

User testing protocol

2020-12-11, TU/e Industrial Design BSc year 2, Project II Design. Project B21 Games for Data Collection.

Variables:

building + getting familiar, length: **max 5 minutes**

semi structured interview: **max 3 minutes**

How we record the data

1. Participants will be recorded with video while performing the user test, if they consent.
2. Participants will be audio recorded for the think aloud test and semi structured interview.
3. The data recorded by the app will be sent to a central server when the user test is done.
4. The iPad Pro's screen will be recorded during the building process.

Test environment: Atlas 2nd floor / 4th floor / preparation steps

1. Researchers
2. Disinfection gel
3. Table with scale model
 - a. The scale model is made out of a cardboard plate, roughly 100 cm by 200 cm.
 - b. A couple of miniature houses are situated on top
 - c. Details are drawn with a marker and felt tip pen.
 - d. The chairs are removed around the table so the user can freely move around.
4. iPad Pro with AR Build System test application
5. Charger for iPad Pro
6. Camera
 - a. + tripod
 - b. + SD card
 - c. + laptop with SD card reader
7. Optional: Laptop / iPhone with microphone (if camera is insufficient > needs to be tested beforehand)
8. (15) Printed informed consent forms
9. Pen

Steps for each user test:

1. Everyone is wearing mouth masks (researchers + participants)
2. Participants disinfects their hands at arrival
3. Participant gets handed the informed consent form and a pen
4. Participant signs the informed consent form
5. Researcher says:
 - a. You have been given the task by the municipality of Eindhoven to redesign this specific playground. It is situated in a relatively quiet neighbourhood. Your goal is to make something that is inviting for children, and where parents can watch their children play.
 - b. During the test, we ask you to talk to us about what you are thinking: whether you don't understand how to do something, or what kind of things you feel while performing certain actions.
6. iPad Pro is taken out of its charging solution.
7. The iPad Pro's screen recording is turned on

8. Participant gets handed the iPad Pro with the application on the blue main screen
9. The participant is reminded of the time limit that is set for building + getting familiar with the app (**max 5 minutes**)
10. The participant can now click on the start button.
11. The researchers put the camera on record
 - a. The goal of the camera is to stay stationary in a specific location. During the build process it can be repositioned once, but it is not meant to be obtrusive to the participant, so it needs to stay in position.
12. After the 5 minutes or when the participant feels like they are done, the participant is asked to put down the iPad Pro
13. The iPad Pro's screen recording is turned off after getting picked up by the researchers.
14. iPad Pro gets put back in its charging solution.
15. The researchers now ask a couple of questions in the form of a semi-structured interview:
 - a. What were your initial impressions?
 - b. Happy with what you have built?
 - c. Intuitiveness of:
 - i. moving objects
 - ii. placing objects
 - iii. selecting objects from the library and adding them to the inventory
 - d. Comments on the look / feel of the app.
 - e. Do you ever have critique on your living environment?
 - f. Have you participated in codesign sessions / given feedback to the municipality about a certain place. e.g. municipality asking for input for a new playground?
 - g. Think you would take the time to do this when the municipality asks you to redesign a certain area of your neighbourhood?
 - h. General feedback? / other remarks?
16. The participant now leaves and is asked to disinfect their hands again.

If's:

1. If the participant asks a question, of how to perform a certain action, they are answered. This is noted.
2. If the participant takes too long (reaches max. length of building), we ask the participant to finish up the build and give back the iPad Pro.
3. If the participant isn't talking as much as wanted, the researchers can ask the following questions:
 - a. How comfortable do you feel while performing this action?
 - b. What goes through your mind right now?
4. If the tracking gets lost by the iPad, the participant is reminded by the researchers to sway the iPad around until it has found the tracking again.
 - a. In the worst case scenario, the application may be reset to its initial state (Stop usertest > Stop usertest > Start)
5. If the semi structured interview is taking too long, the participant is given contact information for further discussing.
6. If the user is taking too long to even place the first object, or is struggling to understand a certain concept for more than 30 seconds, the researchers will explain to the user what they should do, or how a certain feature works.