Human Computer Interaction (In English)

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User Perspective

Hi everyone, I am Ritwik Bamba and I am your teaching assistant for the course on human computer interaction. Today we are going to have a panel discussion on user personas, empathy maps and mental models. Today we have with us Vibhuti and Syed. So let's get into this. First we need to see that what we are going to be covering today. So we have empathy maps, conceptual models, mental models and Use the personas.

So let's begin. Well, first we need to see what exactly are personas. So well, they're just idealized representations of what the actual users will look like. And they actually help designers create solutions that make the user experience better overall.

Then we also need to see that why are they important in design? Well, you need to understand the user's goals, their pinpoints, as well as their behavior, which is crucial in building a successful design. So now we will be having some of the discussion on personas. Okay, so when we discuss about the personas, so how actually we capture the user, all the users inside and avoid the stereotyping. Well, first of all, we need to do some user research, which is really important in the context of getting insights from the users. And as for the stereotypes, well, we follow certain guidelines, which includes getting the representative of the actual user base to the dataset.

And I think that is enough to avoid any biases or stereotypes that may have crept in during the research. Another point that I think is important to discuss is like, what are the basic steps involved when we talk about we want to make a persona? Well, the first basic step when one talks about personas is that we need to know who the users are. A typical persona simply contains the demographic details of the users, their motivations, their pain points, as well as some of the personality features of the users that helps identify how they may actually be using the product. So well, I think user research is the key to discussing. So I think user research is the key to getting to know what the persona will actually be.

My next point is what are the major challenges we face while making the personas and how we can overcome them. Well, you know, ensuring that persona is free of any

stereotypes, it is not just a challenge. In fact, it is a challenge as well as it is a big problem to the context that the personas actually go a long way in the design process, because it actually helps us understand what the user is going to be looking at while using the design. So Identifying any problems early on with the personas is really important and well overcoming them involves first robust user research and we actually validate the user persona with the user feedback. Another important thing that comes in my mind is like how can designers actually ensure that the persona that they're taking or using at the start of their project remains relevant throughout because the project has a lot of major stages, right? Well, first of all, we need to, we as designers, we need to, you know, be updated.

As the new data comes in, the personas should be updated accordingly. And, well, overall the design process in itself should also remain flexible enough to allow some changes which are based on iterative user feedback. My next point is how we can capture the insights which is not biased. Like some users does not give the real feedback. Well, I think talking to users in-depth interviews will actually help reveal user patterns that may actually be kind of hidden while taking surveys or the users may not be very keen on discussing those topics.

And what according to you are the biggest challenges while you make a persona and how can you actually overcome those challenges? Well, first of all, our biggest challenge is that while personas try to capture the broadest range of users possible, we may actually end up getting multiple personas. So keeping in mind all the use cases of the design, it is necessary to, you know, create all the necessary personas and do them accordingly so as they capture the essence of the user that is going to be actually using the product. My next point is how do personas contribute to the project design like how much relevance they have while designing some projects? We need to look at personas to have an idea of what the user is going to start with, how they are going to be using it and what are going to be the end goals of the user with the product. So well, user personas actually help us identify what pain points we are going to solve with the design. Okay, well, this was it for the personas part.

Next, the topic that we have is actually empathy maps and what its role is in the user-centered design. Well, first, some of you may be asking me what actually empathy map is. What is an empathy map? Well, it is simply a representation of what the user may think, feel, does, and says, well each of the quadrant is equally important in this context that we need to understand what the user has in mind and what they actually do with the thoughts. To add on to that, so what he said that empathy mapping is basically what users say, think, do or feel. So when we talk about what users say, we can take examples from interviews or research papers or where users have been quoted basically.

And when we talk about feel, we look for adjectives in their statements so that we know how do they feel about this project, about this service, right? And when we talk about say and think, these two can actually sometimes overlap when we actually make an empathy mapping. Yeah. So I want to ask like when we capture the user insights like we as we do in the personas so there are multiple types of users like there are multiple stakeholders so do we capture all of the insights in the one empathy mapping or do we make different empathy mapping for different target page? Well we actually create different empathy maps for different personas so A typical empathy map is mapped to a single persona. For the same user, for the same product, there may be different use cases. And hence, it may actually have multiple personas.

And well, for each persona, we have a different empathy map. like I want to ask in that as you say that there are multiple user base so we make different empathy mapping so isn't like then we have overlapping different things like different users have the same things so isn't the replication or the redundancy well technically it is not redundancy because you see the user personas that we create those are really separate from each other like suppose think about it if we take an example for a writing pad suppose the different user groups that it may cater to may actually be a kid who is writing who is just starting to you know learn to write and draw and scribble the second user group that the product may actually be targeting is teachers who are going to take online lectures. You see those are two very different group of users. So there are very less of the overlapping characteristics as you are talking about. So if they actually have too much of overlapping characteristics, I think we may need to go back and look at the user personas again.

Also, do you have any example that comes to your mind when we talk about how can empathy mapping actually improve bias in the design process? Well, again, ensuring that data comes from diverse backgrounds and we continuously keep validating it, that is an idea that we need to keep in mind while validating the empathy maps. And then again, we also need to ensure that the user feedback that we get from the interviews, it is honest. So I think that helps with avoiding biases when creating empathy maps. Also, as we were taking examples about good empathy mappings, one thing that comes into my mind is Microsoft's inclusion design for Xbox adaptive controllers. So they basically came up with the game panels for people with limited mobility.

And how they did it is they actually talked to caretakers, caregivers, and people with actually disabilities and asked them what all they can inhabit in their designs too. make it more accessible to them and with less bias basically. So that's a good example that you can think about or search online. Well I think this is a great example because you see again that we see we think about it that the persona here would actually be of the person

with the limited mobility but the feedback that was actually given that was actually the caregivers and actually the ones taking care of the people who have limited mobility. I want to ask, when we make empathy mapping, is it a continuous process or a one-time process in the design flow? Well, most of the design flows that we look at are actually not single point-in-time things.

They actually are iterative and continuous. As we can see from the past topics that we have covered so far, The four basic activities in the design process, they just iterate after each other until we get the final product. So most of the design processes here are iterative. Almost everyone is confused in the four quadrants. Like how we can differentiate between the four quadrants in the empathy mapping.

Okay. So well, the first quadrant that we see while making an empathy map is the say quadrant. The same quotient as it means semantically, it is what the user actually says out loud. These are the things that the user said exactly. So you may actually need to put them in quotations as user quotes in the empathy map. The next we have is what the user thinks.

Well, this is somewhat different than what the user says because you may actually need to talk to the user in depth about it on what they actually think about it and not interested in saying that out loud. The next is the do. These are the actions that the user actually completes or the user actually does while he's actually using the product or about to use the product. And finally, feel. Again, as we looked at say and think, do and feel are kind of similar in that sense that These are what the user actually feels about doing and not actually does it.

And can empathy maps actually be used with any other design methods that come across your mind? Well, it does. In fact, it is a great idea. Like they work well with all of the design methods. They work well with personas. They work well with journey mapping as well.

And they provide a kind of a deep layer of understanding. that can inform other techniques. The next segment that we move on is conceptual models. So what the conceptual model actually is, is that we just see how the system is structured, how it's going to look like when the users start using it, how the users interact with it, and it simply guides the design overall and helps align the development process with the user expectations. how we iterate and test the conceptual model during the design process.

So can you say something about that? Well, you see, as you create prototypes, you evaluate it using the user feedback. And well, to validate the conceptual models,

prototypes and user feedbacks is the thing that we need to look at. So well, regular feedback helps tweak the models and while we iterate the prototypes, it leads to increased user feedback as well. And it helps align the product with the user's mental models. And what do you think is the basic and main difference between a mental model and a conceptual model? Because sometimes people get confused between the two terms.

These are two very different terms in the context of human-computer interaction. That mental models are the user's expectations, while conceptual models are what the designers actually answer to those expectations. So well, you see, what the user expects from the design is the mental model, while how the designer actually fulfills that mental model is the conceptual model. And aligning them is really crucial for an intuitive design. As you said, there is that is a crucial step in aligning the conceptual model and the mental model.

But don't you think that is always a trade off between them as like a user always demands something. But as a designer, you cannot give almost everything as the users demand. Well, that is obviously true. Like, we are obviously kind of limited with the resources. In general, we may not actually offer each of the user expectations.

We may not serve all of them. But yes, we try to serve as much as possible while keeping in mind the constraints that we actually have. Also, to add on to that, I think basically getting an idea of what a user expects from the design will be one step towards fulfilling all of their needs. Even if we don't fulfill all of them, but it will be a step forward to that. So making a conceptual model is essential to understanding what goes on in a user's mind. So can you give an example like differentiating between the mental model and the conceptual model? Well, suppose we take an example of an e-commerce website.

Well, the user may expect that the products may be delivered on time. The shopping process is easy and intuitive. And well, the app actually also supports multiple payment methods and all of the typical e-commerce expectation that the users have. But suppose if you are unable to fulfill all of the expectations due to some reasons like suppose you intend to provide luxury goods to the users but you may run into a problem like sourcing those luxury goods and delivering them within a day or two is kind of very hard on a practical note. So well while you may try to fulfill most of the user needs or expectations you may try to fulfill all of them but you may actually not end up doing all of it so again as you said yourself that we may actually need to make a trade-of f between completing the user expectations and keeping in mind of what our product is going to solve I want one more point like when we make the conceptual model is it in the form of the flowchart as many students are confused like as do we need to write the steps or make the flowchart? Well you know there's no hard and fast rule about a conceptual model that you

may use flowcharts you may use diagrams or you may just you know write it down just as a text form so that is enough of it for Like conceptual model, you just need to, you know, have an idea of what the designer is going to do.

That may be in form of anything. It may be text, visuals, or even maybe a video. So we also do a lot of research before we come up with these models or prototypes, right? So what do you think is the basic role of user research in developing a conceptual model like that? Well, if we keep the users in our loop and we understand their needs, we can introduce creativity without staying too far from the user expectations. The sole goal of our product is actually to complete the user expectations so that the users would actually use it. Again I want to ask like how we can test the effectiveness of the like the designer has made some conceptual model if they want to test like they have made the correct conceptual model which meets the mental model so do what we do for that. Well the answer is pretty simple evaluation we go back to the evaluation part where we take user feedback and Discuss with the users what they actually feel that the product may actually include and what the product actually offers.

So well, the answer to every question on how the product is, is simple. Evaluation. Yeah, so this is like we have to iterate and test at every step. Yes. We need to follow the four basic principles, four basic activities of the design process once and for all.

We need to identify the requirements, create alternative designs, prototype them, and evaluate them. And the product is achieved when you trade over the same and get the final product as you want it. Like as we see for the different apps, they keep on improving day by day. Yes. The updates that we get on our phones and everything, they are basically a part of evaluations that they do.

Well, yes, even a better example for the same would actually be the beta programs, beta testing programs that the apps actually launch to, you know, let a limited amount of users test the application, provide feedback for the same so that they can then improve on the same. So is there any example where the conceptual model does not align with the mental model and it's been a backfire or something like that? Well, for every example where the solution was not able to take into account what the target user was, it has turned out to be a bad design and well, What a bad design simply means is that the conceptual model did not align with the mental model. So what are the ways, as you said, like we have to for resolving that. So again, we have to test like evaluate, testing, iterating.

So answer for all the things is like evaluation. As we take more and more user feedback for the target users, we improve on the design. But while we do that, we need to keep one thing in mind that we need to choose the participants correctly. The users should actually

be the representative of the actual target users for the solution. Also, your problem statement should be very clear and concise from the start of the designing process because you need to know what problems your service or your app are solving so that you know what needs they are fulfilling from a customer point of view. And just so, again, we need to keep constrained ourselves in the sense that we do not stay too far from the user's expectations and we keep in mind what we are going to solve as well.

So if we summarize all the three things like the personas, empathy mapping, and the conceptual and mental model, so in all of them research is the key part like taking feedback but as we know that it's an expensive thing to conduct the research and the taking feedbacks so can't we take just the assumptions for the users well that is what companies do wrong and end up making mistakes expensive mistakes so well assumptions are the one thing that we need not do we need to actually take the user feedback and then design the product such that the users actually know what we are designing and if they actually are going to solve the problems that they actually have. Thank you so much. This was it for the panel discussion on user personas, empathy maps and mental conceptual models. Thank you.