HCI Assignment 5

Roll No: 41163

Title:
Evaluate an interface using usability evaluation technique.

Objective:
- To evaluate an interface using usability evaluation technique.
- To test the effectiveness of interface design using usability evaluation technique.

Theory :

Usability :

Usability refers to the quality of a user's experience when interacting with products or systems,including websites, software, devices, or applications. Usability is about effectiveness, efficiency and the overall satisfaction of the user.

It is important to realize that usability is not a single, one-dimensional property of a product, system,or user interface.

'Usability' is a combination of factors including:
- **Intuitive design**: a nearly effortless understanding of the architecture and navigation of the site.
- **Ease of learning**: how fast a user who has never seen the user interface before can accomplish basic tasks.
- **Efficiency of use**: How fast an experienced user can accomplish tasks.
- **Memorability**: after visiting the site, if a user can remember enough to use it effectively in future visits.
- **Error frequency and severity**: how often users make errors while using the system, how serious the errors are, and how users recover from the errors.
- **Subjective satisfaction**: If the user likes using the system

Evaluation Methods and when to implement them :

The key to developing highly usable sites is employing user-centered design. The expression, "test early and often", is particularly appropriate when it comes to usability testing. As part of UCD you can and should test as early as possible in the process and the variety of methods available allow you to assist in the development of content, Information architecture, visual design, interaction design and general user satisfaction.

Opportunities for testing include:
- Baseline usability testing on an existing site.
- Focus groups, surveys or interviews to establish user goals.
- Card Sort testing to assist with IA development.
- Wireframe testing to evaluate navigation
- First click testing to make sure your users go down the right path.
- Usability testing to gauge the user interaction end-to-end
- Satisfaction surveys to see how the site fares in the real world.

Working with Data from Testing :

Usability evaluations can capture two types of data: qualitative data and quantitative data. Quantitative data notes what actually happened. Qualitative data describes what participants thought or said.

Once you have gathered your data, use it to:

- Evaluate the usability of your website
- Recommend improvements
- Implement the recommendations
- Re-test the site to measure the effectiveness of your changes.

Usability Evaluation Methods:

The purpose of evaluation can be to improve the usability of the product as part of design/development (formative evaluation), or to assess the extent to which usability objectives havebeen achieved (summative evaluation).

- **Usability Inspection Method:**
  This section describes methods that can be used by experienced practitioners to assess usability issues. While these methods do not involve users directly, they can provide some useful insights. However, thegoal is to use them to supplement, not replace, direct user involvement in testing designs and systems.The ISO standard for user-centered design (ISO, 2009) defines five key activities in the project,as Figure given below shows, starting with the requirement to plan for user-centered design andusability, and then proceeding through an iterative cycle of activities including evaluation (ISO,2010).

- **Usability Testing with Users:**
  Usability testing involves observing users while they perform tasks with a hardware or softwaresystem. The product may be a paper sketch, a wireframe, a storyboard, a display mock-up, a productin development, a working prototype, or a completed product. Usability testing can also be conductedon competitive products to understand their strengths and weaknesses. A usability test can bea formative evaluation, which is conducted early in the design process to find problems improve theproduct, or summative evaluation, conducted to validate the design against specific goals.

CASE STUDY : TELEGRAM

1. **Intiuitive Design :** The app is designed like most of the messaging apps. Therefore a user doesn’t have to go through the pain of understanding a new architecture altogether. The navigation and basic UI is very user friendly and easy to understand.

2. **Ease of Learning :** The app is designed like most of the messaging apps. Therefore a user doesn’t have to go through the pain of understanding a new architecture altogether.

3. **Efficiency of use :** User can easily navigate through chat and reply. The pinning and starring messages function helps the user to mark important messages to access easily later on.

4. **Memorability :** The app is very easy to operate and there are no complex functions or features which the user needs to remember specifically.

5. **Error frequency and severity :** There can be server crashes at the company side but they are not that frequent and are solved very quickly. The server crash does not affect the user’s data thus they are not severe.

Conclusion:
Therfore we have studied different usability evaluation methods and how to evaluate aninterface using usability evaluation technique.