

Understanding Design Thinking and People Centered Design
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Lecture - 16
Testing Refining and Pitching
Importance of Testing with people

Welcome back to understanding Design Thinking and People Centered Design. We are now getting ready to embark on the last part of the journey.

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We have covered problem discovery, we covered research and analysis, we covered concepting and building and now we are moving on to the section, section 4, testing, refining and pitching, usability testing refining and pitching. So, we discovered how to, what is the right problem to solve and understand how we solve that problem, through bringing users into the process in research and analysis and then based on our findings and our insights and everything, we started with conceptualizing those ideas and trying to build a concept and build a story around the product that we are trying to put out for people to use, a through the story and the accompanying story board which would explain it, as well as the prototype.

So, we have come to a point, where we created a prototype of our idea, representation in three dimensions or in a version that is able to explain how it interacts with the user and

how the user interacts you know the successive paths of the product. So, we are at this point, where you know we have created a prototype, now, we are going to move on to testing that prototype, testing that prototype, with people. So, we will learn how to test, then based on that how to refine and thereafter how to enhance our design and the last part of this section, we will also learn how to define our pitch, as in, how do we communicate our design, how do we now that our design is, you know taken some shape, how do we start speaking to people about it. So, usability testing refines and enhances our design and then defines the pitch.

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These are the five subsections in this section, where in the first section; we will speak about the importance of testing with people. Why do not we just you know, create our design and then a create more refined versions of it, figure out the details, manufacture it and put it out in the market and just test it, just before it gets released in the market, why do not we do that and instead why do we feel that its important to bring the people, into this fold early on, you know right in the beginning, beginning of the process right.

Then we will speak about testing your design with people. What are the mechanics of testing with people, how do you bring people in, how does that whole process work. Then we will speak about how the usability testing is actually conducted the, the nitty gritty of the testing, then we will speak about how do you record results, you know you do your testing and then there is findings out of that, you know that your design fared

well in some things, did not fare well in some things, people were confused with some things, people absolutely hated something else and people were, you know, just sailed smoothly through something else.

So, we use all of those findings, based on how people reacted to, not just reacted, it is actually how they performed on the design and we use that to enhance our design and then after enhancing we retest and we refine the design . So, this is a cycle that we do several times, over the course of the prototype and the prototype keeps getting better and better. And it get starts to get closer and closer to what the final product is going to be like and then finally, we will speak about creating a pitch for your design, just brief inputs and insights on how do you speak about your design, how do you communicate your design, speak or otherwise.

So, let us now get started with the first part, which is the importance of testing with people and remember this is taking off from the point where, your prototypes are now ready, your prototypes are ready, they are paper prototypes, they are rough prototypes, they are rapid prototypes, quick prototypes, quick and dirty is what we call then in many occasions. So, it is not by any stretch of the imagination, something that has finesse in it and now they are ready to be taken to the people. So, let us look at what it means, as far as the importance of testing with people goes, right?

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Usability Testing Can Save Your Life.....

...Okay, so maybe it won't save your life.....

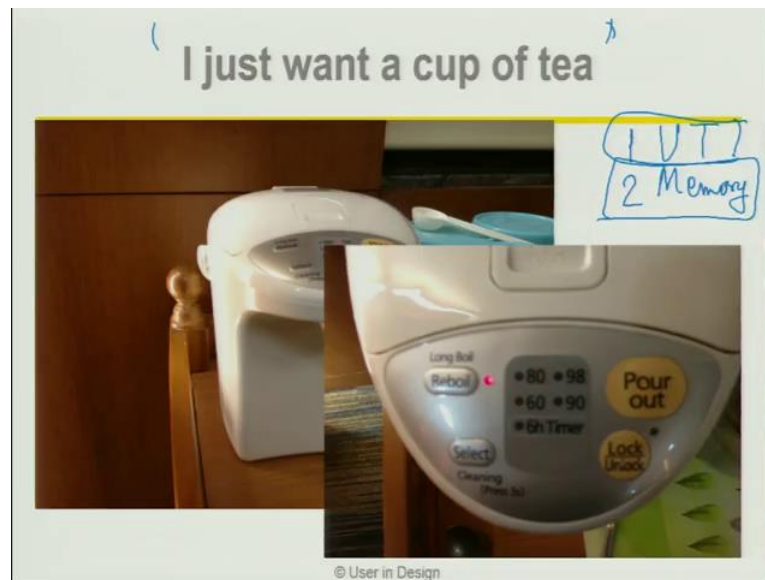
But it certainly can keep you out of the Emergency Room due to the stress-induced heart attack you were about to have because you have no idea whether or not your customers can actually use the thing you just poured your life into building.....

Joshua Porter

So, this is, a do not take this literally, usability testing can save your life, but its more a light hearted way of saying, may be, it wont save your life, but what will it do for you? It certainly can keep you out of the emergency room, in the hospital, due to the stress induced heart attack you are about to have, because you have no idea whether or not your costumers can actually use the thing you just poured your life into building. Now those of you who are in industry and work on products, a and know what it feels like, what it takes to role a product out the door and how much of a stressor it can be and how much effort, especially as the launch date draws closer, you know how crazy it gets and how much of stress is in everyone's life and at that point if you have questions like - Oh! my God, I wonder whether the people are going to be able to make sense out of this, I wonder whether they going to like this, I wonder they are going to be able to use it. If you have questions like that at that point, it is too late, it is what it is and you cannot do anything about it.

But usability testing can save your life, if you done this, you know, through the product development phase, as we know as you go through, the costs keep rising. So, what we trying to do is do as much of the testing and elimination of the risks as possible, in the, if you look at this as cost and this is time, right? So, we are trying to do as much of this as possible in the early days, when the costs to make to changes are very, very low. So, also to keep in mind, the thing you just poured your life into building. You know that when we create products and as I said, towards the launch and it through the entire thing, it is a hugely big commitment of your energy, time, effort, and to mention of course, money and lots of things that are at stake right? So, you poured your life into building this thing, now does it work or not. So, this is what is the whole point of usability testing; and to do it very early in the (Refer Time: 07:52).

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So, I will show you an example of a product over here and this is a tea and coffee maker. Like you see in a lot of offices, this is something that many offices purchase and keep in their corner of the office or in their conference rooms or whatever. Now, we are not going to discuss this in detail, but I am just going to show it to you, I have used this in several occasions, not continuously everyday. So, I use it and then after several days of not using it I go back to it again, every single time it is a big baffler for me. I stand in front of this machine and I think how do I pour a cup of hot water in order to make a tea and it is not just me right? Most of the people in that contexts, say we are in a conference together or in a meeting together, many people in that room are standing in front and really struggling and wondering, how do I, how do I pour a cup of a hot water out of this? And it is not just a pour out, if you press the pour out button, it does not work. So, do not ask me what the answer is, because I do not remember, but it is a baffling product.


And. So, there are a 7 points that I would like to make to you over here, why does a, you know, when I just want a cup of tea, why does it have to be so complex right? So, a that was one part and it is very complicated for me to try and figure out from this, how do I pour out hot water, in order to a you know take my tea bag and put it in the cup and just make a simple cup of tea right? So, I do not know exactly how this works, I do not remember, but the point is that number one, they could have done some simple usability testing.

This could, have been drawn out on a piece of paper and if they have tested it early, we would have known that it is very confusing for people, right? Perhaps I would imagine they did not do it, second thing is and we are not going to speak about this in, in this course, but peoples memory is poor, its not like when you use something once, given you are going to remember it for the rest of your life, the next type and if it is not intuitive, that is if it is intuitive you walk up to it and you just know how to use it, but products which are not intuitive. I will never remember, even though I may use this, you know, once a year or once every 6 months, I will not remember it, if it is not intuitive right? So, you know again to emphasis the importance of testing for usability, it is a simple control panel that could easily have been perhaps, you know, prototype on paper and tested before it was released on the market.

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Usability Testing in a Nutshell....

1. Get representative users
2. Ask them to perform typical tasks with your design
3. Shut up and let the users do the talking *Active Listening*
4. DO NOT PROMPT them



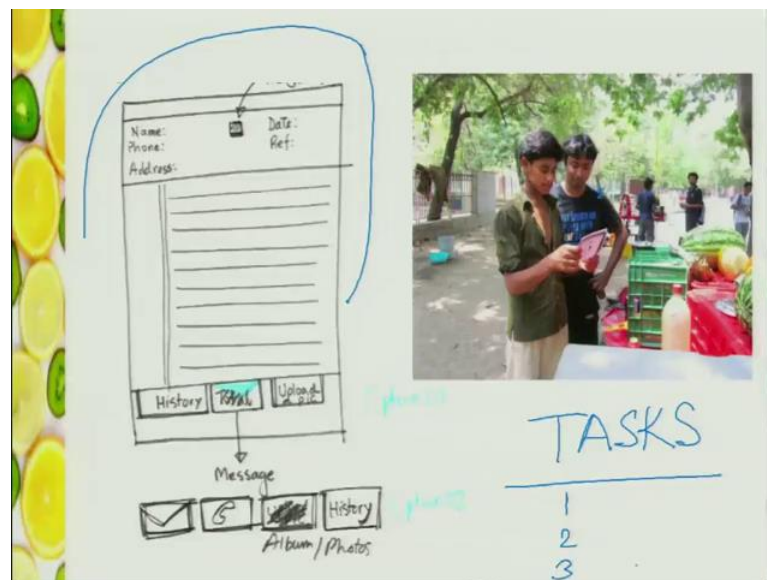
So, this is an example for you to understand, how important it is so that, when it is out in the market it is not so complex.

What is usability testing in a nut shell? Here is you can see is a paper prototype and here is, a, you know fake of the keypad. So, this, this user is trying to test this product. So, get representative users, this is what usability testing means. Get people who are representative of the people you are trying to test. So, if you are trying to test someone who is an avid moviegoer, remember one of the personas we talked about. So, bring someone like that, ask them to perform typical tasks with your design, ask them to do

things with your design. So, for example, for that moviegoer you might say that you know, you, you just went and watched so and so movie and you are interested in a buying the songs for it or you are interested in buying the t-shirts for the movie. So, can you show me how you will do it? So, that is a task, alright. Shut up and let the users do the talking. Keep mum; remember active listening that we talked about, during our research, the same applies over here.

Your focus is not to speak to the user and tell them about your design, it really does not matter, your entire focus is to get from the user, what their notion, their mental module is of the design and therefore, how they think it works and therefore, how they start behaving with it, expecting it to behave in a certain way. Do not prompt them again it is in caps, because it is a very difficult thing, when we created a design and we know how it works and you are watching someone whose struggling with it, the most natural tendency is to say, just press that or just click on this or just you know turn the knob over there and these are the kind of things that come naturally. So, you have to resist that urge, you have to keep your mouth shut and not prompt them, find out and see how they go.

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So, a usability testing is done in various contexts and we will speak about usability lab, but its also done in the field, in this case, remember the fruit wala example that I gave, you this is their rough cut paper prototype and this is what they have taken to the fruit

wala and they are trying to understand, a you know, how it works. Now this is the English version, what they took actually for testing was done in Hindi. So, you know, this is and you can see that they have taken it to the context of the user. This is his fruit stall and they are trying to this is one of the people in the design team and he is trying to you know have a conversation with him and try and get him to perhaps do some of these kind of tasks.

So, a task in this situation was, you know Ramesh has returned the 432 rupees that he owed you and now you want to change that in your khata, can you show me how will you do it? Or you want to open a new khata for Sheila aunty, who lives on the top floor of the next building, how will you do that? And you know how, how would you upload the phone number and address whatever it is. So, these are different tasks, this is what we call tasks and in usability testing, we give these tasks to the user. Now were do these tasks come from? They come from the things that we have in our persona, the details that we have in our scenarios, we built our scenarios around, what the users' goals, motivations, intents are, and based on that we build our tasks.

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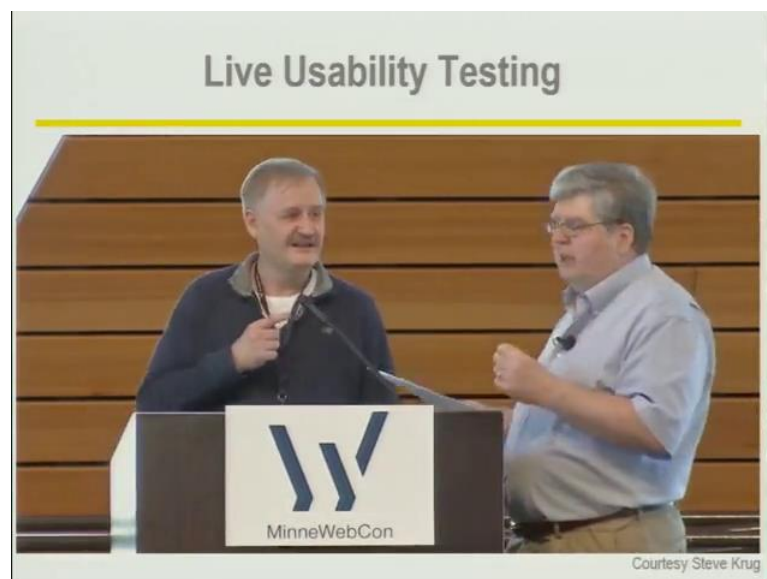
The slide is titled "Why Usability Testing" and features a yellow horizontal line below the title. It contains four bullet points, each with a yellow dot. The first bullet point is "To get a great service/site/product, you HAVE TO test". The second bullet point is "As a designer you soon know too much, therefore your opinion is irrelevant and misleading". The third bullet point is "Testing is to refine and increase success of design". The fourth bullet point is "Nothing beats a live audience reaction". At the bottom right of the slide, there is a small attribution: "-- Courtesy Steve King". A yellow bar at the bottom of the slide contains the text "It's about 'performance' not 'preference'".

So, let us now try and understand, why we do usability testing, why is it so important to do usability testing and I would like to emphasize over here, that it says, it is all about performance and not preference. So, it is not about creating your prototype and then giving a demo to the user, demonstrating it to the user and saying, do you like it? And

what was the user likely to say? Yes I like it, because they have no idea what happens inside it. Or rather you know when they start to work with it, so why usability testing? To get a great service or a site or a product, you have to test, why? Because nobody gets the design right the first time, that is just life. You cannot get a design right the first time, even the most brilliant people. So, even in, even if you think someone's come up with a sudden concept, it usually has been progressively refined over time right? So, at least majority of people are not able to do great designs on the first shots.

As a designer you so know too much. So, this is you know if you are thinking, why cannot I test it? I am a user for example; I watch television, why cannot I test it right? You are a designer of that product, you know too much, you know too much about the back end of it right? So, your opinion is irrelevant, not only is it irrelevant, it really you know does not matter what your opinion is, its also misleading, because if you are able to use this and we go on the assumption that because you are able to use it, the rest of the population can use it, that is completely misleading and wrong. It is important to, test it with actual people, more like the actual, the people who finally use the product. Testing is meant to refine and increase the chances of success of the design. So, as I said earlier, as you refine it, you are removing all the things that do not work, early enough, so, that later you do not have to face them when its so much more expensive and nothing beats a live audience reaction, until something is you know, in front of the real people it just is incomparable to a anybody else who you might test with.

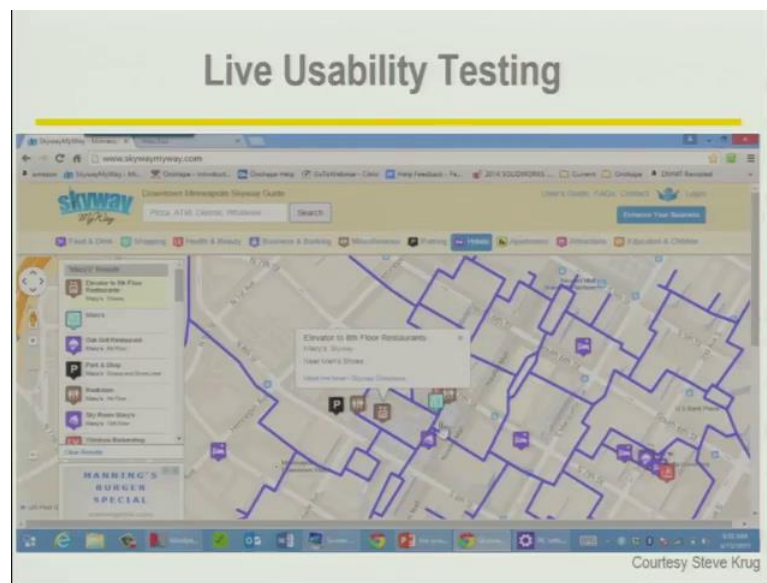
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Now, what I am going to show you, before I speak to you about usability testing, is a video and this is by Steve Crog, who is the author of the book that I mention to you called, Dont Make Me Think and also he has written another book thereafter called, A Rocket Surgery Made Simple. So, this is a video that will show you how usability testing is conducted.

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So, that was how a usability testing looks and feels like. So, there are several things that you must have noticed, of course, this is with the live product and it was to give you a feel for it, but you must have noticed that Steve Crog the person who was the moderator, the one who was conducting the test and then the other person was the participant right? Who was the, the costumer? So, he had what he called the script and that means, is a you know he had instructions written there, what he has to tell him

We will talk about that, you must have noticed also that he told him please think aloud, as you go forward think tell me what you are thinking, then you must have also noticed where he told him, this is not about you, we are trying to test the design, we are not testing your abilities. So, there is nothing right or wrong that you are going to do right? You must have noticed also that he asked him a few initial questions, were you from? What you do? and then a he gave him a real open ended kind of opening into the product where he said, look around and tell me what you make of it, he did not explain to him,

this is a product, that does this and then it does that and it can also do this, but he said, look and tell me what you make of it. So, trying to get the users, you know initial and intuitive feedback, as to what this thing is and what it possibly does.

Now, for those of you who may not be familiar with Skyway, Skyway is basically a covered walk way, that is built in lot of cities, with very cold climate when it is harsh weather, to walk outside. So, Minneapolis, I believe has about 11 miles of Skyway that people can walk around the city and it is covered, like a covered corridor, then you must have noticed about the task right? Where he said, I would like you to imagine that you are living the Grand Hotel, remember its all fake, he is not staying in the Grand Hotel, he told him, imagine that you are staying at the grand hotel and imagine you want go to Macys, now tell me what you would do? And you must also have noticed that the participant was asking him, is what I should do? Or I do not see anything, do you see anything? but you must have noticed that, the moderator which Steve Crog did not answer him, instead he told him several times, do whatever you would do whatever you would normally do and you must also noticed, that he was not helping him, he was not saying, why do not you look here, why do not you look there.

So, this is not a demo, this is not a situation where you are explaining the product to the person, but what you are doing is, you are trying to find out whether they understand your product or not.

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Why Usability Testing

- To get a great service/site/product, you HAVE TO test
- As a designer you soon know too much, therefore your opinion is irrelevant and misleading
- Testing is to refine and increase success of design
- Nothing beats a live audience reaction

— Courtesy Steve King.

It's about 'performance' not 'preference'

Whether they, you know, are able to perform with your product or not, you as you can see it was not about preference, he did not ask him, did you like it, if he had said, did you like it, the participant very likely would have said, it looks really nice and then you have learnt nothing about what works, what does not work. In this particular case, you saw that he was not able to first find notice; he was not able to notice that there was a direction section over there, instead what he you know, he said that I might look up on Google.

So, when there is this Skyway map available and you are looking on the Skyway map to find how to go; obviously, the Skyway will have details that you want to know as you are walking along the Skyway, you do not want this person going to Google for directions. So, if that product is the product you expect your participant to use or you are your customers to use actually; you would want them to figure it out on your product. So, that was one of the things that just is an example, something that the user did not get right away. So, there, there some others, but that is a summary of what a usability testing really looks like. Now you know, that we have understood why it is important to test with people we will move to understanding, how do you test your design with people?