



Web Development

Week 11: Web Site Evaluation



Overview

- Nielsen's 10 Usability Heuristics for User Interface Design
- Creating a Usability Study
- More JavaScript Examples – In Class

What are the characteristics good website?



Nielsens 10 Usability Heuristics for User Interface Design

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

Visibility of system status

- ↗ The user should be kept informed of what is happening.
- ↗ Appropriate messages should be provided for the user to know exactly what is going on.
- ↗ The feedback to the user should be prompt and provided within a reasonable time.

Why is this important??

Match between system and the real world

- ↗ The text and language on the website should be familiar to the users of the site.
- ↗ Don't use technical terms the users won't be familiar with.
- ↗ Information should be presented in a clear and logical manner

User control and freedom

- Through the normal usage of a website/application the user will find themselves in places they weren't expecting.
- The web application should clearly display where the user currently is.
- Links should be provided to go back you the previous screen or to exit or return to the start/main homepage.
- Undo and Redo should be provided where appropriate.

Consistency and standards

- The layout and design of the website/application should follow the conventions of standard designs.
- The website should look like other sites and the content and operation should be similar to other sites on the web.
- If an application is designed correctly the user should find the site intuitive to use and easy to navigate and find content.

Error prevention

- ↗ The site should cater for any potential errors that may happen.
- ↗ Try to prevent errors from happening in the first place.
- ↗ Question: What errors could appear on a website??

Recognition rather than recall

- The user shouldn't have to remember information from a previous screen to be able to use the website/application.
- The information needed to operate the website should be provided onscreen or provide instructions that are visible or that are easily retrieved.

Flexibility and efficiency of use

- ↗ The site should be designed to cater for both experienced and inexperienced users.
- ↗ Frequent and experienced users should be able to use the site in an efficient manner.

Aesthetic and minimalist design

- ↗ The content on display should be tried to kept to a minimum.
- ↗ Information that is rarely viewed or irrelevant should not be included.

Help users recover from errors

- ↗ Any issues or problems that occur when using the site should be presented in a clear manner that the user can easily understand and offer a clear solution on how to solve the problem.

Help and documentation

- Documentation should be provided wherever necessary to allow the user to research a particular piece of functionality contained within the system.
- Any information provided about the system should be easy to search, intuitive offering clear steps on how perform a particular task.
- Whilst it would be better that the user wouldn't need to check on how to use the system, it is a good resource to have for a site/application.

Usability Study to Evaluate a Website

- For a given web application our main goal is to ensure the user can complete the required tasks/functionality in a clear manner.
- From a usability testing approach it is important to determine if the users can navigate the site content and successfully.
- The usability testing could consist of:
 - Observation of users completing a set of pre-defined tasks
 - Complete Questionnaire
 - Quick Interview

Sample Usability Study

↗ Numbers and Letters Game (Website)

Observation

- The observation of users completing a set of pre-defined tasks was used to see if a first time user could navigate the site and successfully complete a game.
- The system used was a complete beta version, providing full functionality to the user.
- The test was designed around the functionality of the system, with the tester giving all the users an instruction sheet (Slide 19) to complete a pre-defined set of tasks.

Observation

- The lifeline of the game is clear and this is the most important aspect of the testing.
- The user must be able to swiftly work through the game without becoming stuck or lost half way through a game.
- The following is the list of tasks the users were asked to complete:

Tasks

1. Signup to the website.
2. Login using your new username and password.
3. Read the rules of the game.
4. Successfully complete a full version of the game.
5. View the leader board.
6. Logout of the website.

Questionnaire

- After the observation tests were complete the users were asked to complete a questionnaire. This was used to gauge the usability of the website. It allows the users to rate statements of a scale of 1 to 5, allowing for the data collected to identify any possible design issues for the new website. The questionnaire is shown in next:

Website Questionnaire

Please rate the following statements based on your usage of the website today.

The scale is from 1 to 5, where:

1 strongly disagree to 5 strongly agree

1. This website is visually appealing.	1	2	3	4	5
2. It was easy to move from one page to another.	1	2	3	4	5
3. The overall organisation on the site is easy to understand.	1	2	3	4	5
4. Individual pages are well designed.	1	2	3	4	5
5. Terminology used in this website is clear.	1	2	3	4	5
6. The content of the website met my expectations.	1	2	3	4	5
7. I would be likely to use this website in future.	1	2	3	4	5
8. I was able to complete my tasks in a reasonable amount of time.	1	2	3	4	5
9. Overall, the website was easy to use.	1	2	3	4	5

We would like to thank you for helping us with our testing and we will only use any data gathered today for our own in-house proposes. Your information will not be passed on to any third party.

Interview

- The final phase of the testing consisted of a quick interview of all users on an individual basis. A set of general questions were created to provide structure to the interview and other questions were asked as required. This process was used to determine how specific users dealt with their completion of the observation test.

Interview Questions

1. Did you like the look and feel of the website?	
2. How did the menu structure allow you to navigate the site?	
3. From your previous knowledge of the Countdown game, how did the online game measure up?	
4. Is there anything on the website you did not like?	
5. From the observation conducted by our team member, did you require any assistance and why?	
6. Would you use the site again?	
7. Would you recommend this to a friend?	

Results of the Usability Test

- From the tests conducted, a couple of major issues were identified. After the completion of the observation testing it was clear that some users struggled with the lifeline of the game. Intervention was required for two users, both could not figure out what was the next action needed to complete the phase of the game.
- The questionnaires all received positive feedback, except for the statement It was easy to move from one page to another, this got a low ranking for three users.

Results of the Usability Test

- The interview process was very productive as a number of users suggested the games should be numbered to let them know where they are in the life of the game.
- A major issue for most users was with the numbers round, they didn't like the method for inputting their math calculation and suggested there should be an easier method, like an onscreen calculator.
- Any intervention needed was discussed in detail and all feedback was used to formulate the recommendations.

Recommendations

- Following the usability testing a status window was added to each webpage to help users with the next action they should take. This is aimed particularly at the game, instructing the user what to do next and to inform them when the game has ended.
- The second issue to address was the round numbers, this was an easy change and was added to the web application.
- The issue for the Math calculator was not addressed as a straightforward solution could not be found within the remaining project timeframe

More JavaScript Examples – In Class

- ↗ Image Rotator
- ↗ Rotating Header Image
- ↗ Validation: Numbers and Email Addresses

Questions

