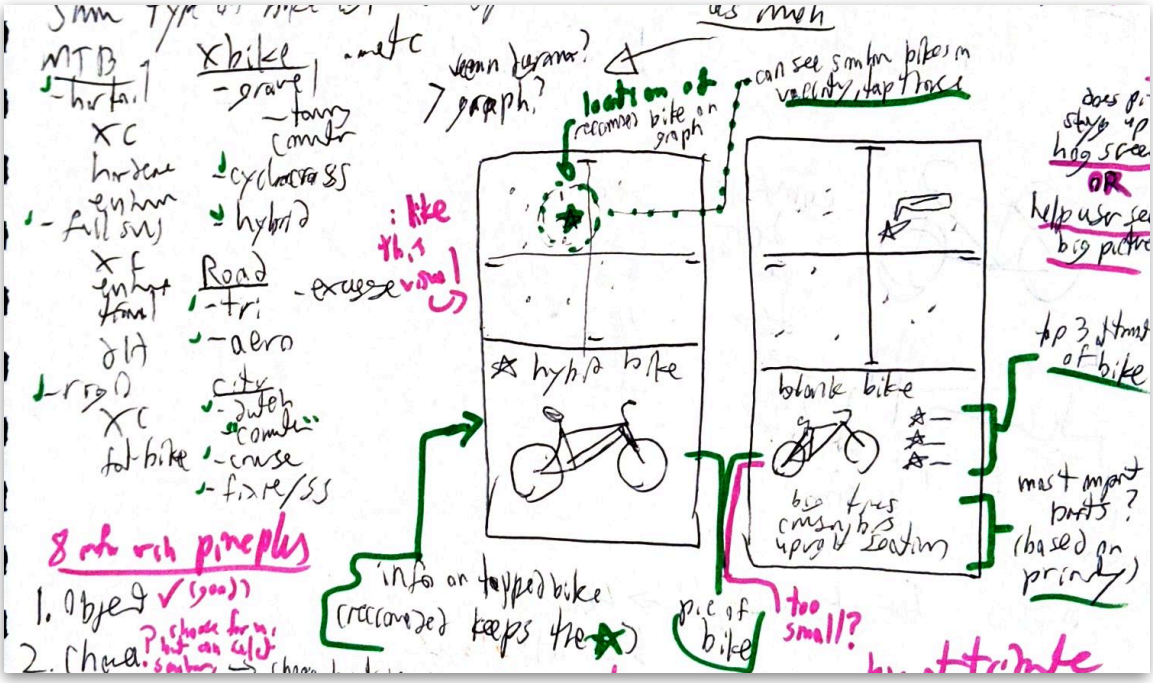
This was the graphing style I went with in the end. 4 attributes along 2 axis, creating a simple 2 dimensional graph where bicycles could be easily placed in accordance to their attributes. The Y axis was simplicity vs. capability, and the X axis speed vs. comfort. This method had some significant advantages over the other:



•Simple and easy to read
•Easy to see what bicycles are similar to each other by their proximity to each other.
-This could allow user to explore similar bikes using the recorded one as a jumping off point.
•Could be divided into 4 main sections, with four extremes to be used as examples (Track fixies, beach cruisers, triathlon bikes, and downhill racing bikes).
-These extreme examples could help give the user context to the bicycle recommended for them via comparison.
•Each of the 4 quadrants was similarly populated, showing a wide range of bicycles.

Graph Implementation into Education

My initial idea of implementing the graph into the education section is that it would be the “main” screen of that section, the one that comes right after the user finishes the questions.



The bike the design recommends for them would be highlighted with a star, and information with a visual of the bike would be below the graph. This basic information highlights the bike's import attributes and lists 3 parts that the user priorities, most likely the handlebars, tires, and riding position. The user is prompted to learn more about this bike, and the information below the graph expands into the education section where they can learn more about the bike, its parts, and main attributes.

The user can go back to this graph screen at any time during the education section, and can choose to look at any other bike on the graph by tapping on it. The recommended bike while stay highlighted with a star however, and may even have a circle surrounding it showing that those bikes are similar and most likely to also be a good fit for the user.

Ideation Insights

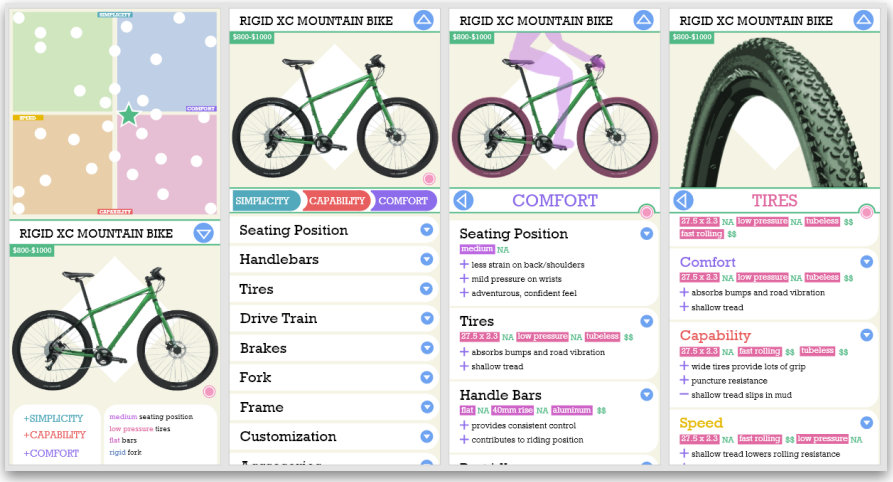
The main thing I learned I got from this was how I could use examples to improve the information architecture of the education. The graph and it's contrast between bike the user could explore should add a lot of exploration into bicycles if the user chooses to seek it out.

Further Education Ideation

Initial Mockups

After the paper prototypes, I did some further sketching with what I learned and created some mid-fi mockups to help me flesh out how I would fit the peccary info on a mobile screen, as well as learn more about using Adobe XD. A few key features of these mockups are:

- Color coding to different attributes
- Color coded "tags" including technical terms about the parts (put into sentences when "dot" is used)
  - A "value" assigned to these tags to help user understand reasoning behind generally higher cost of LBS bicycles
- Highlighting of bicycle at top corresponding to parts (when on attribute screen)



These mockups were pretty close to the paper prototypes, which had been fairly successful, but I think they had trouble translating into a digital mockups and it showed their flaws more. Some major ones were:

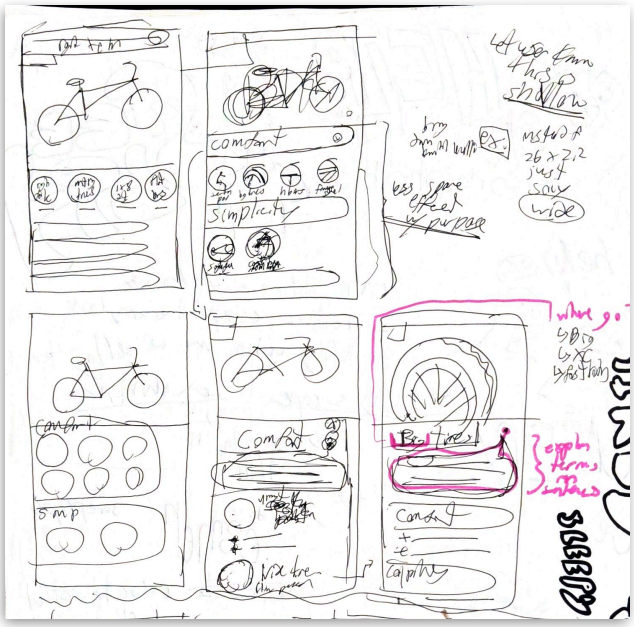
- Too much information and too dense
- Lack of imagery except at top picture
- Difficult to tell what might be a button and not
- Too much reliance on color coordination
- "Overview" of bike specifically disappointing, most comprised of just a list of parts

These issues in mind, as well as insights gained from testing and connections to other industries, I designed another set of screens to try to improve these issues.

Further Mockups

Sketches

Before I tried to re-do the design digitally, I went back to my sketchbook to get my ideas down as well as set some guidelines based on what I had learned.



These sketches were inspired much from the Wine Quizzes I took online, and like those I focused on imagery and breaking down the intonation in a better way. The main changes came to the overview of the bicycle.

•**Pictures of the parts** instead of just listing them

•**Attributes being broken up and acting as categories,** containing the parts that affected them

•No attributes at bottom of picture, instead spaced out below

Information Guidelines

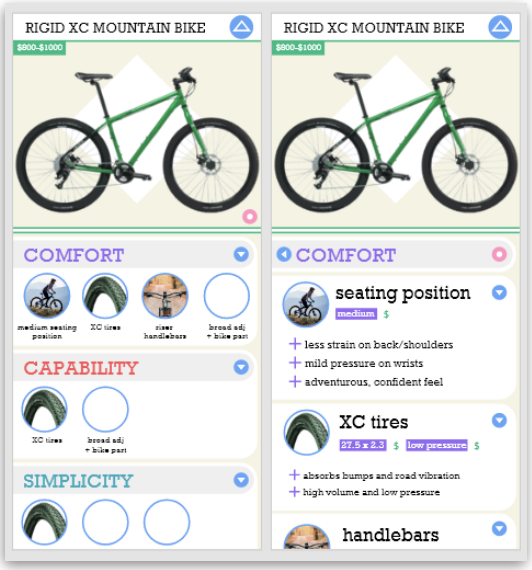
To contain the information I would put down, I made a short but strict set of rules for the information I could detail in the information section

- Only include what is both important to user and what would be important when buying bicycle (ie user might care about pedals, but this detail is not important when buying bike)
- Maximum of 3 “+”s per part per attribute
- List one negative (max) per attribute in part detail screen
  - This communicates that parts can have both upsides and downsides without giving to much info
- 4 max total info tags per part, and 2 max displayed when under an attribute screen

Digital Sketches

I played around trying to recreate these sketches digitally, and with that they evolved. These focused on visuals and breaking up the information into more palatable bites.

A big difference in this iteration is the inclusion of another screen welcoming the user to their recommended bike. It includes a overview using imagery, including the 3 main attributes and 4 major parts. This screen does not include the graph, but that can be accessed by hitting the explore more options button, otherwise they can learn more. Reasoning and more information is discussed under task flow.



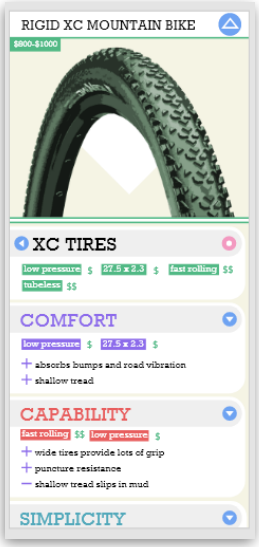
A lot of change went into the bike overview screen, major ones being:

•The 3 attributes acting as categories, containing parts that affect them

•Parts being represented with imagery in circles, with labels underneath

•Increased clarification into what is a button

This leads into the attribute screen, which is similar to the past mockup but more spaced out and clear. Highlighting the image up top has been ditched for including the imager first seen in overview screen in the description.



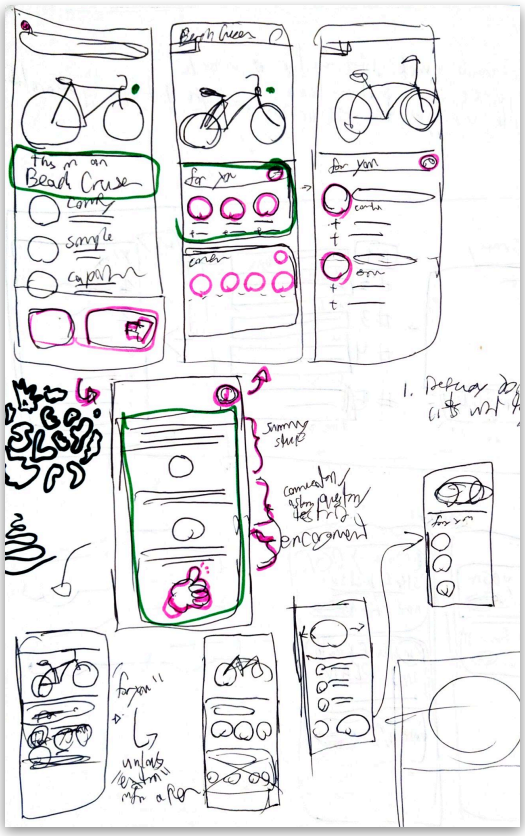
The part attribute screen is kept similar as well. Limits have been placed on information as discussed earlier. The tags are also all listed at the top without any color coding, and then broken down into colors as they affect the different attributes. This is to help show that an aspect of a part can have multiple effects on the bike (ie low pressure tires give both a smooth ride and good grip over bumpy/loose terrain). These tags at the top will also be used in the sentences provided by dot, like the past mockup.

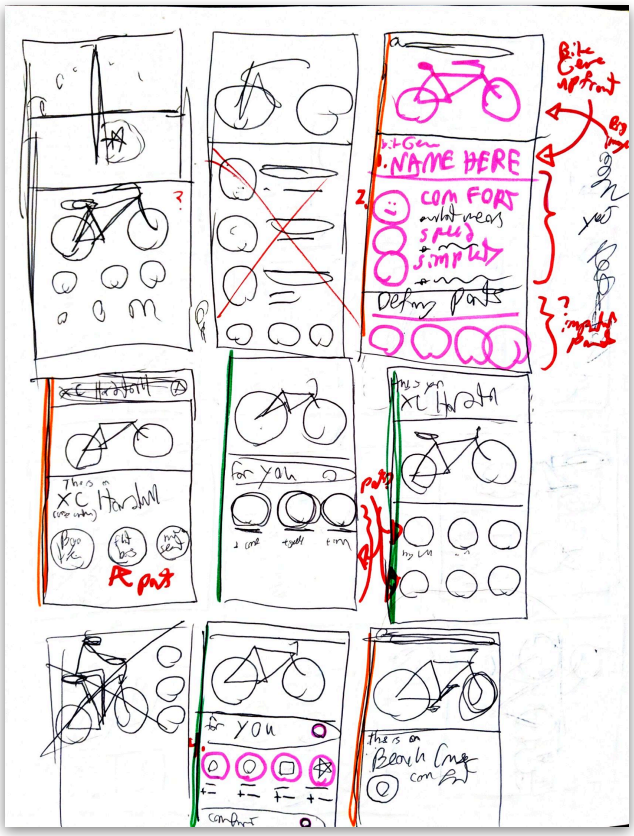
Final Round of Ideation

Sketches

My next round of ideation came after my final milestone and final round of testing, and I set myself some principles to lead me in this final round:

- Create an obvious and quick **through-line** that gives the user the 3 main takeaways necessary for empowerment
- Make most information so simple it causes my bicycle expert side **physical pain**
- **No subtlety,** make the important info and takeaways blatant to make sure the casual consumer know it's important





These sketches helped re-structure the organization of the education section in a way that created that obvious through line. Some noted changes and inclusions addressing this were:

- An added **disclaimer screen** after the user decides to learn more about the bike
  - Meant to encourage user to ask more questions at LBS by emphasis this is a summary experience

- Make user feel more comfy asking questions by telling them the bike shop employee won't be annoyed by lots of questions and works their because they love talking about bikes

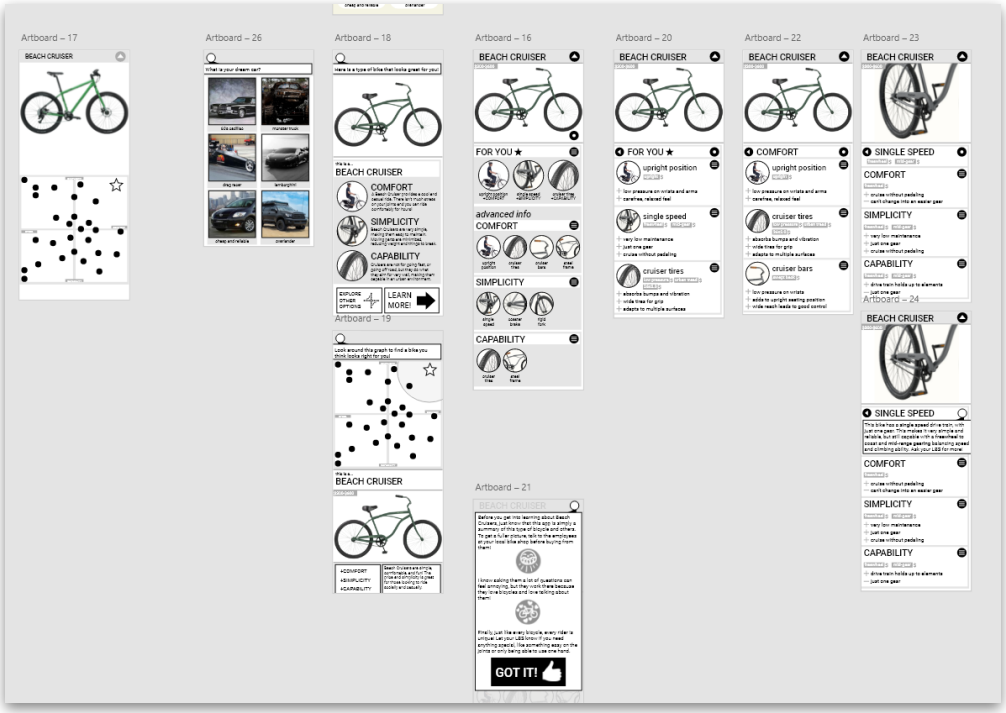
- A **for you** section at top of bike overview screen, marked as most important.
  - Gives basic info about bicycle and 3 most important parts, followed by the sections broken up by attributes/strengths

Further, some visual ideas that would emphasis this through line and decreased subtlety were:

- The **for you** section being at top of the bike overview screen
  - Also including bigger pictures and less parts that following sections
- More emphasis on the name of bicycle type on bicycle introduction screen
- Bicycle attributes taking up more space on bicycle introduction screen, followed by an explanation of what "comfort", "simplicity", etc means in this context

Mockups

For this final round of digital mockups following my sketches, I follow the same principles as those sketches. I also ditched the color scheme and some fidelity to focus less on visual design and more on what was important right now: information architecture and task flow.



Adobe XD workspace of these screens in creation

These mockups added the previously mentioned disclaimer, for you section, and reworked bike introduction screen. Notable changes and additions that came from turning sketches into mockups include:

- A star and larger images to put further emphasis on “for you” section
- Larger circle images of parts on bike overview and attribute detail screen
- Reworked graph screen to create a “circle of similarity” around recommended bicycle.

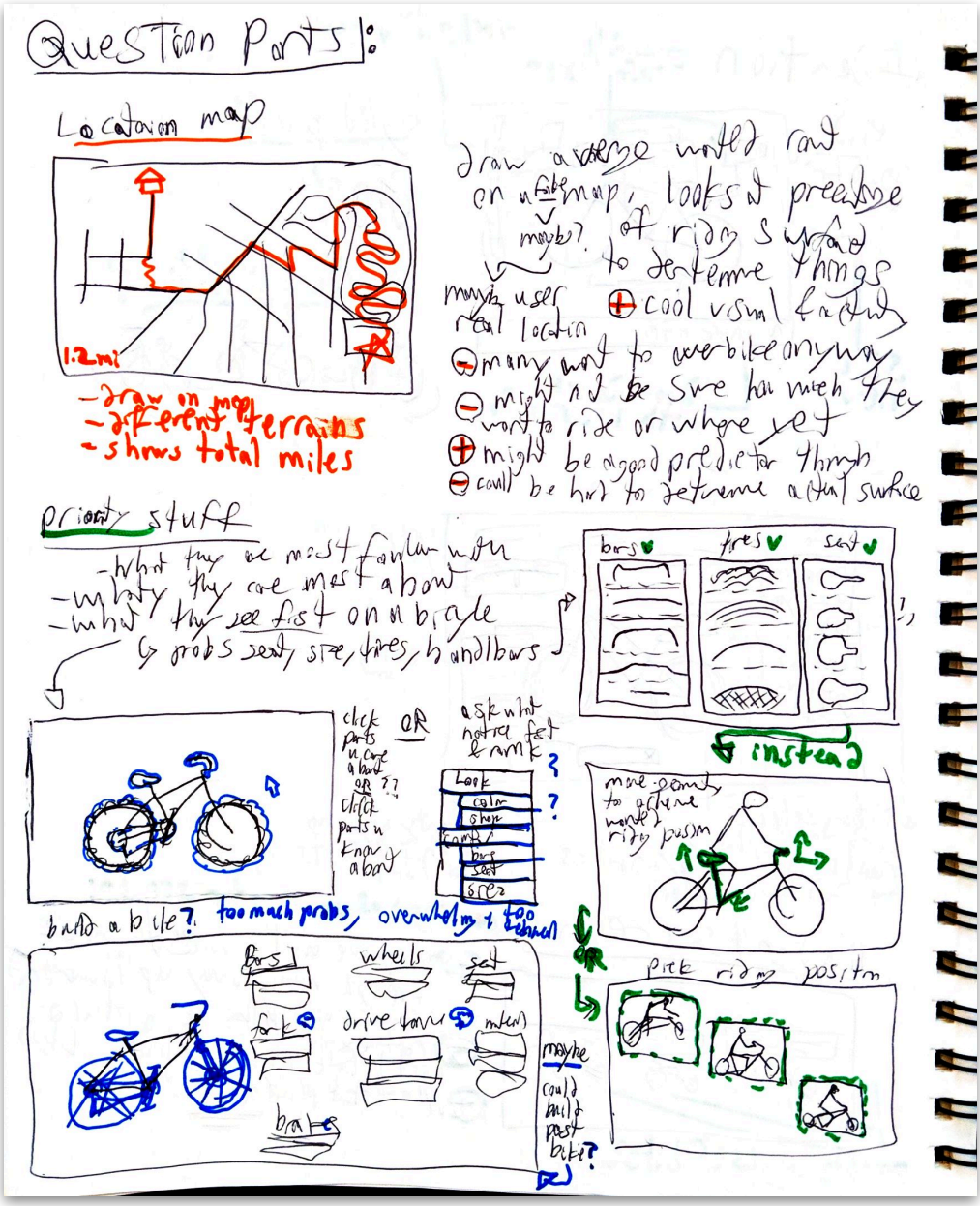
Ideation Insights

This final round of ideation did a lot to make the takeaways more obvious, even if it might have had to add more screens and sections. I feel like this was a necessary sacrifice, but my intuition tells me stripping it down instead would be more effective. Some of my testing insights disagree with this however. I think the framing of the disclaimer could be really effective, but I know that is not enough to really get that encouragement in the user, so I made sure to keep the further encouragement baked within dot’s statements further into the experience.

Question Section

Early Ideation

I had some ideas for question activities since my research last summer, so I first took inspiration from those to get the ideation ball rolling. All of the design priceless informed this, but the most where finding out what the user cared about the most and avoiding using technical jargon for this section. I evaluated as I sketched and annotated the sketches with those evaluations.



What not to Ask

My research gave me a lot of insights on how people can feel judged in a bike shop, and I want to avoid that feeling for my users as much as I can. To do this I am avoiding a particular set of questions:

- What is their weight?
- What is their gender?
- Are they a cyclist?
- How tall are they?

A lot of these have to do with physical traits or ability, so I am trying to avoid that as a whole. In cases such as height, the LBS employee will know enough about that and be able to pick from their stock, so size should not affect wether someone should ride an MTB or a road bike. However, I might include a question about any physical disabilities they might have and want to bring up with an LBS employee.

Mobile Ideation

As I began ideation of the question section, I knew there were still a lot of possibilities even within this more narrow mobile space. I began with some sketches that sued a lot of visuals to capture emotion, sliders to show trade-offs between things like capability and simplicity or comfort and top speed.

After a stop by office hours with Paul, the idea of using the mobile experience to do things like scan images of bike the user liked and found around campus to build a library of recommendations was formed. I also thought this could be used to scan a picture of a bike the user was upgrading from and using what the user liked or disliked about that bike to create recommendations. Both of these had solid foundations from my research findings, where I have noted friends brining up neat looking bikes they had seen on campus, or using their past bike as a

baseline. However, I was not sure if these ideas would expand my scope past a point where it was reasonable for me to complete.

Because of this uncertainty, I focused more on the education section and the creation of a prototype that focused on the education to see more about what info was necessary for me to gather, and how much time and effort I could put into the questions depending on how much I needed to put into the education, which for me took slight priority.

Ideation Insights

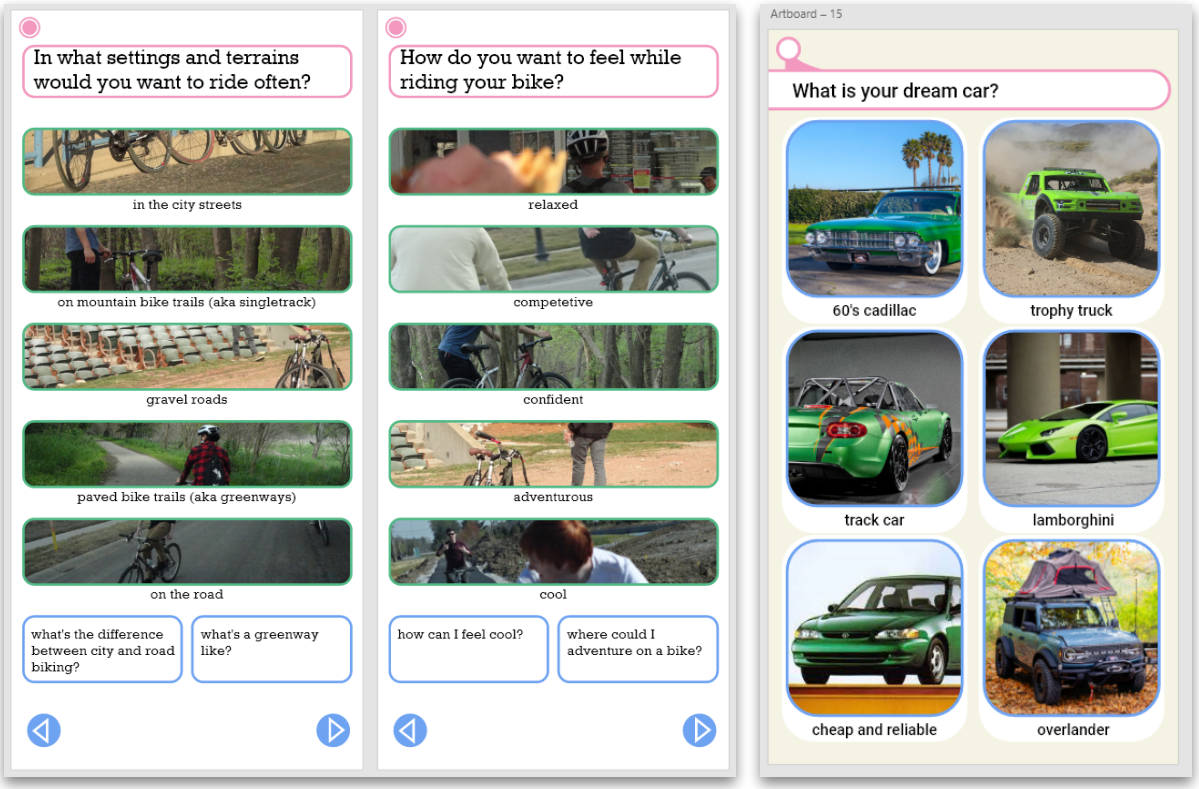
This start into ideating upon the questions has a lot of possible directions and methods, however I have my principles and mobile constraints to keep in mind.

- Possibility to use camera attached to mobile phone
  - Scanning interesting bikes or past bikes
  - Too far outside of scope?
- Use of imagery is very useful in conjuring hard to define emotions/feelings
  - Must make effort to avoid bias hidden in these images found in competitive analysis
- Needs to connect to education section
  - Draw personal connection to recommended bicycle
  - Introduce feelings and attribute to connect to later terms
  - Narrow the information covered in education, tailored to the user
- Keep things casual and positive!
  - Nice, fun language and appealing visuals
- Should be short and sweet
  - Both to conform to mobile expectations and not exhaust user before learning

Further Digital Ideation

As I contained working on the education section, I realized the questions would need to be short and sweet. This led to to see the buzzed personality questions I had thought of as too easy and a cop-out readier as an actually useful tool. Specific inspiration was taken from both learning about car sales as well as the quizzes from the wine picking websites I looked at in my research. Some main advantages were:

- Short and sweet to get the user though quickly
- A medium the user is probably already familiar with and might view as fun
- Not very technical and casual in nature
- Opportunities to use a lot of visuals
- Easy ability to gain lateral info without the user over thinking their answer



A few digital drafts of questions created in Adobe XD.

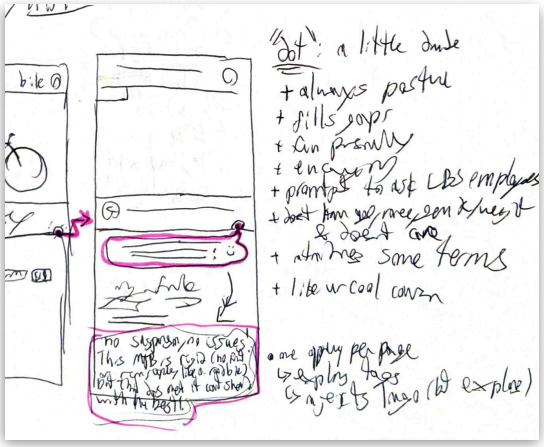
Most of my focus has been in education, and developing the questions further is in my future plans. However keeping them in mind is very important for the very important connections they bring to the education section.

Personality: “dot”

Need for personality

Up until a certain point in the project, my mobile design had focused mostly on just getting information across in an understandable and non overwhelming way. But after some evaluation and testing, I realized I had been neglecting to add encouragement and fun to the design, and I did not want my users feeling cold towards their bike. I want them to feel happy and excited. So I went about adding that in.

Overview



“**Dot**” is meant to be a personality within my experience, guiding the user through the questions and encouraging them during the education. **They have a few key traits:**

- Always positive
- No gender
- Thinks every bike that is recommended is the coolest bike ever
- Somewhat knowledgeable
- A “dude” type of attitude and lingo

Purpose: Encouragement

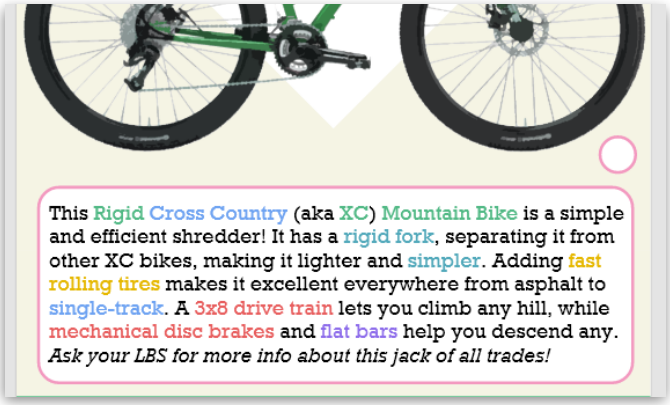
The first purpose for dot was to inject personality into the experience to make it more enjoyable. They will use a lot of positive language and talk about the bike is a very positive light in the education section, and in the question section would be asking the question and always have an air of welcomeness to them.

Purpose: Encouraging Question Asking

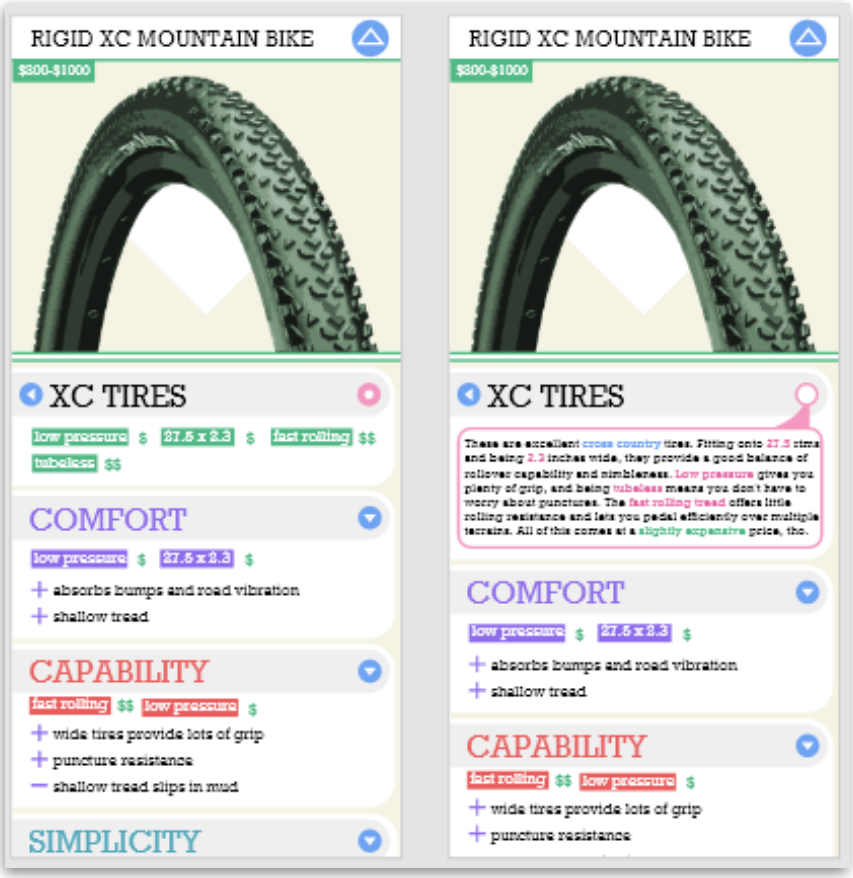
There are a lot of important things about bikes, and too much for me to explain in the app. Luckily this experience is supplementing the bike shop and providing the user enough information to be aware of what they don’t know and ask questions about it. However, to make sure this is clear to the user and to give them a little courage to actually do the asking, which can be intimidating for my user group, dot will use their speech bubbles to encourage the user to ask questions.

Purpose: Terms and Lingo

Bicycles have a lot of weird words, from the technical terms used in my technical tags, to the lingo and phrases like “shredding the gnar.” My testing showed that these terms became a lot clearer when used in full sentences, so dot will speak in full sentences. In these sentences they shall bring up the technical tags in context without full explanation, helping the user learn enough to ask about them. They will also use that radical lingo to introduce the user to some of it, as well as add some fun and humor to their personality.



In Use



On the left is a parts screen about a set of XC tires on a recommended bicycle. The pink dot is “dot” and when clicked, the screen would expand to the on on the right. Here dot is talking a little about the basic idea of XC tires, using the technical tags in the sentences, highlighted. Dot only appears once per screen, and will only share their wisdom when tapped by the user, avoiding the annoyance of similar personalities like Clippy.

Next Steps

Test & Evolve

There are more things I want to figure out, and a lot of questions have popped up after using storyboarding for evaluation. I want to continue to test and ideate upon this idea, hopefully doing more observations and body storming using an actual bike shop.

Focus on Questions and Dot

The education section was the main focus of this project this semester, but the questions are also very important and need their fair share of effort put in. I also want to flesh out the personality “dot” more.

Create Future Plans

I want to continue this project past this semester and I have a few ideas to do so. I might reach out to bicycle companies to try to get a job using it, or creating it myself, however I am not sure how to monetize it (especially because most methods of doing so would be detrimental to the user experience)

Appendix

Timeline

Week	Learning Activities and Milestones	Learning Activities	Readings
2		• Submit Specialization contract • affinity diagram past insights	E
3		• Identify and fill past gaps in research with persona and journey maps • bodystorm LBS • Compare bodystorming experience to past persona and journey map	

4		• combine to create key principles
		• Begin ideation using key principles
		  ◦ Paper Sketches
		  ◦ Paper task flows
		• Use comparative analysis to evaluate principles and early ideation
		• Compare early task flow to journey mappings
			H, G

5	Milestone 1 (monday)	• continue ideation • Creative data visualization of bicycle attributes connected to user feelings • Begin creation of paper prototype	D, J, F
6	(design challenge #1)	• Heuristic Evaluation of ideation so far • Finish creation of paper prototype • Test paper prototype	
7	Milestone 2 (monday)	• Evaluate results of prototype, • re-evaluate principles • Connect to other industries • Continue ideation of task flow	A, C
8		• Further ideate • begin use of digital tools	I
9	(midterm crits)	• Re-evaluate task flow of experience by journey mapping new experience • Finish rudimentary clickable prototype	

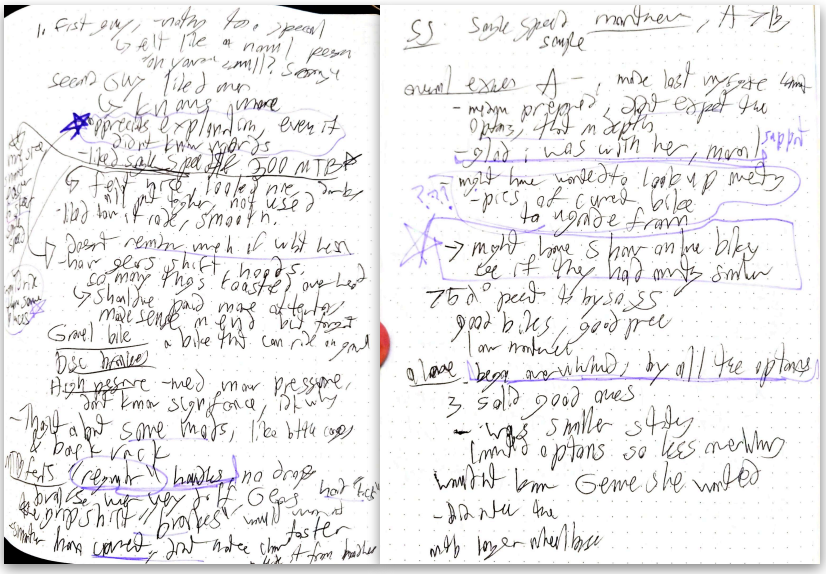
10	(design challenge #2)	• Test first clickable prototype • Evaluate and compare to new-experience journey map • Compare also to LBS journey map	B
11		• prototype and test the information design of informing user about bike type and attributes • Complete prototype and test with user, begin construction of bike	
12	Milestone 3 (monday)	• Finish construction of bike and begin week long evaluation of bike results • Continue Ideation	
13	(final presentations)	• Analyse results of real bike prototype • compile list of next steps	
14	(final presentations)	• Present findings and continue documentation • mockup new iteration based on next steps	
15	(evening poster show)	• Finish documentation of project	

Research

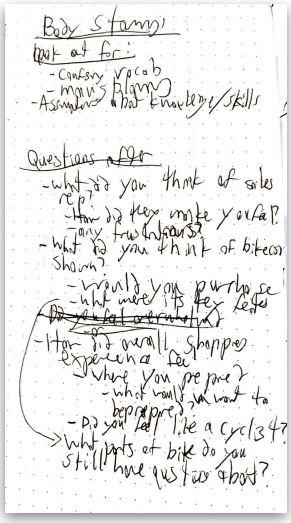
Prior Research

- Interview Protocol: https://docs.google.com/document/d/1zaRdmTjMCkcB4pmgt12aJ1_aGFxMRXODmY0CMBd4Gtc/edit?usp=sharing
- Picture Activity: https://docs.google.com/document/d/1q6acYSZz32m5qctm8RhgV6YLvJ9hCDM1HiF7KVcnKwI/edit?usp=sharing

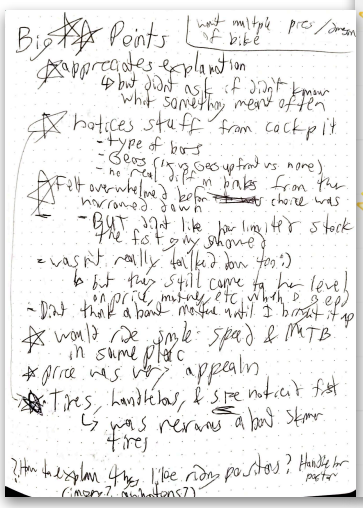
LBS Observation



Handwritten notes during interview directly after observation



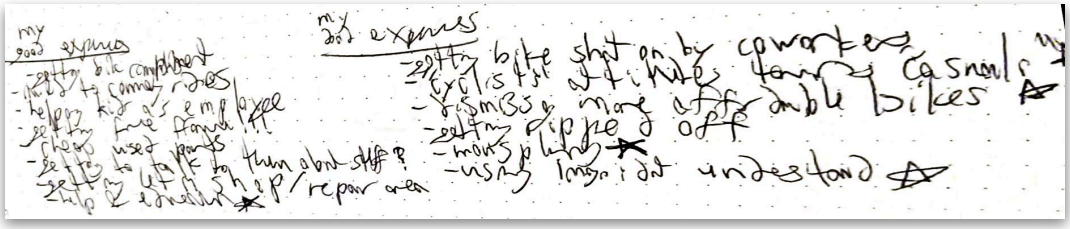
Reflective Notes taken after observation and interview



OBSERVATION NOTES
Maggie, College student, Bikes to class
-Appreciated explanation of things, even if she did not remember afterwards
-Usually did not ask about an unknown term if it was used in conversation with bike shop employee
-Noticed a lot of bike components from information gather via the "cockpit"
-Used one term to mean a certain part of bike, when in industry this term is used to describe a completely different part
-felt overwhelmed by choice before it was narrowed down by her size
-At same time,felt dissapointed/frustrated by initial and limited stock first employee mentioned
-Had 3 main bikes to choose from, liked that, narrowed to 2
-Would ride both a single speed with skinnyish tires and capable xc mtb same places (to class)
-Was thinking of getting into bikepacking with bro, didnt mention it until prompted really (maybe forgot?)
-Cheap price of SS was very appealing
-One mysgistic joke/comment at end at checkout, other than that very respectable and good employee
-Liked having me there as "moral support"
-Wish she had pic of old bike she could use to get upgrade from, or a link to a bike she found online to find something similiar

Loose Observation and interview protocol

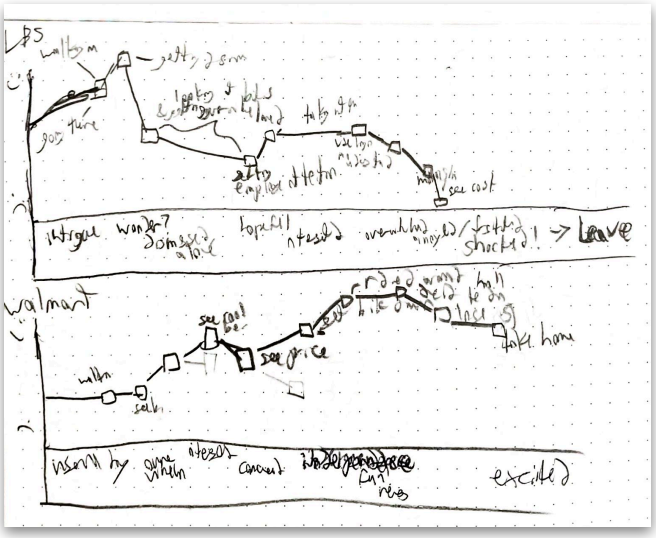
Minor Reflective LBS Research



Reflecting on my past experiences both shopping in and working at a bike shop

Ideation

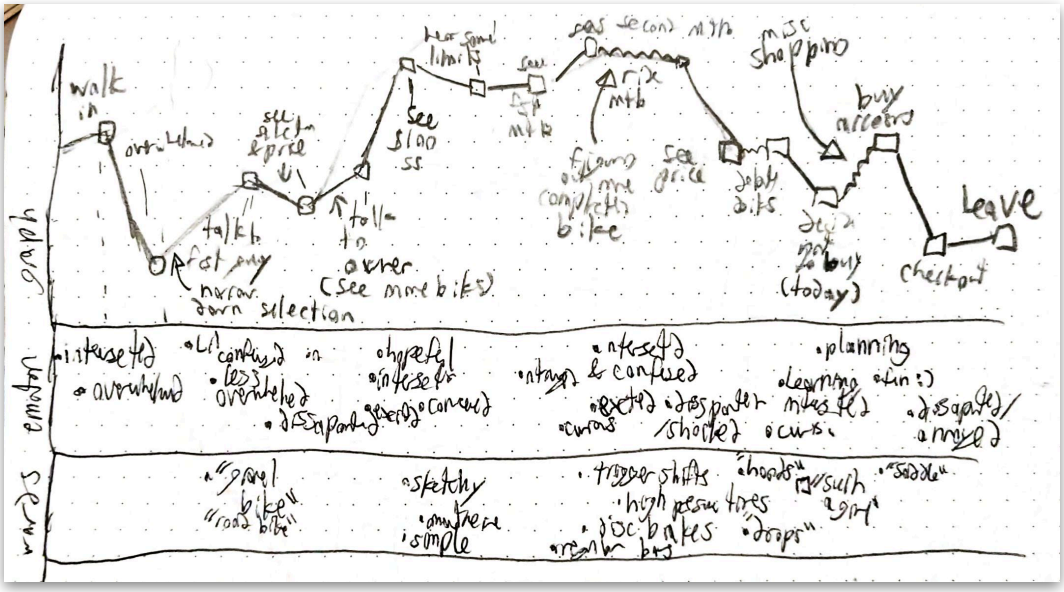
Journey Maps



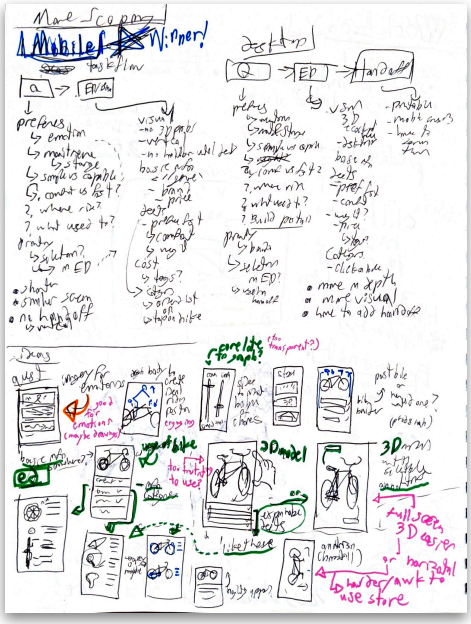
Both Prior Journey Maps

Top is of an LBS shopping experience, Bottom is Walmart bike shopping experience

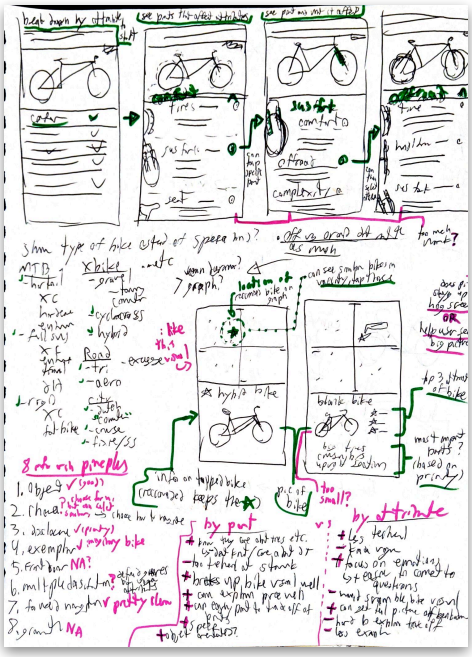
First sketch of the LBS observation journey map



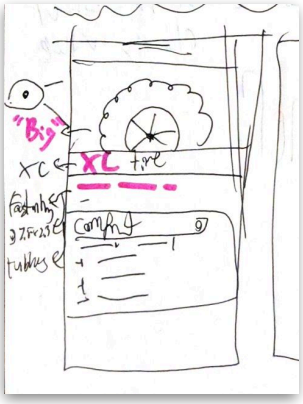
Sketches



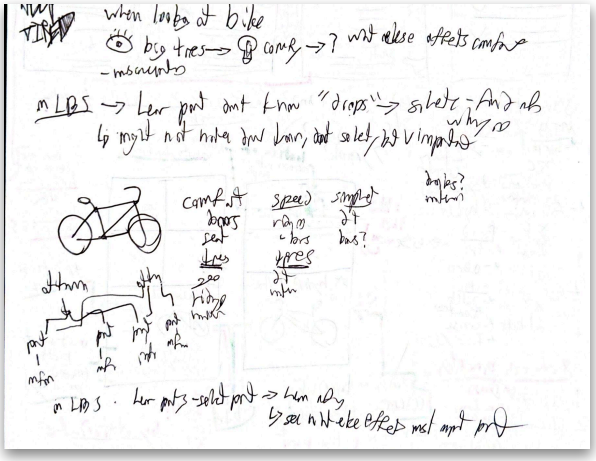
Full image of task flow breakdown to decide on mobile, and the early ideation that came from it



The ideation of combination of by part and by attribute organizations followed by implementing the graph into the education section



A sketch made as I was figuring out a translation hierarchy for the education section

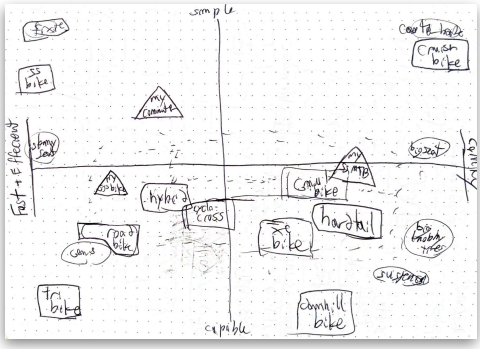


Documentation of thoughts on task flow of the organization of the education section. Special thought when into what the user would want in an LBS experience, namely quick access to information about

I sketched a lot during ideation.

Data Visualization

From my prior work this past summer, I had created a graph in an attempt to visualize different part of a bike, and how they made a bike more comfortable, faster, simple, or capable.



This graph was broken down with 2 axis:
•Comfortable VS Fast
•Simple Vs Complex
It also was mainly comprised of parts of bikes, and not whole bicycles as I now wanted to display. I felt this was a solid jumping off point, but needed more work to be tailor fit for my experience.

6 Attribute Method

One idea involved a graph with 6 points, forming a hexagon. Each point would have of the the attributes assigned to it, with the dichotomous attributes and opposing ends. This was inspired from a couple places, breezer.com and how they described their bikes, and some silly Twitter quizzes that told you what kind of goblin you are.

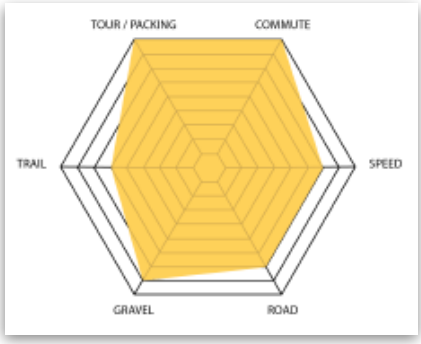
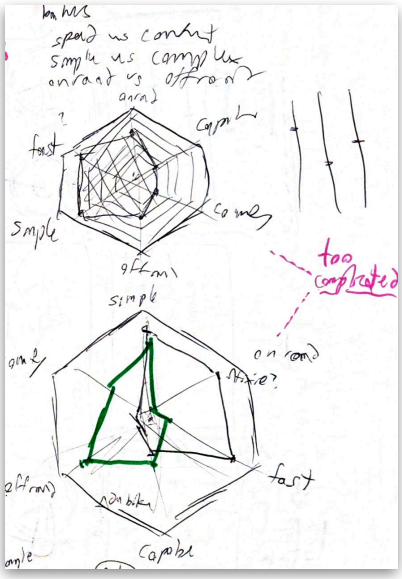
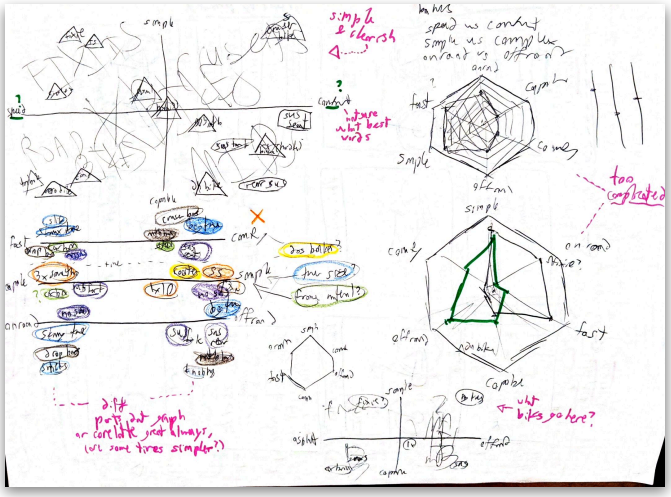


Image from breezerbikes.com



However, in the end, I decided to not go for this style of graph for a few main reasons:

•It was overly complicated
-Could easily intimidate a casual consumer
•I could not position bikes on this graph, and instead just draw a visual which would be compared to another bikes visual
•6 attributes felt like too much
-Off-road vs On-Road was not very useful anyway

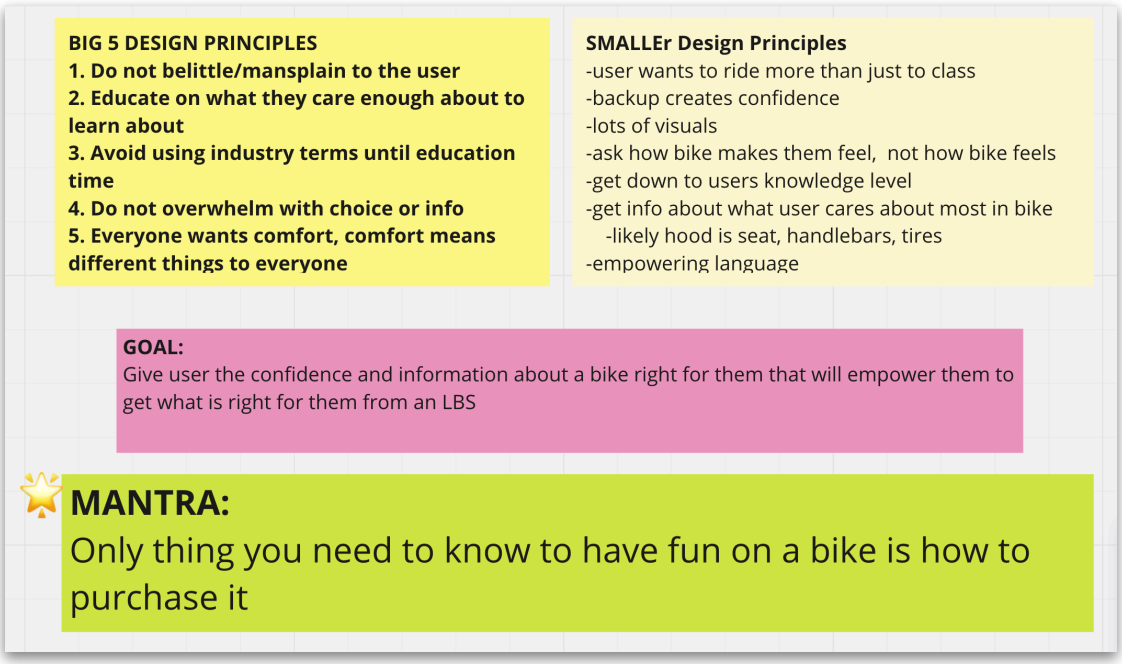


Full page of ideating upon how to visual the attributes of various bicycles into a graph

Draft Principles

Minor Design Principles/Insights

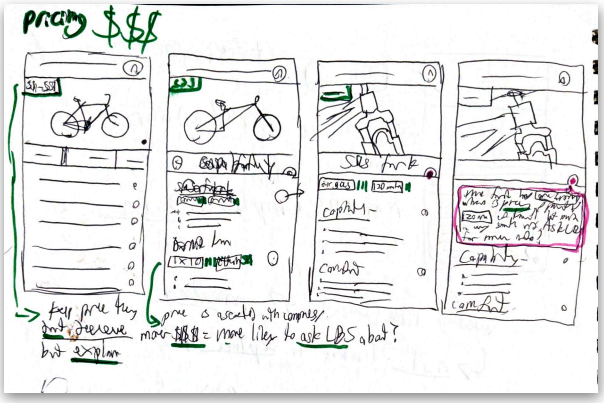
- User wants to ride more than just to class
  - If not they would be happy with any big box bike
  - However, they still view bikes primary as fun toys, not a serious hobby
- Backup adds confidence
  - Confidence is key part to empowerment
- Use lots of visuals
  - Both for courting emotion and displaying bicycle
- Ask they want a bike to them feel, not how they want a bike to feel
  - Everyone describes how a bike feels differently, if they can even find the words at all
- Get down to user's knowledge level
- Draw a connection between user and bicycle
  - People can often feel an emotional attachment to a bicycle, start that connection here and they might want to learn more about a bike
- Gather info on what attributes/parts user cares about most
  - This allows me to narrow down what they want to learn about and present that first
- Use empowering language/design



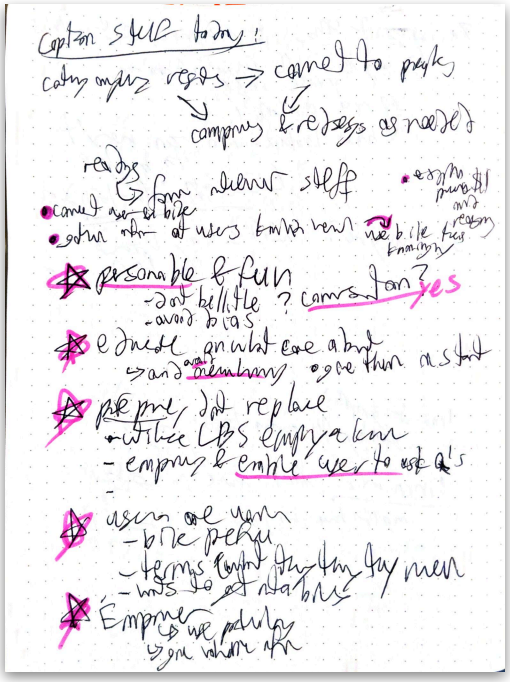
Draft principles for both the major and minor design principles at this early stage of project.

Prototype Testing & Results

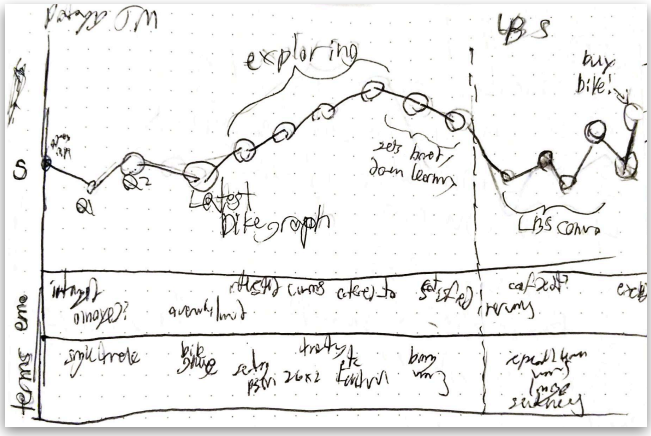
A screenshot of me and a friend body storming an LBS experience during the first round of testing. I am acting as a bicycle salesman and him a customer who has used my prototype before going to buy a bicycle.



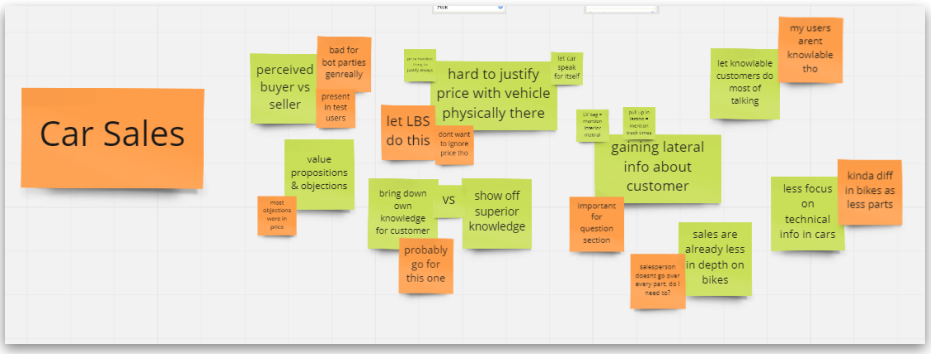
Sketches trying to figure out how I should represent pricing and value in my education section.



Some notes as I re-evaluated my main principles after doing the first round of testing

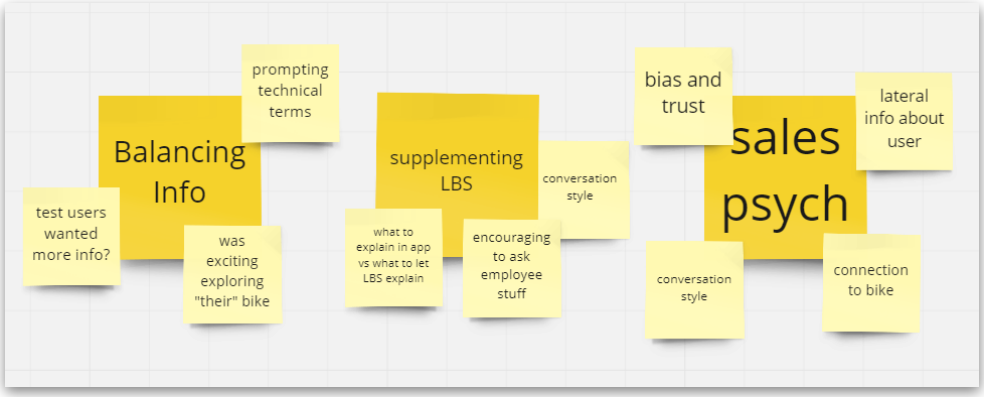


A journey map of the experience as I saw it during the prototype testing. The main insight being how excitement built up for a little during the education section, and then plagued and started to drop before the user said they were done with this section.



A compilation and semi-affinity diagramming of notes and insights taken from my time looking at the car sales industry, primarily from an interview with the ultra luxury car salesperson.

The main goals and insights I had in mind (mostly from the car industry and prototyping) when developing my first and second drafts of the digital prototype.



fin.

References

[Purdue Library] VanHulle, Lindsay. "Selling Cars without a Showroom; Awaiting New Store, Staff Faces Challenges, but Sales Are Still up." Automotive News 94.6903 (2019): 43. Web.

[Purdue Library] Wang, Jerred Junqi. "First Taste of Freedom: A Cultural History of Bicycle Marketing in the United States." Journal of Sport Management 33.3 (2019): 244-45. Web.

Nemko, Marty. "Buying A Car". Psychology Today, 2016, https://www.psychologytoday.com/us/blog/how-do-life/201612/buying-car. Accessed 27 Jan 2021.

[Purdue Library] Segar, Michelle, Taber, Jennifer M, Patrick, Heather, Thai, Chan L, and Oh, April. "Rethinking Physical Activity Communication: Using Focus Groups to Understand Women's Goals, Values, and Beliefs to Improve Public Health." BMC Public Health 17.1 (2017): 462. Web.

Liu, Gloria. "Hey, Bike Shops: Stop Treating Customers Like Garbage". Bicycling, 2019, https://www.bicycling.com/culture/a27496999/bike-shops-need-change/.

Stott, Seb. "The Ultimate Guide To Bike Geometry And Handling". Bikeradar, 2020, https://www.bikeradar.com/features/the-ultimate-guide-to-bike-geometry-and-handling/.

Hatten, Paul, and Jessica Pray. "How To Choose A Bike". REI, 2018, https://www.rei.com/learn/expert-advice/bicycle.html. Accessed 27 Jan 2021.

Holladay, Matt. "The Eight Principles Of Information Architecture". Medium, 2018, https://medium.com/@hollabit/the-eight-principles-of-information-architecture-6feff11f907a.

Christoph Ungemach, Adrian Camilleri, Eric Johnson, Rick Larrick, and Elke Weber. "Redundant Information As a Choice Architecture Tool: How Attribute Decomposition on Displays Can Be Used to Highlight Important Dimensions For Consumers." Advances in Consumer Research 40 (2012): 298. Web.

[Purdue Library] Thudt, Alice, Perin, Charles, Willett, Wesley, and Carpendale, Sheelagh. "Subjectivity in Personal Storytelling with Visualization." Information Design Journal 23.1 (2017): 48-64. Web.