D'source Project

Open Design School

MoE's Innovation Cell

Usability Studies, Iteration, Final Design

Design Thinking & Innovation Project

Section: P14, Week 14

Design Thinking & Innovation (DT&I)

Section: P14

Week 14

Design Thinking & Innovation (DT&I)

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DT&I Project

P14 Module P14:

Usability Studies, Iteration, Final Design

Project:

Content

P14.1

DT&I Project:
Observations

Apply Observation in your project

By Observation you collect data/information about the designed solution.
Observation can be by the **Designer** or by the **Users.**

Observation by Designer:
Do observation **watching the user interact with the designed solution**.
.

Documentation:
Take notes or video/photo record while doing the observation.

Examples: Designer observes and documents Children playing with a newly designed toy / Elderly operating a mobile phone designed for them.

Apply Observation in your project . . .

Document the observation by the User before using the design in progress to identify its characteristics such as aesthetics, affordance, readability, feeling of comfort, its expression, etc.

Document the observation by the User while using the designed solution to reveal its usefulness, ease of use, comfort while using, skills required for using, interactivity, human factor considerations, etc.

Documentation:
Take notes or video/photo record while the user is doing the observation.

Examples: User observes is trying out the newly designed sustainable food container/ controls for solar powered fan.

Observation . . .

Steps in Usability Studies through Observation:

1. Finalise the prototype of Product/Workspace/Service

2. Give the prototype to the user for observation before using it

Observe the prototype for its physical features

3. Observe the prototype while it is being used

can reveal its usefulness, ease of use, comfort, skills for using, human factor considerations

4. Document the feedback before using and while using the prototype

Document while giving the feedback

P14.2

DT&I Project:
Conversations

Converse with the users

Converse with the users before using the prototype to identify its characteristics such as aesthetics, affordance, readability, feeling of comfort, its expression, etc.

Converse with the users while using the designed solution to reveal its usefulness, ease of use, comfort while using, skills required for using, interactivity, human factor considerations, etc.

Converse with the users after using the designed solution to reveal its overall characteristics and an overview of the solution.

Documentation:

Take notes or video/audio record while conversing with the user.

Examples:

Converse with the user while trying out the newly designed Bamboo Steamer/ controls for Solar powered Insecticide Sprayer.

Conversation . . .

Steps in Usability Studies through Conversation:

1. Finalise the prototype of Product/Workspace/Service

2. Give the prototype to the user for conversation before using it

Converse with the users about the prototype and its physical features

3. Converse with the user while the prototype is being used

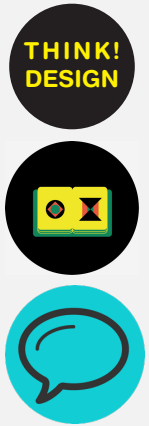
Can reveal its usefulness, ease of use, comfort, skills for using, human factor considerations

4. Converse with the user after using the prototype

Can reveal its overall characteristics and an overview of the solution

5. Document the Conversations

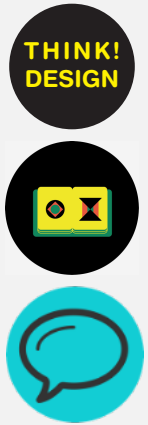
take notes or video/audio record while conversing with the user



T14.3

DT&I Project: Think Aloud Protocol

Think Aloud Protocol



Think Aloud Protocol:
Request the user to think aloud about the prototype. The user speaks aloud about the interaction that he has with the prototype. This can be done before using the prototype, while using the prototype and after using the prototype.

The users can be promted to do certain tasks or actions such that the use of the product is described by the user.
The designer documents the verbiage of what the user says while using the prototype.

Think Aloud Protocol method can reveal its usefulness, ease of use, comfort while using, skills required for using, interactivity, human factor considerations, etc.

Documentation:
Take notes or video/audio record while the user is thinking aloud.

Examples:
User thinks aloud while trying out the newly designed TV system/ controls for a smart bedroom.

Think Aloud Protocol . . .

Steps in Usability Studies through Think Aloud Protocol:

1. Finalise the prototype of Product/Workspace/Service

2. Give the prototype to the user before using it and request to talk about it

Converse with the users about the prototype and its physical features

3. Request the user to talk about it while the prototype is being used

Can reveal its usefulness, ease of use, comfort, skills for using, human factor considerations

4. Request the user to talk about it after using the prototype

Can reveal its overall characteristics and an overview of the solution

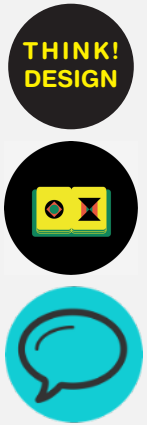
5. Document the Conversations

take notes or video/audio record while the user is thinking aloud

THINK!
DESIGN

T14.4

DT&I Project:
Usability Testing



Usability Testing . . .

Usability Testing:
What aspect or characteristics of the prototype needs to be tested for usability will depend on the nature of the design solution.

Request the **users to use the product and complete specified tasks, while their reactions are being documented and measured.**

Documentation:
Its best for the designer to take notes or video/Photo while the user is being tested.

The recording can be played back to measure timings, navigation, ease of use, etc.

The results can be compared, analysed to identify issues and problems in the present prototype and recommendations for improvement can be taken up for redesign.

Usability Testing. . .

Steps in Usability Studies through Testing:

1. Finalise the prototype of Product/Workspace/Service

2. Give the prototype to the user and request him to perform a given task
the user is observed while performing the task

3. Measure variables (could be quantitative or qualitative) while the user is performing the task
the different variables will depend on the characteristic of the prototype – it could be readability, comfort level, navigation, comprehension, etc.

4. repeat the user testing with other users
The number could vary from 3 to 10 depending on the diversity of the users

5. Compare and analyse the measurements
the recommendations can be taken up for implementing it in the prototype

THINK!
DESIGN

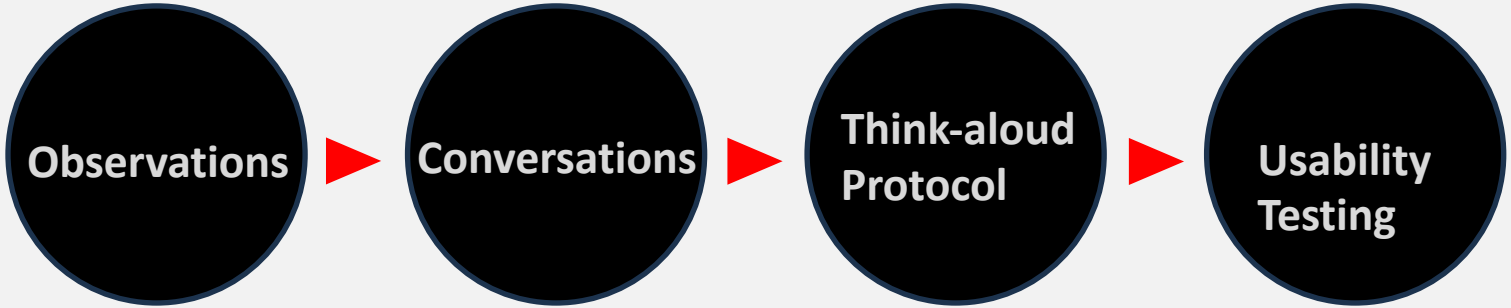
T14.5

Usability Studies

Usability Studies:

(Observations > Conversations> Think –aloud Protocol> Usability Testing)

Here are a few suggested methods:



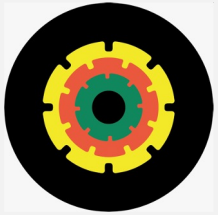
Thanks for Listening

DT&I Project
Section: P14
Week 14

DT&I Course – Week 14:

DT&I Process
(20%)

> **Usability Studies, Feedback and Iterations**
> Make use of user feedback and iterate
> Methods of getting User Feedback
> Finalise Design



DT&I Tools
(20%)

Usability Studies
> Observation
> Conversations
> Think-aloud protocol
> Usability Testing
> Iterate
> Finalise Design

DT&I Project
(50%)

Apply
> Usability Studies
> Iterate and Finalise

DT&I Cast Study
(10%)

> Case Study Project: **Redesigning a Solar Powered Cookstove**

THINK!
DESIGN

Supporting Organizations:

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Credits:

Presented by:

Prof. Ravi Poovaiah

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Credits:

Camera & Editing:
Santosh Sonawane

Credits:

Think Design Animation:
Rajiv Sarkar

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Credits:

Graphic Icons:
Shweta Pathare

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