MEDICAL REALITY

Usability Testing

Roles

- Lorenzo Sciara will be the facilitator
- Benito Marra, Francesco Grande and Luca Rota will be the observers

Participants

- Target population: Medical university's students who have yet to support the pre-training, mandatory in the University of Turin.
- Education: Undergraduate university student
- Gender: Even mix of male and female
- Age: 2-3 year of B.S., so 20-22 years old
- Expertise with university terminology: good
- Expertise with the use of computer and smartphone: good
- Students have not yet done their pretraining at the SimTo
- Students have yet to support the pre-training, mandatory in the University of Turin.
- Use computer daily for activities, like study, send email, use social media and but in Shop on-line

Equipment

- Computer, Internet connection, and a browser to run the prototype
- Paper and Pencil to take notes
- Smartphone notes
- Smartphone audio recorded

Requirements

- we found the students of the desired target
- We have led them to a shelter, free of distractions
- We started the computer and browser
- We launched the high-level prototype

Artifacts

- Informed consent form
- Facilitator Script
- Pre-test questionnaire
- Post-Task Questionnaire (SEQ)
- Post-test questionnaire (SUS)

Tasks

#	**Text of the task**	**Success criteria**	**Methodology**
T1	Start the first lesson provided by the professor.	The first lesson provided by the professor is in execution.	Think-Aloud
T2	Share your obtained results to the professor.	A box that says that the sharing happened successfully is shown	Think-Aloud
T3	Receive feedbacks from the App and follow his tips.	A suggested lesson is executed.	Think-Aloud

Metrics

Quantitative:

- Time to complete task
- Number of attempts/errors
- Number of users able to complete task
- Pre-test, Post-task, and Post-test questionnaires

Qualitative:

- User's comments and questions
- User's body language and facial expressions

Script

Presentation:

Hi, we are a group of students of the Polytechnic of Turin and we are carrying out a "usability testing", that is the last phase of a course that we are following in the university, in which we look for feedback for the prototype we created: Medical Reality.

First of all, I want to thank you for participating in this study. I understand your time is valuable, but hopefully you. We are testing our app, not you! Any mistakes are app's fault, not yours.

We are performing usability testing on our high-fidelity prototype, so hour we are going to spend time together to get your impressions of this. We are going to ask you to complete a series of tasks that match goals typical uses like yourself might have when using this application. It is just a prototype of applications, so it will be some limitations or design parts work in progress, but we are interested in knowing how you do things, where you look, things like that. More than what you're doing, though, we're interested in knowing what you're thinking, how you react to things on the prototype.

One important thing we need you to keep in mind while you are testing is that we need you to "think out loud." I know that sound a little bizarre, but you'll get used to it quickly. This really helps us understand what is going through your mind while you are using it. If you like it, we want to know that. If you get frustrated or are confused, we want to know that too.

We're going to watch you complete these tasks and we will take notes, in order to complete our report, writing what could be improve in the future on our prototype.

Form providing:

Before we proceed with any testing, we do have a few forms we need you to complete.

The first an informed consent form, to giving us permission to record your voice and takes notes on your impressions.

<Handling the informed consent form>

While the second form is a pre-test questionnaire. We're just trying to get your input, know what your expectations are, previous experience, and so on. I'll read the questions aloud to you, and you just answer honestly.

<Handling the pre-test questionnaire>

Process explanation:

The way this testing is going to work is that we are going to give you a number of tasks to complete. Each task will have a specific goal, and we want you to explore the prototype and complete each task. While you're using it, we will take notes on paper and/or on smartphone notes, while another smartphone will record your voice.

After each one, we will talk about your experience with it, how you felt during the task, and so on.

Questions asking:

So, before we get started, do you have any questions or concerns?

First impression asking:

Before to ask you to execute the three main task of our prototype, I'm going to show you the home page, so you can look it for a few seconds only and tell us:

- What's your first impression of this website?
- What/ who do you think it is for?

<Participant looks at page for 10 seconds>

Study starting:

<Start the recording!>

Ok, we start with the main tasks of prototype. The first one is: "Start the first lesson provided by the professor.". I won't be saying anything, I'm just going to be observing, but to not hesitate to ask if you have any questions.

<Participant executes or tries to execute the first task >

Now we will ask you some quick questions about the task you just did.

<Provide questions from the post-task questionnaire (SEQ)>

Ok, let's go ahead with the second task; this time it concerns in "Share your obtained results to the professor.". As before, I will observe you and ask me questions if you need.

<Participant executes or tries to execute the second task >

Now we will ask you some quick questions about the task you just did.

<Provide questions from the post-task questionnaire (SEQ)>

Ok, for the third and last time I will tell you the task to run and then I will observe you during your performance of it. the third task says, "Receive feedbacks from the App and follow his tips.".

<Participant executes or tries to execute the third task >

Now we will ask you some quick questions about the task you just did.

<Provide questions from the post-task questionnaire (SEQ)>

So, you finished using the prototype, you could perform all its main tasks, you could navigate through it and see it better, than the first initial impressions, we asked for. We therefore ask you as a thing to complete a quick questionnaire, which will allow us to understand how you came up with using our prototype.

< Handling the post-test questionnaire (SEQ)>

Okay, we're finally done taking your time, so thank you for your time and goodbye.

Appendix A – Informed consent form

Usability Testing – Informed consent form

I undersigned _____, to authorize, in date _____, the gentlemen present here, to be able to use the data provided by me (e.g., gender, age, etc...), the recording of my voice and the written notes taken, in order to contribute to a complete conduct of the tests, necessary to make future improvements to the prototype: Medical Reality.

Full Printed Name: _____

Home university: _____

Gender: _____

Age: _____

Year of the course of study: _____

Signature: _____ Date: _____

Appendix B – Pre-test questionnaire

Pre-Test Questionnaire

How do you usually study to prepare your pre-training? _____

How confident you are with using computers? 0, 1, 2, 3, 4+

How confident you are with using Visor? 0, 1, 2, 3, 4+

How confident you are with using 3D software? 0, 1, 2, 3, 4+

How prepared you are for your pre-training at SimTo? 0, 1, 2, 3, 4+

Appendix C – Post-task questionnaire (SEQ)

Post-Task Questionnaire

How did you feel about running this task?

1. Very difficult
2. Difficult
3. Somewhat difficult
4. Neither difficult nor easy
5. Somewhat easy
6. Easy
7. Very easy

What could facilitate the task? _____

Appendix D – Post-test questionnaire (SUS)

Post-Test Questionnaire

Evaluate these statements with a score from 1 (Strongly disagree) to 5 (Strongly agree):

1. I think that I would like to use this system frequently. ____
2. I found the system unnecessarily complex. ____
3. I thought the system was easy to use. ____
4. I think that I would need the support of a technical person to be able to use this system. ____
5. I found the various functions in this system were well integrated. ____
6. I thought there was too much inconsistency in this system. ____
7. I would imagine that most people would learn to use this system very quickly. ____
8. I found the system very cumbersome to use. ____
9. I felt very confident using the system. ____
10. I needed to learn a lot of things before I could get going with this system. ____