Design Fundamentals

As a product manager, there may be times when you would have to focus heavily on business goals and technological capabilities and try to design and develop a product that meets these needs. But in this process, there is an important stakeholder — arguably the most important one — that may get left out: the user.

This is where the user-centred design process comes in. It involves various steps and phases that help you design and develop a product keeping in mind the user who would be using it. In this way, you can build a product that does not demand the user to change his/her beliefs and attitudes, but instead is built to accommodate them. This would ensure that your product fulfils the needs and expectations of your user in a seamless and user-friendly way.

The Basics of UX Design

According to Steve Jobs, a great design can be identified by 'how seamless it is for a user to use your product or service.' User experience design, or UX design, falls at the intersection of the user needs, business goals, and the technical constraints. These three together determine how the design of your product turns out.

User experience is the summation of the user's entire experience while using your product, both online and offline, and is usually marked by delightful moments, or what can be called the 'aha' moments. UX can also be described as the journey the user undergoes while using your product, including what he/she feels or thinks during each step of the journey.

A great UX can make your product, while a bad UX can break it. An example of a bad UX is a long form which can be tedious for the user to fill, especially when there are asterisks next to unimportant questions or when the reset button is right next to the submit button.

Through the comparison of the error messages seen on Amazon and Mailchimp, it's clear how a good UX can make a difference. While Amazon doesn't give any explanation for the error, Mailchimp wins over the user by explaining the error and helping him/her to rectify it.

Two important aspects for UX are as follows:

1. Usability: This aspect focuses on the tasks the user needs to perform to achieve his/her user goals, and the effort required for these tasks, e.g. Gmail scores high on usability
2. Delight: This aspect is concerned with making the product enjoyable, and making it indispensable for the user, e.g. Google, Twitter fail-whale are high on the delight quotient

A great example of usability is MakeMyTrip versus Akbar Travels. The former has a highly usable search feature which predicts the name of the city you are typing, while the latter has no such feature. Therefore, a user would find Makemytrip far more usable than Akbar Travels.

A great example of delight is the Slackbot. It makes the user onboarding experience on Slack great with quick and witty responses and helpful suggestions.

On the subject of great UX, the two products highlighted by our industry experts are Google and Blue Tokai Coffee. When it comes to Google, all the features seamlessly integrate with each other to provide a simple yet delightful experience to the user. The website for Blue Tokai Coffee creates an emotional connect with the user and establishes an ecosystem of coffee drinkers.

The primary metric used to measure UX is conversion. You also need to look at:

- The number of listings viewed per session
- The number of leads by a particular user in a session
- The number of transactions done by a user
- The frequency of repeat users

Conceptual Design

Conceptual design is the core set of ideas that you would use to design your product. The aim of conceptual design is to fulfil the functional requirements of the product. For example, the conceptual design of Uber is map-based, where the user can see the cabs near him/her. Upon booking a cab, the user can also track it and know what its ETA is.

At BookMyshow, one of the conceptual designs was a 3D view of the auditorium where the user can pick a seat based on its distance from the screen. Another concept is zooming into a particular cinema from a map view. At Housing, one of the concepts that the think tank came up with was the ‘Slice view’, a 3D projection of a building plan so that the user can actually experience which part of the building the flat lies in.

You should develop a conceptual design of your product because it helps with the following:

- Solving the pain points of the user
- Developing your product in accordance with the various personas you are targeting
- Adding features to your product
- Changing the user’s preconceived notions about your product

The steps for conceptual design are as follows:

1. Tasks: These are the tasks the user would carry out while using your product, e.g. for a food ordering app, a task would be adding dishes to the cart
2. Objects: Objects are what the user performs the task on, e.g. in a food ordering app, the objects would be the restaurant menus, the shopping cart and the payment gateway
3. Actions and attributes of objects: These are the actions and attributes that can be performed on an object, e.g. adding dishes to the cart and customising the dishes are attributes of a restaurant menu

After building these conceptual details you can design the UI by turning the abstract concepts, tasks and actions into UI icons, layouts, and other elements.

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Information Architecture

Information architecture, or IA, determines how the functionalities of your product should be structured in such a way that usability is maximised. It decides what the features of the product should be, and how they should be organised and labelled.

An affinity mapping exercise is how you can develop the information architecture of your product. This would help you figure out how users think about the different parts of your product, so that you can assess their preferred organisation. A sitemap, which includes all the pages/screens of your product and how they are arranged, would give you the IA of your product.

A sitemap has the following elements:

- Box: It represents a page
- Lines: They show how the pages are connected, and whether the navigation is one-way or two-way
- Sections and subsections: These are detailed out in the sitemap
- Type of pages: Whether a page would open up as a dialog box or a popup

The information architecture for a typical product page of an ecommerce website would have the following elements:

- Multiple images of the product
- Name and information about the product
- Price of the product
- Information on whether the product is available in the user's particular area
- A section on the ratings and reviews of the product
- A section listing products similar to this product
- Recommended products by the website

Through the example of Flipkart's sitemap, you understood how developing the IA of your product makes it easier to structure the plethora of information and develop the navigational flow of your product.

Interaction Design

The interaction design of your product should include details about each step the user would take while interacting with it, and the way the product would react at each point. Interaction design would include all elements the user can interact with through a click, hover, drag, type, swipe or tab.

For example, the interaction design for a registration form would include what information you need to ask, what the valid inputs would be, what happens when the user clicks on the submit button, and how the entire feel of the form would be. It would also include the feedback the user would receive while interacting with your product, e.g. the error message when the user leaves a mandatory field blank.

At BookMyShow, an example of an interaction design would be the movie-booking process, including selecting the movie, selecting the cinema and seats, and buying the tickets with multiple payment options.

For selecting the seat layout, the interaction design at BookMyShow allows the user to select multiple seats from left to right in just one tap. This interaction design helped the website increase conversions.

Interaction design can be sketched out through flowcharts or wireframes:

- Flowcharts: They are usually used to specify the flow of key tasks that the user would perform with your product, e.g. a login flowchart would have the following steps:
    - The user clicks on the login/register button
    - For the login button, he/she is asked to enter the username and password
    - These details are checked and, if correct, the user is taken to the home screen
    - If the details are incorrect, an error message is shown and the user is asked to fill the information again
    - If the user has forgotten the password, he/she will be prompted to take help from the website/app
- Wireframes: They are the skeletal frameworks of your product

Visual Design

A good visual design helps make the product appear pleasing and contributes to ease of use. Visual design has the following components:

- Colours: Colours help you convey specific messages to the user. A good product has a well-defined colour palette with pre-decided colours that are used throughout the product.
- Graphics: Graphics include photographs as well as illustrations, and are an important aspect of visual design.

There are various design principles which describe how humans visually perceive objects. There are:

1. Gestalt principles:
    a. Gestalt principle of proximity: The brain perceives objects that are close together as more related than objects that are farther apart. Therefore, you should place similar elements close to each other. For example, on The Guardian website, the news cards are placed together for each separate section, making the user think that they are somehow related.
    b. Gestalt principle of similarity: The brain perceives objects with similar characteristics as more related than objects which don't share similar characteristics. For example, at the top of the homepage of The Guardian website, the different categories of news have similar shape, colour and size, making the user think that these elements perform a similar task because of their similar visual characteristics.
2. Principle of visual hierarchy: This determines the importance the user gives to various elements on a page/screen, and the order in which he/she interacts with them. Visual hierarchy is determined by colour and size, as the human brain assumes that bigger objects are more important than smaller ones.

Designing for web and mobile is vastly different.

- Mobile has a limited amount of real estate. Therefore, the user should only complete one task on a screen. On the other hand, the web has more real estate so more information can be presented to influence the user's decision. Designing for mobile first and then expanding it to the web is a wiser choice.
- User interaction on mobile happens through touch and taps, whereas on web it happens through clicks.

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You should be able to:

- Comprehend the importance of UX design
- Identify best practices for the conceptual design of a product
- Describe the information architecture of a product
- Understand the design elements and fundamentals used for building a product