Human-computer interaction report

Yihua Liang u6487831

1. Introduction
    a. The experiment is Visual Processing of Briefly Presented Chinese Characters and Objects. In this experiment, objects, e.g. keys, hammers, umbrellas and Chinese Characters keep showing up on the screen in a hierarchical way. The objects on screen are shown for a very short time(shorter than 1 seconds) before covered by meaningless picture and participants need to recognize the objects no matter they are constructed by smaller objects or they construct a bigger objects. The objects and simplified Chinese characters are introduced before tests are taken by the researchers. The researchers are obliged to make sure participants could recognize every objects when they are shown statically. When participants recognize an specific object they should press "YES" button to send a signal, otherwise participants should do nothing.
    b. The experiment includes 2 parts. Participants are tested with objects in part 1 and with simplified Chinese characters in part 2. Both parts include 3 tests and every test takes about 7 minutes. 1-minute resting is compulsory between each tests.
    c. This experiment is one of a series experiments. The researcher requires that participants should not reveal the purpose of the experiments because this could affect later participants' experiments and results.
2. Learned from experiment
    a. Developers should avoid using complicated or duplicated contents in the website. Complicated pictures or text will run out users patience. Even though I could have rests between the tests, I feel quite sleepy after 3 or 4 tests. In this experiments, the tests could be boring because researchers are keen on getting specific datas. However, websites are usually not for experiments and tests so we definitely should not use the complicated elements like long and unorganized paragraph, too much pictures in the same color, etc.
    b. Developers should use color schemas that are not only good looking and friendly for users eye. In the experiments, everything is shown in black, white and grey. According to some psychology papers, the color could have effect on humans feeling and thinking. As a consequence, when we designing the website, we should selects a color schema relevant to our topics and it should not harm users' eyes.
    c. All contents in web pages should be relevant to the topics and users could be distracted by irrelevant materials. In this case, though users stay in the webpages for a very long time, they do not learn what developers want they to learn. The sequence of showing objects is random so that sometimes the participants should not press "YES". When these disturbing objects show up continuously, participants could be distracted especially in the last 2 tests. I understand the worries that, developers cannot make sure what kinds of elements the users want to see or learn. As a consequence, the developers should provide various components for different users so that every users could find something that attract them and stay on the web pages. But the

different elements should be put in different pages and developers should make sure users could find and access every parts of the website easily and fast.

d. Using small elements to influence users when they are not aware of that. Hierarchy is an amazing way to assemble information and it is commonly used in designing posters. However, we have infinite space to show the contents we do not need to put all elements in a very small circle or square. Another way of hierarchical designment is hiding some small elements in background pictures or some other proper places. Though they are quite small, but they could have effect on users. In the experiment, participants are required to recognize both big and small objects. This could be fun when the difficulty is controlled.
e. The interaction between participants and computer is too simple. The only way to interact is pressing a button, which is very simple and boring. Regarding to the learning pyramid and VARK types, learning by actions is much more important. There is only one button “YES” because it is an experiment. However, more interactive function shoud be offered in normal website development.

3. Operation on my website
    a. Put the contexts in a more proper way.
        i. Replace unnecessary contents with links to external websites. This operation could have problem due to external websites could be removed.
        ii. Writing the contexts in a more organized model could also help. HTML provide several tags to organize web contents, e.g. list, table. Table is a very useful technique for my website, I could put the rating system into a table.
        iii. Using CSS on paragraph tags to optimal the visualization.
    b. Adjust color schema. Now my color schema is relevant to tennis court. Blue, green, white and grey are used for most part in my websites. The color schema is friendly to eyes and relevant to my topic.
    c. All the contents on my website is relevant to tennis(or required by this course). A possible action is optimaling the navigation bar and sitemap to make sure that more important contents can be found in the navigation bar and those less important are linked at the sitemap.
    d. Use hierarchical objects and objects association to have users think what they want to learn from my websites, what they have learned from my websites, what else they could learn from my websites. This part could require extra JS code.
    e. Add more interactive parts to the websites. A simple game will be useful for keeping users stay in my webpages. This part could require extra JS.
4. Conclusion
    a. This experiment perfoms like a pre-experiment of other experiments for words association. The relation between this experiment and human-computer interaction is not very strong, but it is still possible to learn something in the experiment process since it is done on computer.

b. Words association is a special gift of human. When the developers are aware of that, they could use it in websites designments to lead or mislead users. Obviously, this requires profound psychological and web development knowledge. But this invisible and unawared interaction is fantastic and useful.