Reflections on website design based on user-participation experiments

Ruoqi Wang

Abstract

This paper based on two different types a and b of the user-participation experiments, from the views of participants as compared objects involved in the experiment and the experimenter which compared others, discussed the relationship between experimental methods, feelings and evaluation indicators of the web design, in order to reflect for the user evaluation process in HCI.

1 Introduction

User evaluation is a core aspect of website development. The use of each system will have a different user experience. The quality of user experience determines the success of website design to a certain extent. Therefore, based on two types of user participation experiments, a and b, this paper summarizes, describes and evaluates the way the experiment was conducted, the experience of the experiment, and the design of web pages and websites from the perspectives of a. participants and b. experimenters and reflect on User Evaluation Metrics. I have participated in 3 SONA experiments in total, one is a type a experiment called "Teamworks" with a duration of 75 minutes, the second is a questionnaire survey called "Food, Body and Mind" with a duration of 60 minutes, and the third is called "How do people from impressions of others?", a 10 minutes type b experiment. The report focuses on experiments of type a and b, and reviews the specific content of user participation experiments with the themes of "Teamworks" and "How do people from impressions of others", so as to make recommendations for user evaluation of website design.

2 First Experiment

2.1 Summery

The first experiment is a type a experiment with the theme "Teamworks". The purpose of this experiment is to examine the impact of team emotional state on team performance. In the experiment, participants were asked to fill out two questionnaires to describe their emotions. In this experiment, I participated in a group cooperation activity of four people as a participant. This experiment consists of three tasks: 1. Listening task. The task required participants to briefly introduce themselves to other group members and to share life events such as "my day" with other participants in the group. 2. Writing assignments. This task requires participants to record as many events as possible from all other group members and their own events that they heard

in task 1. 3. Innovation tasks. The task requires all participants to work in groups for 30 minutes to create a promotional video for the upcoming o-week of the Australian National Universality 2023 Semester 1 under the theme of "ANU o-week".

2.2 Description

Based on the three tasks in this experiment, I have the following experience. First, I felt the adaptation during the experiment. The first and second tasks are from introducing yourself to sharing with each other. In the process, I showed myself to others and recorded the interests of other team members through keywords. Through this task, I have deepened my understanding of others and found more common topics to talk about. Second, I felt cooperation in the experiment. The third task lets us make a video through teamwork. We first brainstormed and asked everyone to contribute their own perspectives and ideas. For example, for the design of the o-week video theme, content and music, we critically analyze the strengths and weaknesses of each idea, so as to objectively combine feasible video production methods. In the end, we chose to invite new students to participate in o-week activities on the grounds of free food, and chose to invite old students to participate in o-week exchanges on the grounds of language learning. Then say "a lot of free food" in comical ways like "I hate free food so much". Finally, add a piece of music called "happy".

2.3 Comment

This paper evaluates the advantages of this experiment. First of all, the design of the tasks in this experiment is reasonable and accurate, so it supports the achievement of the experimental goal and verifies the feasibility of the experiment. This experiment was used to explore the impact of team emotional state on team performance. Therefore, the experimental task 1 and task 2 allowed the participants to introduce themselves and share events. This experimental design allowed the group members to have a preliminary understanding, so that the experimenter could reasonably evaluate the emotional state of the group through questionnaires. In task 3, each group produced an o-week video in a cooperative way, and the experimenter could clearly compare the output of different teams on the same topic. Secondly, the response mode of the tasks in this experiment is from shallow to deep. From the participant's point of view, the difficulty of completing the tasks of the experiment is gradually increasing. In tasks 1 and 2, participants are asked to perform relatively simple behaviors, such as listening and writing, while in task 3 it is about sharing and implementing their ideas. This approach is easier for participants to adapt and more stable. At the same time, the results of this experiment may have a small amount of error. When the experiment uses the control variable method to compare the team performance of different groups, it cannot completely ensure that the environmental variables of each group member are completely consistent. For example, the group that participated in the experiment on a cloudy and rainy day may have a lower emotional state than the group that participated in the experiment on a sunny day. Therefore, the data collected by the experimenter may be at risk of inaccuracy.

3 Second Experiment

3.1 Summery

The second experiment is a type b experiment with the theme "How do people from impressions of others". The purpose of this experiment is to understand the factors that influence the evaluation of others. In the experiment, participants were asked to look at and rate several people accused of minor and different crimes. The participants in this experiment also acted as experimenters comparing three different people, and by scoring their personalities, the participants' evaluations of criminals were transformed. The background scene of each criminal, the portrait of the criminal, and the confession of the criminal will be played in sequence on the screen. After the broadcast, participants were asked to rate each criminal for honesty, danger, and aggression, while making a choice about whether he committed a crime.

3.2 Description

In this experiment, I played the role of the experimenter. First of all, I have a strong interest in this experiment. The experiment revolved around accusing criminals, setting up a story suspense, allowing participants to use their ingenuity in the process of solving the puzzle. Second, I felt an immersive interaction during the experiment. I was able to form an impression of the criminal through his portrait and his voice. This feeling created a crime scene for me, and I quickly adapted and integrated into the experiment. Finally, in the experiment, I felt relief. The task of the experiment was clear: to evaluate impressions of different criminals by viewing and comparing pictures and sounds. Due to the short duration of the experiment, I made my evaluation in a natural state.

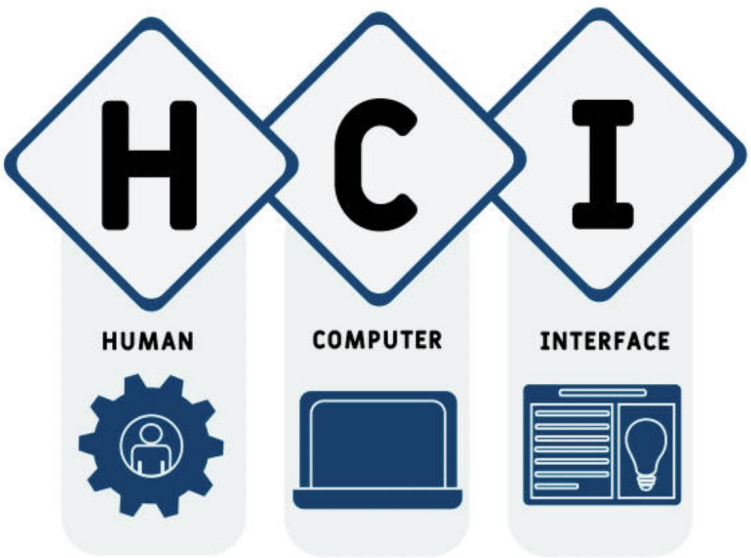
3.3 Comment

This paper evaluates the advantages of this experiment. First, the topic design of this experiment is creative. The experiment uses the evaluation of criminals as a scene to understand the evaluation factors that affect others. Content is designed to be vivid and specific, increasing user engagement. Second, this experiment employs various forms of user interaction. For example, when the criminal reads the confession, there are sounds and images instead of just words. This deepens people's understanding of the task and facilitates memory and review. Finally, the design of this experiment covers aesthetic elements. The experiment uses pictures as the main description method, and participants can directly watch people's faces and the scenes behind them. Through detailed images, people's understanding of the evaluation index of beauty is considered. The disadvantage of this experiment is that the time of the experiment is short, and there may be no way to fully compare, resulting in inaccurate data.

4 Comparison

The similarity between the two experiments is that in the case of user participation, different tasks are designed to achieve experimental goals, such as researching influencing factors or researching relationships. There are also many differences between the two experiments. First, the perspectives of the two experiments are different. In type a experiment, the participant joins the experiment as the subject, and the participant's understanding and response to the task are based on the description and promotion of the experimenter. Participants also felt more attentive to themselves, making it easier to grasp details or parts of the experiment. At the same time, participants play more of the role of executors, so the expression of their own state will be relatively lacking. In type b experiments, participants join the experiment as experimenters, so the macroscopic control of the entire task will be clearer. Participants clearly understand what they need to do and compare, and what evaluation system to use to draw conclusions. Therefore, participants play more of the role of decision makers, making choices and evaluations based on the behavior of the compared. Second, the two experiments were designed differently. In type a experiments, participants are the objects to be compared, so the experimenter needs to consider everyone's feelings when designing experiments for participants, and design experiments with better experience for each part of the participants. In the type b experiment, the participants are the experimenters, so when designing the experiment, it is necessary to provide different objects or equipment under the same evaluation system for the experimenter to compare, and the consideration of the experimental design will be more comprehensive. I prefer the second experiment because it has more participation and more decision-making power.

5 HCI



HCI includes two links: web design and user evaluation. The user evaluation experiment has certain similarities with the two user participation experiments in this paper. The core idea of user evaluation is to improve user experience. (youtube, 2020)

Thielsch and Jaron pointed out that the core factors for evaluating user experience of website design include content, feasibility and aesthetics. (Thielsch and Jaron, 2014) In terms of content, the content of web design first needs to have a creative topic, such as the design of the criminal problem in experiment two. Interesting topics can make users more interested in the website. The content of web design needs to be from the shallower to the deeper, such as the design of tasks in Experiment 1. From simple to complex website content, it is easier for readers to understand. As far as feasibility is concerned, the design of the website needs to meet the needs of users, and at the same time solve the problems of users, so as to achieve the goal of website construction. Experiment 1 demonstrates this very well. In terms of aesthetics, websites need to be designed for some user interaction. Such as the sound playback in the second experiment. When users interact more with a website, users will have more responses to the website. Website illustrations can also support the concept of aesthetics. Illustrations are easy to make eye contact with users, and images are often easier to accept and understand than words. On this basis, the methods of user evaluation experiments and website design also need to reflect different perspectives. such as participants and experimenters. This means that in the design of the website not only the comparison of different elements, but also the situation of different user groups needs to be considered.

Reference

https://freshvanroot.com/blog/2017/deep-content-vs-shallow-content/

Thielsch, Blotenberg, I., & Jaron, R. (2014). User Evaluation of Websites: From First Impression to Recommendation. Interacting with Computers, 26(1), 89–102. https://doi.org/10.1093/iwc/iwt033

https://www.youtube.com/watch?v=SoTLNrkDN4U