20 KEY POINTS FROM "THE DESIGN OF EVERYDAY THINGS"

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Course : HUMAN COMPUTER INTERACTION [D]

01. Human cognition

Human cognition refers to the mental processes that occur when a person is trying to make sense of information or solve a problem.

Example:

- Smartphone manufacturers have made a conscious effort to design their products to be intuitive and easy to use.
- The layout of apps and menus is designed to be easy to navigate.

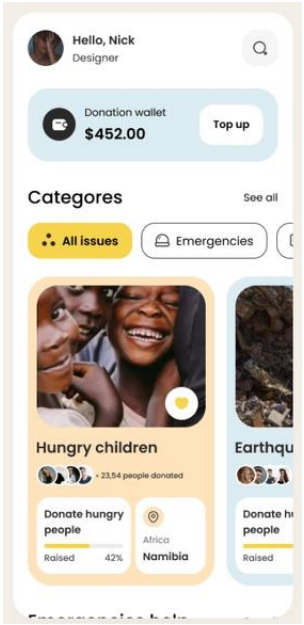

Figure: Layout of an application

02. The Reflective level

The reflective level refers to the highest level of processing in which people reflect on their experiences and emotions related to a product or system.

Example:

- A person may reflect on how the car makes them feel successful and prestigious, and how it reflects positively on their social status.

03. The principles of interaction

The principles of interaction refer to the design concepts that facilitate easy and intuitive interaction between users and products.

Example:

- Smartphone icons on the screen are visible and clearly labeled, providing users with an indication of what each app does.

Figure: Icons in a smartphone

04. The paradox of technology

The paradox of technology is the idea that while technology can improve our lives, it can also create new problems and challenges.

Example:

- Facial recognition technology has potential benefits but also raises concerns about privacy, surveillance, and discrimination.

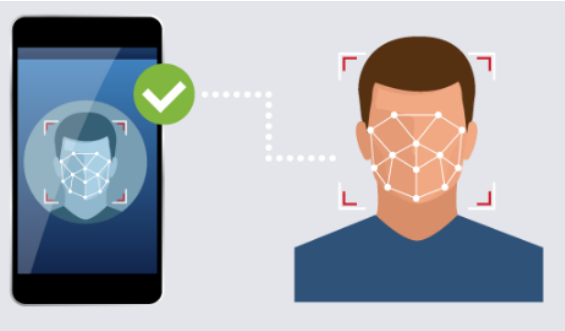

Figure : Facial recognition

05. Blaming the wrong things

Blaming the wrong things refers to the tendency of people to blame themselves for design flaws rather than the actual design of the product.

Example:

- Struggling to use a poorly designed kitchen gadget and blaming oneself for not being able to figure it out.

06. Reporting error

Reporting error refers to the situation when an error occurs, but the system does not provide enough information to diagnose the problem or the error message is confusing or misleading.

Example:

- Reporting errors can be seen in the error messages displayed by computer software. if a user receives a message that reads "Error 404: File not found.

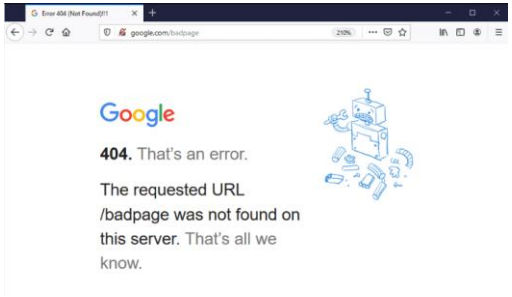

Figure: Not enough information in the Error message

07. Deliberate violations

Deliberate violations refer to situations where people intentionally ignore or break design rules or conventions in order to achieve their goals. It occurs when people feel that the design is limiting or hindering their ability to complete a task or achieve a goal.

Example:

- Rooting a mobile phone.

08. Competitive forces

Competitive forces refer to the pressure companies face to innovate and release products quickly to stay ahead of their competitors.

Example:

- Competitive forces leading to poor design is the Samsung Galaxy Note 7 smartphone, which had a battery defect that caused the phone to catch fire and explode.

09. Affordances

Objects should have clear and understandable properties that indicate how they can be used.

Example:

- A wall fan with rope controller, never get which one to pull for faster speed or otherwise.

Figure: A fan with rope controller

IO. Mapping

Controls and functions should have a clear relationship, making it easy for users to understand how they interact with a product.

Example:

- Volume controller nob on a sound box, rotate right to louder or otherwise

Figure: Nob of a sound controller

II. Constraints

Design should include constraints that prevent unintended actions or errors.

Example:

- A competitive game named valorant where full parties of 5 are allowed with no ranked restrictions. That means you can play with 4 of your friends no matter what your skill levels are. You could have a team of 3 Irons and 2 Ascendants as long as you queue up and play together as a party of 5.

Figure: Valorant match-making

12. Signifiers

Products should contain visual or audible signals that indicate their functioning or operation.

Example:

- The exit button on PowerPoint.

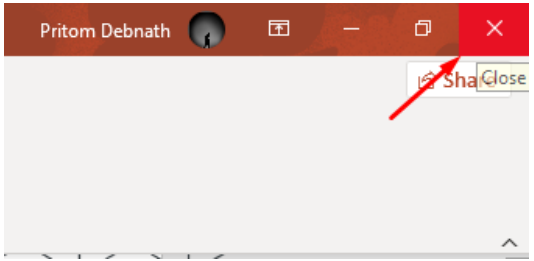

Figure: Visual representation of exit button on PowerPoint

13. Visibility

Users should be able to quickly determine the state and status of a product or its components.

Example:

- In foodpanda the steps of processing food remains clear to the user.

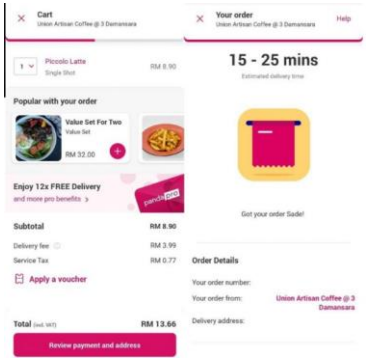

Figure: Foodpanda delivery steps

14. Testing

Iterative testing with real users should be used to detect and fix usability concerns, ensuring that products are intuitive and simple to use.

Example:

- A smartphone app that goes through usability testing with target consumers in order to gain input and enhance its interface and functionalities.

Figure: Steps of testing by the user

15. FEEDBACK

Everything that an item or system conveys to a user about its status or the effect of an activity is referred to as feedback. Designers must consider the type and quality of feedback provided by their items or systems in order to create intuitive and user-friendly designs.

Example:

- System alert when a teams call is ended is an example of feedback

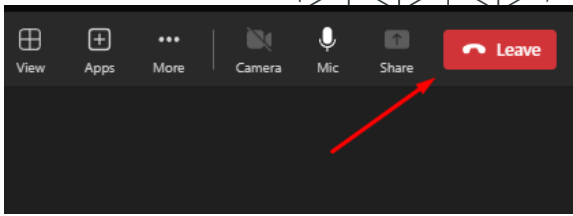

Figure: Sound feedback of leaving the call

16. CONCEPTUAL MODELS

Consumers create conceptual models in their minds to understand how a system or product works based on their existing knowledge and experiences. Constructive models may lower errors and generally improve user experience.

Example:

- The use of calendar reminder can be a conceptual model of planning the to do task.

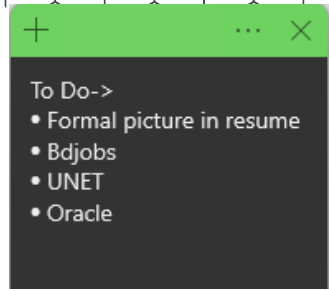

Figure: Conceptual model of to do task

I7. SYSTEM IMAGE

The portion of a device that is visible is the System Image. Only the system picture is used by the designer to communicate with the user. The user will produce a new model through interaction if the system image does not make the design model obvious.

Example:

- The Apple Pencil is designed to be used for drawing, writing, and other creative tasks on an iPad or other compatible device.

Figure: System image of apple pencile

18. Slips

An unintentional and trivial mistake or fault is called slip. They typically arise as a result of routine tasks being completed mechanically or automatically and without much thinking.

Example:

- Not turning off the electrical components while leaving the room.

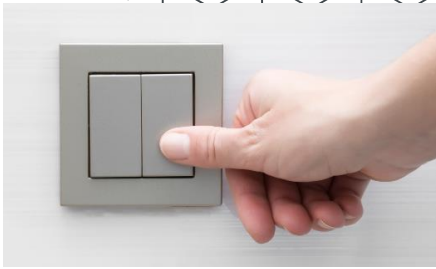

Figure: Turning off the switch

19. Flexibility

Different user preferences, capacities, and uses should be taken into consideration in design.

Example:
Adjustable height settings on monitor to accommodate users of different heights as preferences.

Figure: Adjustable height of a monitor

20. Simplicity

Design should be easy to understand, avoiding unwarranted difficulty that might confuse people..

Example:

- Cap of a cocacola bottle is a simple design and easy to understand to the user how to open or close it.

Figure: Design of a cocacola bottle