



GYMNASIUM

---

UX  
**FUNDAMENTALS**

---

*Lesson 6 Handout*

*Watching Users*

# ABOUT THIS HANDOUT

This handout includes the following:

- A list of the core concepts covered in this lesson.
- The assignment(s) for this lesson.
- A list of readings and resources for this lesson including books, articles and websites mentioned in the videos by the instructor, plus bonus readings and resources hand-picked by the instructor.
- A transcript of the lecture videos for this lesson

## CORE CONCEPTS

1. Use analytics to see what your users do.
2. Set goals, and then watch for problems. It's not enough to just look at stats. We need to set goals for what we want to see, and then watch our stats to see what might go wrong.
3. Hold usability tests-- those are the one on one tests-- to see what our users think.
4. Understand the cycle of user experience design. Namely, first you design and then you watch users and see what they do with your design. Then, you repeat the process.

## ASSIGNMENTS

Your final assignment has two parts: a usability test of the prototype you built during the previous session, and the organization of all the elements you've created so far into a portfolio-style piece that documents your process.

### PART ONE: USABILITY TEST YOUR PROTOTYPE

Select three to five people to observe using your prototype. They should roughly fit the category of your audience. You won't need each person for more than 10 or 15 minutes. Each usability test should follow this procedure:

- Select a person to interview and ask their permission. (If it helps, explain that you're a student and need help on an assignment.) They can include the same people you worked with earlier.
- Explain that you're testing a prototype, and that some things might not work, but they should use it as if it's a real website.
- Explain that you're testing the prototype, not them — that anything they find confusing is helpful for you to know about — and that they shouldn't worry about hurting your feelings with their feedback.
- If you don't already know this information, ask them a little bit about themselves and their habits around booking flights or finding restaurants.

- Explain that your project is for (booking flights/finding restaurants) and ask them to use it to do so, while thinking out loud about what they're seeing. Note: If the person you're talking with doesn't exactly fit the audience—for instance, if the site is for single people and the person is married—ask them to pretend as if they were single and think out loud with that in mind.
- If the user runs up against a problem in the prototype (for instance, faked data that's confusing, or they click a link that's not hooked up to anything), explain that the prototype isn't fully functioning but ask what they would expect to see if it were functioning. If the user reaches a dead end in the prototype, it's okay to direct them back to a spot where they can continue to work.
- Take notes on what seems easy and difficult for them.
- Be sure to collect the person's age, name, and profession. Sometimes it's easier to ask this at the end of the interview, if it's a stranger. First names are sufficient; you don't need to collect more personal information than that.
- Thank them for their time! If you did "Starbucks testing" or approached someone at a public place, it might be nice to buy them a muffin or a coffee for their time.

For inspiration on how the conversation might go, see Steve Krug's usability testing script. (Krug's script is more in-depth than the description here, but it can give you a good sense of tone and attitude.)

## **UX FUNDAMENTALS PROTOTYPE USABILITY TEST**

Your name \_\_\_\_\_

Project chosen \_\_\_\_\_

(Booking a flight or finding a restaurant and making a reservation)

Medium chosen \_\_\_\_\_

(Website or smartphone app)

My user is a \_\_\_\_\_ who needs to \_\_\_\_\_.

For each observation, include:

Subject's first name, age, profession:

Observation notes:

Trouble points:

Summary:

## **PART TWO: PACKAGE YOUR PROJECT**

Our final class deliverable is to package the project you've created over these last few sessions into a narrative, to be potentially included in your portfolio. Your package could be in HTML, PDF, a Word document, or something else—whatever works for your portfolio.

Also, this is "student work" and a vignette of a project, not a full project. It's meant to demonstrate your ability to think critically about your users and how to make a product that's targeted towards them.

The minimum structure of the package is the following:

- Project description (the project type, medium, and “my user is a \_\_\_” statement)
- User research and interviews, from session 2
- Wireframes, from session 3
- Menu items (site map), from session 4
- Screenshots and explanation of prototype, from session 5
- Usability test summary, from session 6

Once this is collected, add explanatory text for each section, describing your thinking and how each step is targeted towards your audience. Pro tip: follow the UX “secret sauce” of talking to users, and show this package to a designer or hiring manager for their feedback. Make revisions to the package based on their feedback.

When it’s complete, gather the elements into a single file format (PDF or Word are ideal) and post to the UX Fundamentals forum.

Congratulations! Once you’ve passed the final exam, please collect your certificate and let us know what you think!

## ASSIGNMENT EXAMPLE

Here’s an example of this assignment in PDF format, from a student who completed the course (this example is also included in the lesson 6 folder).

[https://gymnasium.github.io/GYM-103/Lesson\\_Files/UXF\\_Lesson\\_06\\_Student\\_Example.pdf](https://gymnasium.github.io/GYM-103/Lesson_Files/UXF_Lesson_06_Student_Example.pdf)

# RESOURCES

- (Article) Optimization Experts Share Their Favorite Google Analytics Reports: <https://cxl.com/blog/optimization-experts-share-their-favorite-google-analytics-reports/>
- (Article) How to Identify Your Online Target Audience and Sell More More: <https://cxl.com/blog/how-to-identify-your-online-target-audience/>
- (Article) Guide on Performing A/B Testing: <https://cxl.com/blog/ab-testing-guide/>
- (Article) An A/B Testing Case Study: <https://cxl.com/blog/case-study-how-we-improved-landing-page-conversion/>
- (Article) The Risks of Quantitative Studies: <https://www.nngroup.com/articles/risks-of-quantitative-studies/>
- (Article) Multivariate Testing Case Study, for Hawk Host: <https://blog.hawkhost.com/2010/02/21/multivariate-testing-a-real-life-example/>
- (Article) A Case Study in the Redesign of a Pricing Page: <https://vwo.com/success-stories/basekit/>
- (Article) Three Uses for Analytics in User Experience: <https://www.nngroup.com/articles/analytics-user-experience/>
- (Article) Case Study of Using Analytics in a Design Practice: <https://www.smashingmagazine.com/2013/09/data-driven-design-in-the-real-world/>

- (Article) Case Study on Expedia's \$12 Million Form Field: <https://www.zdnet.com/article/expedia-on-how-one-extra-data-field-can-cost-12m/> and <https://web.archive.org/web/20101103121445/http://www.silicon.com/management/sales-and-marketing/2010/11/01/expedia-on-how-one-extra-data-field-can-cost-12m-39746554/>
- (Video) A Sample Usability Test, by Steve Krug: <https://www.youtube.com/watch?v=QckIzHC99Xc>

# INTRODUCTION

*(Note: This is an edited transcript of the UX Fundamentals lecture videos. Some students work better with written material than by watching videos alone, so we're offering this to you as an optional, helpful resource. Some elements of the instruction, like live coding, can't be recreated in a document like this one.)*

This is UX Fundamentals, an online course developed by Aquent. This is lesson six. It's our final lesson together. Today, we're talking about one of the keys to being a user experience designer-- and that is watching users.

We'll go through two techniques for watching users: *analytics* and *usability tests*. Analytics let us see users by the numbers and usability tests let us talk to them one on one. The goal is to understand what users are doing, and whether they're happy doing it, because happy users make for good business. For instance, we'll talk about how one design team used analytics to make their company 12 million extra dollars a year.

Today's session will be quick and useful, as always. There'll be an assignment and a brief quiz, and our final assignment of the class which is a portfolio-style piece combining all of the work that you've done so far. We'll talk about that at the end.

## Today's big ideas:

1. Use analytics to see what your users do. We'll talk about analytics, or stats, and how we can use them for design purposes.
  2. Set goals, and then watch for problems. The key here is that it's not enough to just look at stats. We need to set goals for what we want to see, and then watch our stats to see what might go wrong.
  3. Hold usability tests-- those are the one on one tests-- to see what our users think.
  4. Understand the cycle of user experience design. Namely, first you design and then you watch users and see what they do with your design. Then, you repeat the process. We'll talk more about how you can do this, with lots of examples.



# BIG IDEA #1

**USE ANALYTICS TO SEE WHAT YOUR USERS DO.**

Let's start with Big Idea #1, that you can use analytics to see what your users do. Analytics is the practice of taking data and finding meaningful patterns from that data. In this case, it's how customers use your website. Whenever a customer uses a website or an app, there's almost always a log made detailing what pages they visit and what time they visit them.

These logs don't record information like the person's address or phone number, but they do record what that person looked at and when. And usually, the logs look something like this. There's lots of data there, but not very readable to us. And so a number of services have popped up which take logs like this and turn them into this.

This is a screen shot of Google Analytics and it's much more readable. This is a free service offered by Google, and there are lots of other comparable analytics services. Generally speaking, they all work in roughly the same way. In this session, we're going to use Google Analytics as our example. Analytics programs like Google Analytics let us see what pages are viewed on our website and how users interact with content.

For instance, this chart shows us what pages were viewed and how many times they were viewed over a certain time period. The number one page is this slash. And the slash is just shorthand for the home page. In this case, the home page was viewed 296,414 times. In addition to knowing what pages were viewed, we can tell what kind of device our customers were using.

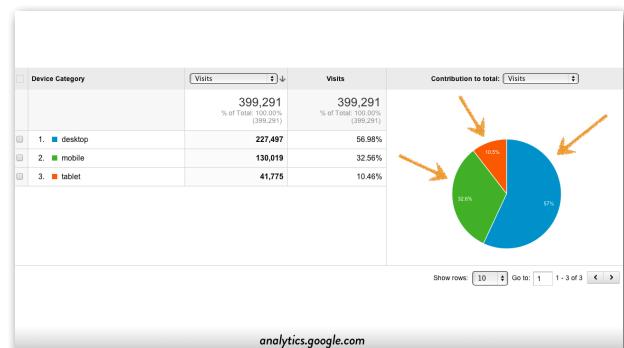
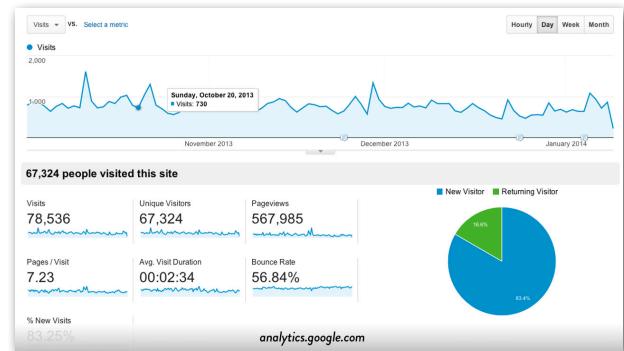
This chart shows that of all the users who came to the website, 57% were on some kind of a desktop machine. 32% were on a mobile device, like a smartphone. 10% were on a tablet. Analytics can show us where our users live. This chart shows that most of the visitors came from the United States. 284,000 of them came from the US.

The United Kingdom was second, supplying about 30,000 visitors and you can see the rest of the countries down the line. Analytics programs like Google Analytics sometimes also show this in map form, which can be handy if you have a multinational audience. We can learn about repeat visitors too. How many of our viewers are coming back for the first, second, third, fourth time.

For instance, in this chart, we can see that 80% of the viewers of this website are brand new. They've never been to the website before, ever. And 20% are returning visitors of some kind. There are also statistics that are more directly helpful to designers, like what users are clicking on a page. Here's the website for National Geographic photographer Joel Sartore, who's been nice enough to share some of his data with us, thanks Joel!

This is a page that lists all of his photo galleries. And our analytics software can put an overlay on top of it, color coding the different links and showing how many people clicked on them. It's kind of like the heat maps we've seen in earlier sessions. Except they're not where people have been looking, they're where people have been clicking.

In this particular example, the red ones are things that have been clicked the most. So these photo galleries down here are the most popular from this page. They actually get the most clicks. So does this link over here on the left hand side. It says "popular." It's gotten the most clicks out of anything on the left hand side.



So using this, you can see what your users are doing. And we can use the data to make better design choices, and to settle arguments with our bosses and with our clients. Settle arguments, that sounds good! What do I mean by that? Well, here's some examples. Let's say we want to know if our client's Facebook page is helping the website.

Our client comes to us and says, we need more "likes". You know what I mean by likes? I mean the Like button. You've probably seen it. Facebook wants us to put it all over our sites and on the internet. Starbucks, for instance, has a Facebook page and has generated 35 million likes. That's impressive. That is a lot of presses of the Like button.

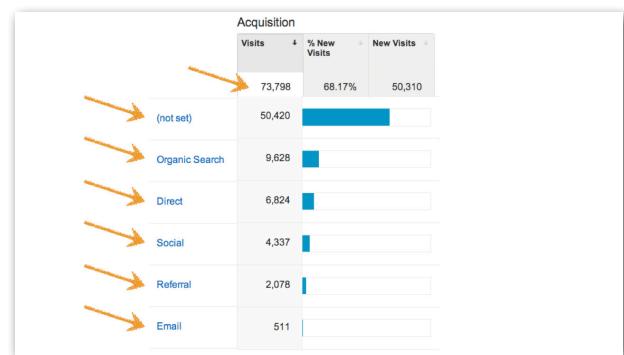
So many clients want to get more likes. Sometimes clients will create door slams like this one, which pop up and get in the way and ask you to like something in order to get a coupon or to move forward. If you take it too far, your website or your blog can look something like this with lots and lots of different like buttons trying to get your attention.

On top of that, it's not just Facebook that's doing this. Twitter, Google, Pinterest, Reddit, Instagram, all of these social media sites have their own version of the Like or Tweet or Share button. And there are, of course, new social media sites popping up just about every month. These likes are what we call a vanity metric. The number of likes that a client has isn't directly related to how much money they make necessarily. But it's related to how popular they are, or how popular they seem.

So let's get back to our client. He's come to us and said we need more Like buttons. You as a designer are not quite sure about that. You could argue that they are ugly or your gut just doesn't like them. But instead, let's look at the data. Let's try to figure out is our Facebook page helping the business. There are a bunch of different ways you can do that, but here's one of them.

We might go to our acquisition report. That tells us how people came to the website. This particular report is telling us that 73,798 visits came to the website. The breakdown below is where they came from. About 4,300 of them came from social media websites like Facebook. Let me show you some of these others too. Organic search generated 9,600 visits.

Organic search is when somebody goes to a search engine like Google, and they type in something, and from whatever they typed in, they get to your website. It's called organic because you could also pay Google to have ads, and that would be called paid search. But organic means they found it on their own, without you having to take out ads.



Direct traffic accounted for 6,800 visits here. Direct means that these visitors just typed in the address to your website. They didn't seem to come from search or anywhere else, they just typed in the URL for your website. Referral means that they came from some other website, where they clicked a link on that other website and came to yours. That generated 2,000.

And email means they opened up some kind of email and clicked a link there and got to your website. It could have been an email you sent or an email that somebody else sent. Now, by far the biggest driver of traffic is this top one up here, not set, which drove 50,420 visits. This means that the software doesn't know where 50,000 people came from.

They could have come from search or social media or any of these other ways. And that's a limitation. Sometimes these analytics engines don't have all the answers. Which is a pain, of course, but that's the way it is. So the numbers that we're about to talk about may not be completely accurate, because there's this big chunk of 50,000 people that we don't know where they came from. Still, we're going to move forward and try to get a sense of what we think people are doing.

So let's focus on the folks who came from social media. We would click that and drill down to a chart that looks like this, that tells us exactly where those 4,337 social media visits came from. And here we can see that 4,000 of them came from Facebook. That's the answer we were looking for. 4,067 visits came from Facebook.

That's great, but are those visits helping? Is Facebook helping the bottom line? For that, we've got to do a little bit more sleuthing. One of the benefits of analytics engines is that they can also track revenue. In this case, items that are sold in the online store. We can see here from this report that the company made \$45,000 in online sales.

Now, here's the good part. We can go back to our social network report, and what the analytics report can tell us is how much revenue those 4,000 visitors generated; Those folks from Facebook spent a little bit more than \$3,500 in sales. Now, that's really helpful. That's information that helps us understand whether we should make more of those like buttons or not.

Social Network	Acquisition			Behavior		
	Visits	% New Visits	New Visits	Bounce Rate	Pages / Visit	Avg. Visit Duration
	4,337 % of Total: 5.88% (73,798)	80.12% Site Avg: 68.17% (17.53%)	3,475 % of Total: 6.91% (50,310)	49.27% Site Avg: 44.75% (10.12%)	3.30 Site Avg: 3.53 (-6.30%)	00:01:38 Site Avg: 00:02:22 (-31.15%)
1. Facebook	4,067	79.15%	3,219	49.47%	3.33	00:01:38
2. Pinterest	106	95.28%	101	38.68%	3.23	00:01:35
3. Twitter	55	89.09%	49	50.91%	2.75	00:01:30
4. Blogger	38	100.00%	38	47.37%	2.97	00:01:33
5. WordPress	22	100.00%	22	50.00%	2.68	00:00:52
6. Dogster	20	90.00%	18	60.00%	3.15	00:01:12



Social Network	Acquisition			Conversions		eCommerce
	Visits	% New Visits	New Visits	Transactions	Revenue	Ecommerce Conversion Rate
	4,337 % of Total: 5.88% (73,798)	80.12% Site Avg: 68.17% (17.53%)	3,475 % of Total: 6.91% (50,310)	82 % of Total: 7.91% (1,037)	\$3,573.85 % of Total: 7.88% (\$45,340.85)	1.89% Site Avg: 1.41% (34.95%)
1. Facebook	4,067	79.15%	3,219	81	\$3,540.85	1.99%
2. Pinterest	106	95.28%	101	0	\$0.00	0.00%
3. Twitter	55	89.09%	49	1	\$33.00	1.82%
4. Blogger	38	100.00%	38	0	\$0.00	0.00%
5. WordPress	22	100.00%	22	0	\$0.00	0.00%
6. Dogster	20	90.00%	18	0	\$0.00	0.00%
7. deviantART	6	100.00%	6	0	\$0.00	0.00%

Device Category	Acquisition			Conversions		
	Visits	% New Visits	New Visits	Transactions	Revenue	Econ Conv Rate
	73,798 % of Total: 100.00% (73,798)	68.29% Site Avg: 68.17% (0.17%)	50,396 % of Total: 100.17% (50,310)	1,037 % of Total: 100.00% (1,037)	\$45,340.85 % of Total: 100.00% (\$45,340.85)	1.41% Site Avg: 1.41% (34.95%)
1. desktop	39,548	69.67%	27,553	744	\$31,923.40	
2. mobile	28,957	66.51%	19,259	202	\$8,969.20	
3. tablet	5,293	67.71%	3,584	91	\$4,448.25	

We can also see that other social media groups are not generating a lot of money. The only other one that is, is Twitter, and it generated a whopping \$33 in sales. All the others like Pinterest, well, they generated \$0 in sales. You see how this information can be used to help settle arguments?

Namely, if you, your boss, or your client disagree with how many of these buttons to put on your website, you can use the data to help inform the decision and use the buttons that seem to be generating the most revenue.

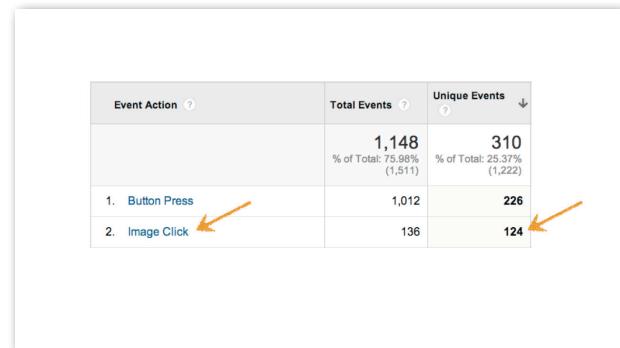
Here's another common argument. Should we use responsive design? Responsive design, of course, is using different screen layouts for different size devices. For instance, providing a smartphone friendly layout using the same HTML and CSS. But responsive design can be expensive and time consuming to do. Is it worth it?

Well, that's a somewhat easier question to answer. All we have to do is look and see how many people came from mobile devices or from tablets. We can see in this case that 28,900 visits came from mobile devices, and almost 5,300 came from tablets. Because we've got the e-commerce tracking setup, we can also see how much money we made from mobile devices and tablets. And we can use that to determine whether or not it's worth the investment to go to responsive design.

Here's another good one. This fits right in with what we talked about last session. Are people clicking the carousel? Carousels are frequently under hot debate by designers and their bosses and clients arguing back and forth about whether they're a good idea. Well, let's look at some numbers. Here's National Geographic photographer Joel Sartore's site. He's got a carousel on his home page.

The carousel can be interacted with in two different ways. You can click these little dots down here to move back and forth between the different slides, which advance automatically. Or you could click the picture itself to go to a particular photograph or photo essay. Now, this one's tricky because it's not something that most analytics services, including Google Analytics, tracks.

Because carousels change all the time and because they're animated, the normal tracking software doesn't work properly. So we had to install our own. We didn't have to write it from scratch. You can get information on how to do this from places like Google Analytics. So they installed this software and then were able to track how many times the image was clicked on the carousel.



Page	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate
	58,779 % of Total: 100.00% (58,779)	49,830 % of Total: 100.00% (49,830)	00:00:26 Site Avg: 00:00:26 (0.00%)	8,009 % of Total: 100.00% (8,009)	56.76% Site Avg: 56.76% (0.00%)
1. /galleries/	2,783	1,352	00:00:25	333	29.13%
2. /	2,563	1,864	00:00:58	1,650	27.76%
3. /galleries/rare-portraits-of-america-s-endangered-species/2/	1,675	1,536	00:00:39	1,425	69.75%
4. /about-joe/common-questions/photographer-salary/	733	660	00:01:28	555	70.09%
5. /galleries/the-photo-ark/	623	402	00:00:40	259	27.03%
6. /videos/	570	305	00:00:33	21	28.57%



In this case, the image was clicked 124 times. Now, that doesn't really help us, because is 124 good or bad? We don't know. All we know is the number. So as we have to do when answering many of these questions, we've got to do some sleuthing. We've got to take this number, 124, and then go find out how many people went to the home page.

In this case, 1,864 unique page views. We're matching unique page views and unique clicks so we don't get people who went back to the home page more than once. So out of 1,864 unique page views of the home page, 124 of them clicked that image. So that's about 6%. 6% of the folks who looked at this page clicked on the big picture. Not bad.

However, that big picture also takes up about 60% of the real estate on the homepage. So 60% of the real estate on the home page generates about 6% of the clicks. Does that mean the carousel is working well or badly? Well, you know, the data doesn't make the decision for us. It might be important to keep the carousel, if only for a graphic design and having large photographs.

At least now you have more information about how that carousel is getting used. By the way, if you're interested in doing this on your own website, these reports and others are in the classroom resources and links. Now, remember, we're trying to use analytics here in a way that's useful for designers. Because what's useful for you as a designer is to use analytics to see what your users do.

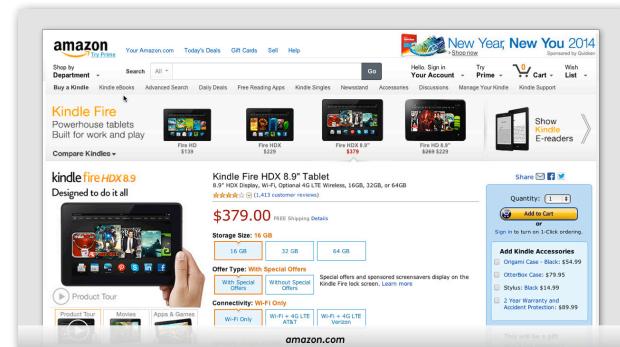
## BIG IDEA #2

### SET GOALS, THEN WATCH FOR PROBLEMS.

All right. Big Idea #2. One of the best ways for designers to use analytics is to set goals, and then watch the numbers for problems. If you've ever done anything with analytics, you know that it gives you tons of really interesting data. It can tell you how many people came to your website from Afghanistan. It can tell you what people are searching in order to get to your website, like how much do National Geographic photographers make.

Some systems can even tell you how old your users are, and whether they're men or women. There's tons and tons of data and you know, most of it is fascinating, but it's not very useful. Still, we could spend hours or days, or even a whole career looking at this stuff to try to get insights. That's one of the two complaints that folks usually have about analytics.

The first complaint is that they are really hard to understand, that can be true. The tools of analytics are complex, and it's challenging to learn. The second complaint is that it can be a time suck. It can be a black hole of interesting but useless data. If we're using analytics to make design decisions, it's important to stay focused on business goals. Because business goals should align with design goals.



Here's what I mean. Let's take e-commerce sites, for instance. If you're running a site like amazon.com—and this works no matter what you're selling—your goal is to sell products. As a designer, we're not just interested in how many products were sold. We're interested in the experience, the steps that our customers took getting there.

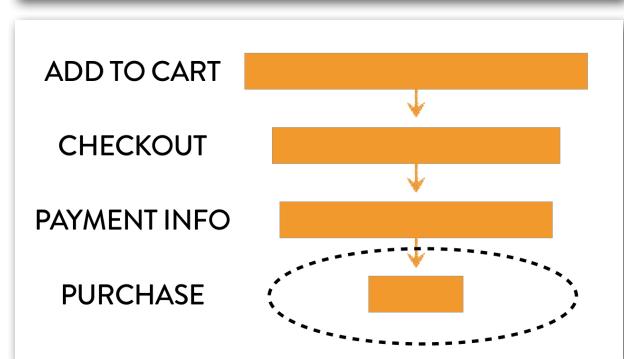
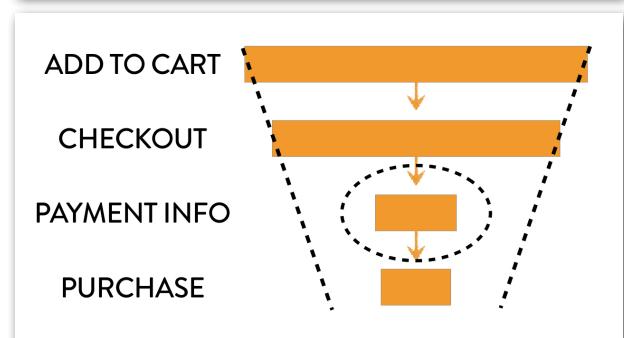
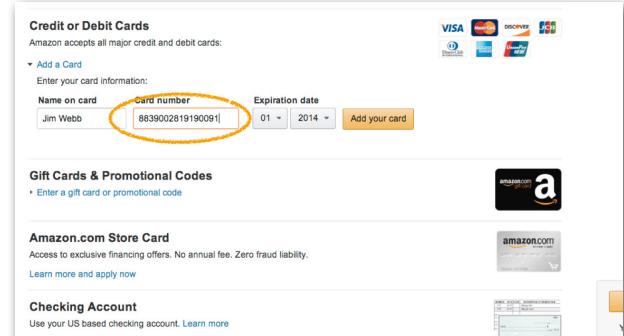
OK. So if we're buying a product off, say, Amazon, this is the goal, this is the holy grail; the "Thank you" page. The purchase has been made. We have the customer's credit card information, we can take their money. This is the macro-goal. Macro means big. This is the big goal. The big goal is the thank you page. That means the sale is done.

But there are also micro or small goals along the way. A customer who wants to buy a product first has to find the product, and then they have to hit that add to cart button. And this add to cart button is like a little goal. It's a micro-goal. If a customer hits it, we know we've done part of our job. But of course, the sale isn't done yet. Then they've got to go to the shopping cart and hit this button—the proceed to checkout button.

That's also a micro-goal. They're still not done. They've got to enter their credit card information. This isn't actually my credit card, by the way. Then they have to place the order. All these steps need to happen before the sale is complete. Let's look at these steps a different way. Let's say over the course of a day or a month or a year that 5,000 people press that add to cart button.

That's a good thing, but not all of them will make it through to the sale though. At the next step in the process where they actually need to check out, let's say that only 4,000 of them make it to there. Those 1,000 people that dropped off, well, maybe they decided not to buy it. Maybe they decided to go elsewhere. Who knows what happened?

Then those 4,000 people need to enter their credit card information. And let's say that not everybody does that. Let's say 3,800 do that. Then finally, you get the people who actually place the order, who finish the purchase and make the sale. A progression like this in which we lose customers along the way is actually quite normal. A normal, well func-



tioning website can always expect some customers to drop off.

Of course, you want as few to drop off as possible. But this shape, this sort of funneling down shape is pretty normal. And we can use this data to sniff out problems in the process. For instance, if we have a bunch of people who add to the cart and then slightly fewer who check out, but then a whole lot fewer who enter their credit card information, this funnel shape doesn't look right anymore.

There's a big gap here in which a lot of people are bailing out when they enter their credit card information.

That kind of a big drop can tell us that something is wrong at that step of the process, and it might be a design problem.

Here's a case in which it was a design problem; Expedia, the travel website where you can book hotels and flights and that sort of thing- they had a funnel that looked like this.

The numbers all seemed normal except for that very last step. Far fewer people were actually completing a purchase than they would have expected. And the numbers didn't explain why, they just showed that something was off.

Expedia's team had to sleuth what was going on. Well, here's what they found out; At the step of the process where customers were asked to enter their name and address, the form looked something like this.

They had to enter their first name and their last name, the company they worked for, and their address. What they discovered is that people were entering their first name and last name fine, they'd enter the company that they worked for, and then they would enter in the address of the company, not their personal address. But they were using their personal credit card.

Then the credit card would get declined, because it was the wrong address. The problem was in the design of this form. They decided hey, you know what? We don't need to know the company name anyway. Let's just take it off the form entirely. When they took that field off the form, their numbers went back to something resembling normal.

That single form field that they deleted made it easier for users to complete their purchase and for Expedia, that resulted in more sales. You know how much more? \$12 million worth, every year. What a success story. And it happened because their team was looking at the process. They were looking at the numbers and seeing that something was wrong, and then sleuthing that problem.

They had to dig for it. Their analytics didn't tell them what the problem was. It just told them that there was a problem. You can do this with your clients. Even if your client doesn't have an e-commerce site, it's still got measurable goals. Different sites have different goals. For instance, content publishers, they're not trying to sell products. They're trying to get you to read articles.

So their goals are ad views and repeat visitations. If they happen to sell an offline product or a subscription, then its

A screenshot of a web form with four fields: FIRST NAME\*, LAST NAME\*, COMPANY, and BILLING ADDRESS\*. The form is crossed out with a large orange X.

FIRST NAME*	Jim
LAST NAME*	Webb
COMPANY	Wells Fargo
BILLING ADDRESS*	1525 Water St Suite 3200

A screenshot of the Forbes website homepage showing the top stories section. The top stories include: "Prada And Husband Mimic Dolce & Gabbana Tax Trouble", "Bentley Head: Our SUV Will Be The First Real Luxury SUV", and "World Debut: The All-New...". There is also a video player for "Bitcoin: Price, Pros and C...".

subscriptions to that product. If your client is, say, a non-profit, then their goals are different. If they like the World Wildlife Fund, for instance, those goals become donations and social action. Figuring out what these goals are and how to measure them requires patience and curiosity.

Honestly, usually it's not cut and dried. Even the Expedia example I gave here was only obvious in hindsight. Furthermore, when you're looking at the numbers, data doesn't always tell the whole story. Sometimes you've got to talk to real people to understand what might be going wrong with your website. We'll talk about that in a second. When we're using analytics, the best way to start is to set measurable goals in the data, and then watch for problems.

### BIG IDEA #3

#### HOLD USABILITY TESTS TO SEE WHAT YOUR USERS THINK.

Big Idea #3 is that holding usability tests is one of the best ways to see what your users are thinking. Analytics or using data helps us see what our users are doing, and more specifically, what they're clicking. What analytics won't say is whether the users were happy doing it. Were they satisfied with the product, or were they confused?

Let's say that we're looking at the analytics of our website and we see the pageviews do a serious spike. They go way up. We know that pageviews went up, but we don't know why. It could be that people are so happy and delighted and pleased with the product that they just wanted to click and see more of it. But it could also be that they're incredibly frustrated and they click around to 10 or 15 different pages trying to find the thing that they're looking for.

Analytics won't tell us whether our customers are happy or sad. For that, there's absolutely no substitute for talking to real customers, asking them questions and watching them use our website. And that's called *usability testing*. Usability testing is a professional practice and procedure that tests the usability of the product.

In our case, a website or an app. It's like an interview in which you as the designer are watching your customer or your user use your product. They're in the driver's seat using your website and you're just sitting watching, listening, hoping to find problems with the product.

Now, formal usability testing involves several parts. First, you need to come up with a test plan to understand what it is



that you're trying to test and how you're going to do it.

Then you'll need to recruit and screen representative customers and get them to come to the testing facility. You'll need to actually conduct the test with those customers. Then when the test is done, a report is written that details all of the issues that the test revealed. Usually there's also some sort of a highlight video so that you can actually watch the participants using the website.

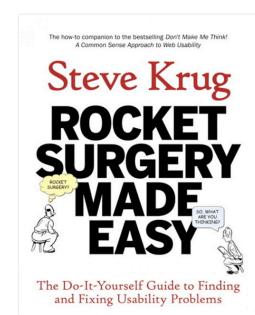
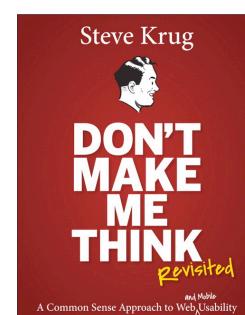
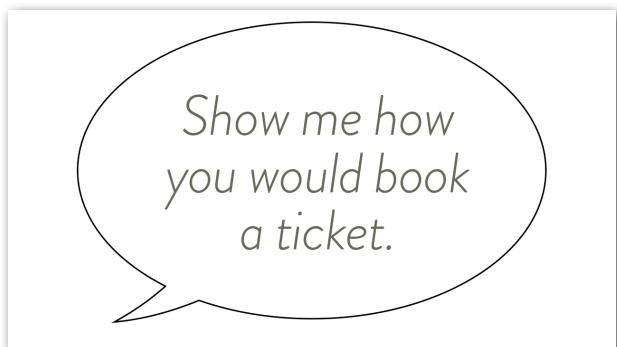
The usability testing process is extremely effective at sniffing out problems with designs. But you know what? Very few designers and design firms do it, even though it's so effective. Why is that? Well, it's because designers and clients are moving fast. There's often not much time to do this kind of testing, or money in the budget. This is true even though folks like IBM have said that every dollar invested in ease of use can return 10 to 100 times that investment.

This is true even though bad design can have such big repercussions, like in famous voting ballots. And this, for instance, is how you use the Washington DC subway system. Seems like this could have benefited from some usability testing! I'll let you in on a dirty little secret about usability testing which is that you can do it yourself. It's not as good as hiring a professional to do it, but it's still pretty useful.

It can take as little as a few hours and this process I'm describing is a very informal way of doing discount usability testing. It's also something you can do today. What I'm about to give you is a brief guide on how to do usability testing yourself. First, we have to find users to talk to. A couple different ways to do that. One way is to do demo-graphic studies and phone recruiting.

But another dirty little secret is that usability testing often works with just about anybody. Just about any potential customer, whether or not they fit your target demographic. As long as that customer is not a designer, and as long as it's not someone on the team or one of your clients. This kind of testing is sometimes called Starbucks testing, because it can literally be done at a coffee shop.

Here's how it might work. You might bring your laptop and politely approach a stranger, say, just after they've gotten their coffee, and say hey, would you mind looking at this website. If they agree, well, then give them the laptop and let them drive. And then ask them to do something, a task that's important on your website such as "Show me how you would book a ticket", or "Would you go ahead and sign up for the



email newsletter?".

Then just watch what they do. This can be the tricky part, because your only job is to listen and to stay neutral. You want to watch what they do and hear what they have to say as they do it. One trick is to ask them to talk out loud about what they're doing. But if they run into trouble, don't show them how to do it and don't get upset if they have a hard time with something that you think is really easy.

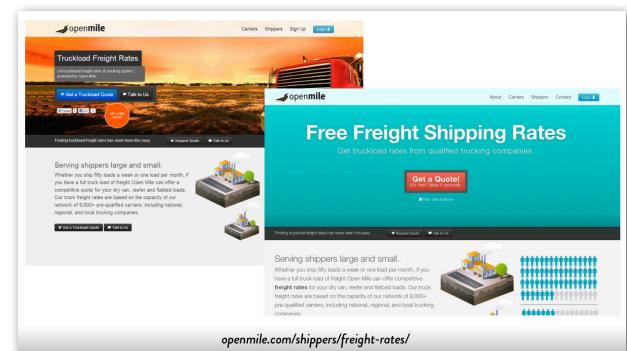
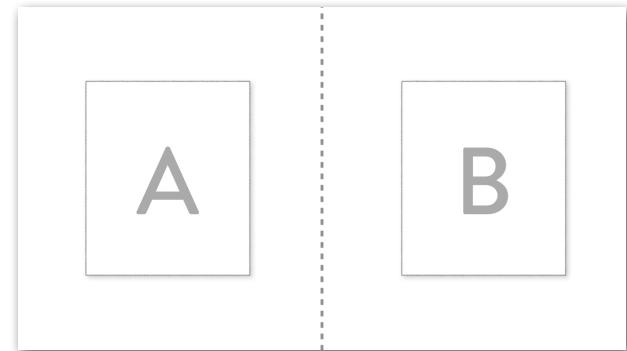
Don't take it personally and also don't ask their opinion. It's not really useful or relevant. Don't ask this person if they like the color of the website. Their answer's not helpful. Don't even ask them if they found the website easy to use. That's not helpful either. They might try to impress you with how awesome they are and say it's amazingly easy to use, even if it wasn't at all.

Definitely don't tell the person what to do. Don't tell them to click on this or that, or the other thing. Instead, ask them to complete a task, such as how to purchase a book. While they do this, be sure to take notes and watch for when they get stuck. That's the gold. When they get stuck on something, that's when you need to pay attention.

There's software that can help with this. One is called Silverback. It's pretty cheap, and it lets you do picture in picture videos for watching later. When you do this kind of testing with strangers, it's important to repeat it with three to five people. If you just ask one person and they have a hard time with something, or if they express an opinion, well, maybe it was just that one person who had a hard time.

If two people have a hard time or if three or four or five people have a hard time with the same thing, then you know you've got a problem. In fact, some research shows that if you ask one person, you're not going to find nearly as many problems as if you ask five. Then, of course, after you do these interviews, it's important that you share what you found with your team and that you talk together about the kind of things that you saw and how to fix them.

In the resources and links section of the classroom, I'm providing a script. The script comes from these two amazing books about usability testing. If you want to do more of this stuff, these are the two books for you to read. Steve Krug, who wrote these books, said the most valuable thing that you can do to improve a website or an app is this; Have the people who are building it, paying for it, or marketing it watch people trying to use it. Holding usability tests is one of the best ways to see what your users think.



## BIG IDEA #4

### DESIGN, TEST, REPEAT.

Our final Big Idea is about process. Specifically, the idea that watching users is part of the user experience design cycle of designing something, testing to see whether it

works, and then repeating the cycle. In this session, we've talked about two different ways to watch users-- analytics and usability testing. Analytics lets us watch many people at a time.

Usability testing is one-on-one. Analytics is, well, analytical. Usability testing is often intuitive because you're right there with the person. Designers, as humans, are often either analytical or intuitive. So you may find that you're better at one than the other.

Either way, we're trying to find and fix problems. It's important that we repeat this process of designing and testing or watching to make sure that the solution to the problem isn't worse than what we started out with. The process is iterative; test, fix a problem, and then test again.

One very efficient way to do this is called an *A/B test*. In an A/B test, we've got two different designs. Let's call the first one design A and the second one design B. What we do is install a piece of code that shows half the users to the website design A and the other half to design B. Our analytic software can then be set up to look at what happens to the customers who use those different combinations or designs and to see how effective they are.

Here's an example. It's the homepage for Open Mile, a service that helps people who need to ship things across the country. They've got this nice beautiful photograph up top and a big button for getting a quote.

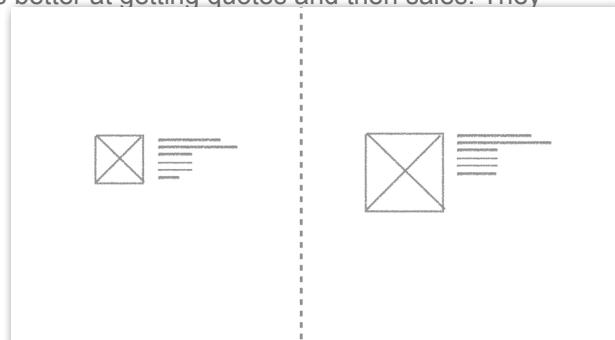
Their designers wanted to see what would happen if they went to a radically simplified design. So they did an A/B test. They showed half the users the original design and half the new experimental design to see which one was better at getting quotes and closing the sale.

They discovered that the simplified version worked better. It was better at getting quotes and then sales. They were able to measure how much better. In fact, it was 230% better. That's a lot better.

In addition to A/B tests, you could do what's called a multivariate test, which is a fancy way of saying instead of testing two things, A and B, we want to test more than two-- A, B, C, and D. That's a multivariate test. Here's an example of that.

Here's the homepage of a web hosting firm called Hawk Host. In this section right here where they're describing their product and what they do, do you see the globe next to the sign-up button? Their designers decided to experiment with that globe.

So they did a multivariate test. They had the system show some users the standard globe that they already had. Then they decided to show some users a padlock.



They didn't stop there, however. They showed some users a smiley face then they showed others a different kind of padlock. They wanted to see if it made a difference as to how many people signed up.

Well, it did. It made a huge difference. Which do you think was the most effective in getting people to sign up? Which is your guess? If you guessed the padlock, you were right.

All they did was swap out that image with a padlock, and they generated 200 to 300% more sales. That's the only thing they changed. They only found out because they did this kind of testing.

Now, sometimes these tests don't always work out the way we think they're going to work out. Here's a story about humility from Amazon.com. One of the ways that Amazon shows products to customers is in a grid view like this, where they've got a thumbnail of the product next to the title, a description, and the price. It's pretty standard and if we were to wireframe it out, it might look something like this.

Their designers thought these thumbnails were pretty small and that sales would go up if we made these thumbnails bigger. After all, you can see the product better, right?

So they tested with an A/B test. Some users saw the small ones. Some saw the big ones. They ran the test for 30 days which is a pretty normal time-frame. You've got to run tests like this for a while in order to get good information back.

You know what they found out? The bigger picture was not better at generating sales. In fact, it was worse. The small thumbnail worked better. This was a huge surprise to their designers.

The guy running the test, PJ McCormick, had this advice for designers. He says, "You are not as smart as you think you are." Now, he's not trying to say that he's smart. He was as surprised as everybody else.

This is important. We as designers are not as smart as we think we are. I'm not trying to say we're dumb, but I am saying that user experience design requires an open, curious attitude and a dose of humility. We have to be prepared to be wrong about what we think is easy or good.

Our whole goal is to help the customer, because helping the customer helps the business. This process of helping the business is not just a one shot deal. It requires learning, designing, testing, and then repeating the process. That's why our mantra is design, test, and repeat.

## ASSIGNMENT

That's it for today's lesson, so here's your assignment. Because it's the final lesson, it's also the final assignment. It happens to come in two parts. As always, complete instructions are in the classroom files, and this is a brief recap. Part one is taking the prototype that we built during the last session and usability testing it. That means finding three to five people. They could be strangers. They could be the people who you interviewed before. Doesn't matter.

Show them the prototype and give them a task. For instance, would you please use this prototype to book a flight? You can explain that it's a prototype, and you can make some allowances that everything won't be working. That's OK. As they do the task, take notes to understand what they're getting right and what they're getting wrong. I've got lots of instructions, examples, and a script available in the classroom files, so be sure to check it before you get started.

Then, Part two-- the final assignment. Combine all of the project assignments that we've done so far into a user experience design portfolio piece. That portfolio piece is different than normal portfolio pieces, because it explains the process by which you've been working on this project. It should include the user research you did at the very beginning of this process. It should include your audience statement, the user is a blank who wants to blank. It should include your wireframes, your site map, and your prototype. It should also include the write-up of the usability tests that you're doing today.

This portfolio piece is a lot about process. It needs to demonstrate your critical thinking ability. It needs to demonstrate how you can sleuth out problems, and that you're not just concerned with visual design. You're concerned with the entire user experience. As always, for more instruction and examples, look in the class-room files.

I just want to say thank you very much for your attention during this class. It's been my pleasure to teach it and I've been really enjoying seeing what you're doing. And if you've liked user experience design, I hope you'll do a whole lot more of it. Speaking of which, I can't wait to see what you do. So do your usability testing, write it up, package everything together in a portfolio piece, put it in a PDF, and post a link to it in the forum. I hope you've enjoyed the class. This has been UX Fundamentals.