Human Computer Interaction Within Psychology Experiments

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Abstract

This looks at two psychology experiments with the purpose of understanding the human computer interaction involved. These experiments were conducted online and looked at visual perception and perceptions on the use of cannabis. This report will go into a small description of each experiment and then finish with a look at the human computer interaction in the experiments.

Introduction

This report looks at two human computer relation experiments. The first experiment is a simple visual stimulus experiment. I was unable to do a Type B experiment, so this report look at two type A experiments. The second one was looking at my opinion on Cannabis both for recreation and medical uses. The first experiments looked a little at human computer interaction (HCI); however, the second one didn't seem to have any HCI aspects. Both experiments could be changed to add more HCI aspects.

Individual differences in visual attention study

This was an online experiment testing visual attention. The user was required to respond to the onscreen image with the keyboard. The user had to tell the software whether the image onscreen showed the shape of the letter "F" or "H". The letter was made from other letters as shown in figure 1. I then needed to press the "F" or "H" key to input the shape in the image. For figure 1, the correct response would be H. The experiment continues with variations of this for about 30 minutes. The experiment adds some extra inside letters which don't change the response.

After about ten minutes, I started to get quite boring. I'm guessing that the experiment will be seeing people's attention span and also how their lack of attention leads to more mistakes or longer reaction times. The actual task was quite easy; however, there were a few times where I incorrectly answered just because of the duration of the experiment. In addition, I'm not fully sure what the experiment is testing.

The experiment was caried out well. The website worked without any problems and the task was easy to understand.

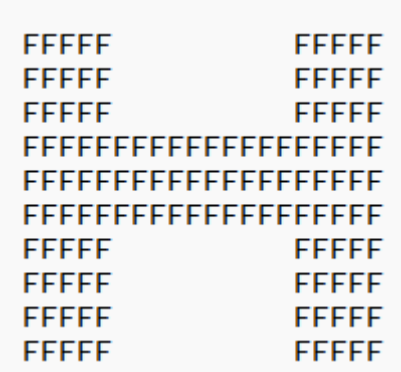

Figure 1. An example image from visual attention study

Public perceptions on the use of cannabidiol to treat symptoms of mental ill-health

This experiment was an online survey style. It asked my opinion about Cannabis and related medication. It included topics such as use for recreation or medical treatment. The server lasted about 45 minutes and included both multiple choice and short answer. Some of the questions were quite thought provoking.

The survey was well designed and had a simple and easy to use interface. There were some regularly repeated questions, changing only a few words. These questions would have been easier with more differences as they were too similar to answer differently.

Comparison of the experiments

The first experiment was easier to complete and had much less thinking involved. The second one seemed to be more beneficial as it seemed to actually get my opinion and wasn't just a repetitive task. Overall, both experiments were well presented with well made websites and no difficulties in completing the tasks. One major problem was neither experiment provided a detailed experiment report or data sheet.

Relevance of user-participation experiments to web design and development

The first experiment can be used to help with web design as it shows attention span. In addition, this experiment could be used to test the visuals on different sized screens or with different size content. I don't think this was being tested but it would be easy to add and would provide interesting results. The actual test was looking at our perception of text on a screen which has a lot to do with human computer interaction.

The second experiment doesn't have any clear relevance to human computer interaction studies. There is a small aspect in that the survey was conducted online; however, the experiment didn't show any evidence that this aspect was being considered. This experiment could incorborate more human computer interaction by trying different survey styles and colours. The experiment would then be able to see how style or colour of a survey change submission speed or content. For this test to be reasonably accurate, the experiment would need a large study group in order to see trends clearer.