

Usability Checklist: A Practical Tool to Increase the Usability of Cross Reality Laboratories

Purpose/Objectives

“On the Web, usability is a necessary condition for survival“[1] usability expert Nielsen said. This is true for Cross Reality Laboratories such as Remote Laboratories or VR laboratories, independent of how they are used. However, from both experience and literature we can say usability is often overlooked in laboratories.

This workshop aims to introduce creators of such laboratories to a practical tool (based on literature, experience and tested on end users) they can apply during the workshop to evaluate the usability of their lab as well as to point them to places where they can improve the usability.

[1] <https://www.nngroup.com/articles/usability-101-introduction-to-usability/>

Audience

The workshop addresses creators (e.g., developers, designers, teachers) of cross reality laboratories, both used in teaching as well as in industry. It assumes that participants bring in an own example laboratory they want to analyse. It offers participants a perspective on usability, which is (based on both personal experience and literature work) normally not considered for cross reality labs. Participants get access to a worksheet in form of a checklist they can continue to use in the future.

Overview

The aim of the workshop is to give participants a practical tool they can use directly at the workshop. For this, it is split into three parts:

First, a broad overview over the area of usability / user experience is given. This has the goal of equipping the participants with basic knowledge which we don't assume creators (like programmers) actually have.

After that, a checklist is shared with the participants which they can use to analyse the usability of a Cross Reality Laboratory they bring into the workshop. While they are working, the presenters are in the room to answer any questions that might arise. This way, participants get a good insight into the usability of their laboratory and their current strengths and weaknesses. They can keep the checklist for further use (e.g., evaluate a different laboratory or reevaluate the laboratory after changes) and share it with colleagues who might also be interested in it.

A reflection period finishes the workshop to allow participants to keep their insights. A couple of participants can present (if they want) their laboratory and the insights they gained in order to increase the understanding of usability for everyone. Finally, feedback on the checklist itself is collected to be included in further iterations of the checklist.

As an additional bonus, we will give a short outlook on an additional tool (a playbook which goes into more detail) at the end, though we assume that the playbook won't be finished by the time of the workshop.

The workshop is part of the project *Flexibel kombinierbare Cross-Reality Labore in der Hochschullehre: zukunftsfähige Kompetenzentwicklung für ein Lernen und Arbeiten 4.0 (CrossLab)*, which is funded by the *Stiftung Innovation in der Hochschullehre*, Germany.

Topics

Topic	Duration (min)
Short Introduction to Usability	30
Rating the Usability of an own laboratory	60
Spotlight Presentation of Results	45
Reflection	30
Outlook: Playbook	15

Presenter(s)/Facilitator(s)

Louis Kobras, M. Sc. Informatics, NORDAKADEMIE gAG Hochschule der Wirtschaft

Louis Kobras has studied Computer Science at the University of Hamburg. He is currently researching in Computer Science and Engineering Education with a focus on laboratory education and technology enhanced learning in tertiary education. He is particularly interested in investigating different interaction modes in laboratories as well as non-traditional teaching methods. Currently, he is working in Project CrossLab where he looks into different areas of cross reality laboratories, especially into their technical development, their pedagogical underpinning as well as their usability.

ORCID: <https://orcid.org/0000-0003-4855-2878>

Marcus Soll, M. Sc. Informatics, NORDAKADEMIE gAG Hochschule der Wirtschaft

Marcus Soll has studied computer science at the University of Hamburg. His interests lay in education in computer science, especially at university level. In his research, he has asked questions like ‘what do teachers expect from students?’ and ‘are there any subjects which have been proven especially complex for students?’. Currently, he is working in Project CrossLab where he looks into different areas of cross reality laboratories, especially into their technical development, their pedagogical underpinning as well as their usability.

ORCID: <https://orcid.org/0000-0002-6845-9825>