Human Interactions and Web Design

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Abstract
With modern websites, there is a relationship between website design and human computer interactions. I participated in two experiments that let me make observations about human computer interactions and website design.

The primary experiment measured a test subject's reactions to a website, and I found that information presented in a book-like form was more natural to read than a diagram, as seen in the second experiment.

A conclusion reached was that book-like layouts are superior to diagram like layouts, as it is easier for a user to explore.

Introduction
In this report, it describes two experiments that I took part in, that show how my interactions with websites demonstrated facts about website design. My feelings, responses and thoughts are contained within the report.

The first experiment focused on my reaction and actions in response to different website content, while the second experiment focused on my ability and ease of extracting information from a website.

Background

Primary Experiment
As I interpreted it, the purpose of the primary experiment was to measure a test subject (user)'s eye movements and heart rates, and see how they change in response to a specific website type.

The website was set up so that the user had a limited time to read a paragraph and determine if it matched a certain criteria, in this case, if the contents of the paragraph were relevant to a certain given topic.

Secondary Experiment
The purpose of this experiment was to see how a user would react to different layouts and appearance of information on a webpage, and observe how easy it was to interpret and understand.
The goal of the secondary experiment was to have a user answer questions based on information provided in a diagram within a webpage. There were two webpages shown, with the information laid out in different ways, but all in a diagram form.

**Participation Experience in the primary experiment**

In the primary experiment, when I started, I was not overly concerned about it, and acted as normal. As the electrodes and heart monitors were attached, I became aware of what was being measured in this experiment by the researcher.

As I first saw what I had to do, I did not change in any way. I was able to scan through most of the paragraphs quickly and just once through to determine if it matched the given topic. However, for some others, it took a bit longer to process, and I had to go back up and look more slowly.

As I experienced and realised, the way I looked through the text was to start at the top and look straight down slowly. If I did not get an answer immediately, then I would look around the edges of the paragraph to find the answer.

Once it was over, I found that I got most of the questions right. I also noticed that I tended to look at the top and the centre of the page, and gradually paid less attention to the bottom.

**Differences between primary and secondary experiment experiences**

The differences that I observed between these two experiments were that in the secondary experiment, without a time limit like in the primary experiment, I was under less pressure to answer the questions.

The primary experiment had all of the information laid out in a single, large, unformatted paragraph in text, whereas the secondary experiment had the information in a diagram, with information being linked like a mind map.

However, the difficulty with the secondary experiment was that the diagrams could be confusing to read sometimes.

I also noticed that with the secondary experiment, I had to look for longer, and all over the page to find information, whereas with the primary experiment, it was quicker, as I just had to look at the top and down the centre of the paragraph, while occasionally looking at the edges.

This could mean that good website design involves the layout being structured in blocks, rather than being all over the place, as it allows for the user to follow some kind of pattern.
HCI and Web Design

The way that humans interact with computers and the design of websites are both related to each other.

For example, if a website is well designed, then a user will find looking at, exploring and interacting with the website easier and more natural. Conversely, a poorly designed website will be more difficult and frustrating to use.

For a major website like Facebook, having a good static interface (ie. Location of links, colours/text etc.) is important, while for any site involving forms, the user interaction is also important, as knowing where the user will look, their reactions when making a decision (under possible stress) and how long the user looks at a certain element will affect how good a website is in terms of design.

Also, the primary experiment made me think that as many of us have read a book, therefore we will naturally read large blocks of text like a book, which is a more natural way of reading information. This was somewhat similar to what I did in the primary experiment.

The scattered nature of the secondary experiment is not a good way of presenting lots of information, as it's less natural, and it's hard to know where to start looking for information. It only works in my opinion on small amounts of information.

In my opinion, HCI is a component of website design, as it's the design of the page that affects how humans interact with the site.

Conclusion

As my observations from participating in both experiments show, good website design is important as it allows for human interactions with computers to be easier and more efficient.

In particular, a website with information laid out like a book (from the primary experiment layout) is better than a website with information spread out like a diagram map (from the secondary experiment layout). The primary and secondary experiments show this distinction in layouts clearly based on my own observations.