

Focus group

Motivation

Focus group is a semi-structured conversation between a facilitator and a group of respondents. The facilitator is responsible for organizing the discussion and guarantee it is not deviated. The main purpose of the group discussion method is to gain detailed user requirements and deeply understand their requirements by listening to a group of respondents who are selected from the target users.

Compared with questionnaires, focus groups seem to be a more authentic approach. It allows individuals to offer tentative explanations, which can also be rejected by others. The value of this approach is that there might be some unexpected discoveries since they can often be made from free group discussions.

Objective

1. Collect expectations, functional requirements from target users.
2. Understand users' attitudes and preferences of the functions we plan to design.

Preparation

1. Recruit target users with different backgrounds and do not know each other.

Require three groups of 5-7 people. Each group represents different grades from Year 1 to Year 3.
2. The facilitator.
 - a. Be objective. Do not raise questions with indication.
 - b. Keep the discussion focusing on the topic. Guide discussion of participants without restricting their freedom to express opinions and comments.
3. Observers.

Accurately record opinions from participants, and pay attention to the attitudes, preferences and feelings of participants.
4. Book rooms. Choose an environment which is as relaxing as possible.
5. Consent form and information sheet.

6. Voice recording equipment.

7. Existing products.

<https://www.cs.usfca.edu/~galles/visualization/ComparisonSort.html>

<http://snapapps.github.io/edgy/app/edgy.html>

8. Explanation of functions we plan to design.

Brief process (about 30 minutes for each group).

1. Establish friendly relationships between participants (about 2 minutes).

2. Discuss the understanding of sorting algorithms (about 5 minutes).

The facilitator should explain what are sorting algorithms and algorithm correctness first.

3. Discuss difficulties in learning sorting algorithms (about 3 minutes).

4. Discuss the opinions on sorting algorithm visualisation (about 5 minutes).

The facilitator should explain what the meaning of sorting algorithm visualisation and show examples (existing websites) for participants.

5. Evaluate the examples above (about 7 minutes).

a. Guide participants to talk about the advantages and disadvantages of these software.

b. Discuss whether the participants will choose these kinds of software to help learn sorting algorithms. Why?

c. Collect their expectations on improving the software.

6. Evaluate the functions we plan to design (about 8 minutes).

a. Firstly, the chairperson should explain for participants what functions we plan to design.

b. Emphasis on how to prove the algorithms correctness we planned and confirm participants understand our thoughts.

Expected output

1. A report that focuses on the opinions and requirements of target users with the

form of natural language instead of data.

2. The evaluation of the existing software algorithm software and functions we plan to design.