Experiments about Human Computer Interaction and Web Design

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Abstract

HCI has occupied an indispensable position in computer and information technology area. It is a profound question how we can design a website that is human-readable and attractive. I gained a basic idea of human computer interaction from two experiments. The experiments about e-Readers and manipulating likes taught me the importance of layout and that the mentality of users are easily influenced by external factors. Furthermore, the instructions from experimenters of both experiments set up good examples of how to deliver information to users in an efficient and pleasant way.

Introduction

Apart from related theory taught in lectures, I attended several experiments about human computer interaction and web design during the semester. Here I will describe two typical experiments among them and my reflections from the two experiments.
The first experiment was about e-Readers. We were required to try on two e-Readers of different types and give some feedback on them. The second one was about punishment impact on things we like. We were asked to eat m&m chocolate beans of the favorite color and do a series of things after being punished by a minor electric shock.
Both experiments are deeply related to human computer interaction. And the interaction in experiments itself also has given me some inspiration about HCI. I will explain my thinking mainly from these two aspects.

First Experiment

Summary

This experiment about e-Readers is aimed at a comparison of navigation capability and other features between two different types. I was asked to use the two e-Readers to do the same things as instructed and provide detailed feedback. Experimenters collect data of feedbacks so that they can get to know in which way the e-Readers might be designed better.

Participation

This experiment took place in the first floor of CSIT building. After the experimenter arrived, I was given a stack of paper forms and one e-Reader. Following the instructions given on the paper,

I turned it on and tried to find the specified document. It took a long time to start the machine. And the reaction to my pressing buttons were slow as well. After this one, a second e-Reader was assigned to me and I was asked to do almost same thing with the previous one.
To some extent, I was asked to do mechanical tasks. The instructions are easy to follow but some were small challenges. For example, I couldn't find how to switch to next page at first glance. This was related to the design of machines. If it was designed well enough, I believe it would take users much less time to get familiar with the operations. The instructions were delivered clearly, so I didn't find anything hard to understand.

Comments
The strength of this experiment was the clear delivery of instructions and a clear-designed form. The weaknesses were not experiment itself, instead, I would like to say the design of e-Readers tested required improving. The experiment would surely meet the aims that were stated in the information sheet. Because the forms of feedback were written in detail and easy to classify and analyze. It was well-conducted and I thought the data collected were reliable enough.

Second Experiment

Summary
In this experiment about manipulating likes, I was given two wrist device to make small punishments and measuring my heart rates at different times. I chose a favorite favor of m&m chocolate beans and eat the beans of different favors as instructed. The purpose of this, was to collect information about to which extent likes could be manipulated.

Participation
This experiment took place in the third floor of CSIT building. After I receive a paper form, I was asked to pick a favorite favor of m&m chocolate beans and eat m&m chocolate beans of different favors according to the instructions and the favorite one I had chosen. During the whole process, I was wearing a special device and would feel a minor electric shock every time after I ate the beans of favorite colors. I was also asked to say "I don't want to like this color" every time before I ate them. I felt the chocolate beans were not so delicious after several electric shocks. It was like a conditional reflex. Another device collected information of my heart rate.
I was asked to do some mechanical tasks. And I surely enjoyed taking part in the experiment because I love chocolate. It was the easiest experiment that I had taken. I understood what I should do well and why I did this after the explanation from the experimenter.

Comments
This experiment was designed well from the structure of forms to the information delivery of the experimenters. I couldn't find a weakness. I thought the experiment could meet the aim to modify a minor personal liking to attempt to reduce the amount you like it (which was stated in the information sheet). The experiment was well-conducted, thanks for the good leading of the experimenter.
I believed the data the experimenters were gathering should be relatively reliable, since the feedback has a basic data of every individual (an initial data about how much I love that favor so

that experimenters can analyze other data based on this to avoid subjectivity), and the heart rates were measured by machines that were certainly very objective.

Comparison

The two experiments were different, since they were not relevant in purposes.
But my participation experience were quite similar. I felt easy in both experiments because the information were delivered clearly and at right times by the experimenters, so that I didn't need to think too much in the participation. Apart from that, I also felt hard in both experiments. Because in first experiment, the e-Readers themselves were not easy to operate. And in the second experiment, I thought the chocolate beans a little bit disgusting after the several electric shocks.
I believed those "bad" experiences were useful information that could contribute to the result of experiments. Since both experiments were conducted clearly and well enough, I knew they would run very well.

HCI and Web design

The relationship between the content of two experiments and HCI and web design is very clear. From the first experiment about e-Readers, I concluded that the layout and design of any software is very important. And the key is to make users use it easily and naturally without thinking too much. From the second experiment about manipulating likes, I could find out that users are easily influenced by some small unpleasant parts (just like the minor punishment in this experiment).
What's more, from the way the experimenters deliver information, I got the idea that information that you want users to know should be delivered clearly and in multiple ways or more times so that you could make users understood fully.
And of course, from studying how human physiology and psychology, we can design better interfaces for people to interact with computers.

Reference

e-Reader Comparison – Info Sheet given by the experimenter of first experiment
Manipulating Likes Experiment – Info Sheet given by the experimenter of second experiment
Human Computer Interaction - Dana Spiegel available at
http://alumni.media.mit.edu/~spiegel/papers/HCI.pdf