

# Benefits of Remote Usability Testing

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## Our Experiences

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**Kitte Dahrén, Sarah Meier, Ingela Wahlgren**

*Swedish University of Agricultural Sciences (SLU), University Library*

### **Introduction**

At our university library we have been conducting usability testing during the last couple of years. When the pandemic hit in 2020, we wanted to develop a method of remote user testing, preferably at a low cost and with minimal effort using existing tools and resources. The basis for our usability testing has always been the method described by Steve Krug in his 2010 book *Rocket Surgery Made Easy*. We have now adapted this method to a video conference setting, where facilitator, test participant, and observers are all in different locations. So far, we have used this method to test our discovery system and website.

The Swedish University of Agricultural Sciences (SLU) has around 4000 students and roughly the same number of employees, making it a research heavy university. Its principal sites are in Alnarp, Umeå and Uppsala, but activities are also conducted at research stations, experimental parks and educational establishments throughout Sweden. Alnarp is in the very south of the country, Umeå is in the north, and Uppsala is located a short distance north of Sweden's capital city Stockholm. The library is organised across these three main campuses, and functions as one (1) unit, with staff working together in departments and teams regardless of location.

### **Purpose**

The main goal with UX at the SLU University Library is to provide relevant and usable services and systems to our users, and we've been working strategically towards this since 2017, though a focus on user experience was emerging even before that but it depended on individuals showing an interest and taking initiative. The hub for our UX work is the internal method support team called The UX Button, staffed with three librarians. We provide support to colleagues wanting to work with UX methods in order to improve services or systems they are in charge of. The support is scalable, from just brainstorming potential UX methods to one of us being project leader. The UX Button librarians also work in other areas of the library which helps spread the UX mind-set across the organisation.

When the circumstances changed in the wake of the pandemic, we needed to find a way of continuing towards our goal. From March 2020 staff at Swedish universities mostly had to start working from home, and there was a decision made at our university that all teaching would be done remotely. The UX Button has supported colleagues wanting to do usability testing "the Krug way" for a few years before the pandemic hit, and we did not want to stop because our circumstances changed, especially considering the increased need for usable digital services when no one can visit campus to get help in person.

### **Methodology and approach**

The initiative to do a usability test typically comes from the system management group, or alternatively, usability testing is part of a project assignment. During the pandemic we have conducted tests on our library website and on a new service that we implemented in our discovery system, where we wanted to create an easy-to-use access point for licensed databases.

The method described in *Rocket Surgery Made Easy* (Krug, 2010) states that a group of observers sit together in a room equipped with a large screen or projector, where they can hear the voice of and see the screen of the test participant, who is in another room with the test leader, completing the tasks mentioned above while describing their actions and thinking aloud.

Part of the reason why our library opted for usability testing as described by Steve Krug (2010) was that Anneli Friberg at Linköping University, a forerunner in UX in a Swedish library context, had adopted the method for continuous usability testing already in 2014 (Friberg, 2016).

When a decision has been made by our colleagues to carry out a usability test of a system, they usually contact the UX button for help with recruiting and setting up the tests. As prescribed by Steve Krug (2010) we recommend them to choose a problem area and formulate scenarios with tasks. Our experience is that five to six tasks are usually appropriate, as any more often gives an overwhelming amount of data.

Someone from the UX Button will book a meeting in our video conference tool Zoom with all observers and send the meeting link to the test participants. So far, there is no big difference to how we used to do tests before the pandemic, even then the observers would most often be in different locations. The biggest change for us was to have the test participant join from their home or some other location, as opposed to one of us as the test leader sitting next to them while they are performing the tasks in the test. A new concern then became to make sure the test participant was well prepared to do the test remotely, for example that they needed to make sure they were in a quiet space, using headphones with microphone and that they would need a stable Wi-Fi or broadband connection. These instructions are sent out when first recruiting so that participants will understand what they are signing up to do. This can of course also mean that we are missing out on potential test participants that might not be as comfortable with remote testing.

At the day of the test the test leader and the participant meet for a couple of minutes before the observers join in Zoom. The test leader has their sound and video on, the test participant should only have their sound on. The test leader changes the test participant's display name in Zoom, to Participant 1, 2, etc. The test leader asks the participant to share their browser and select Show small active speaker video in the video panel that appears in Zoom. The observers enter the meeting five minutes after the time given to the test participant. All this is to ensure the anonymity of the participant, which is easily achieved when the participant meets up with the test leader in one of our physical locations, but the observers are somewhere else. When we are all joining the same online meeting, we found we had to think about all these details to be able to ensure the privacy of the participant.

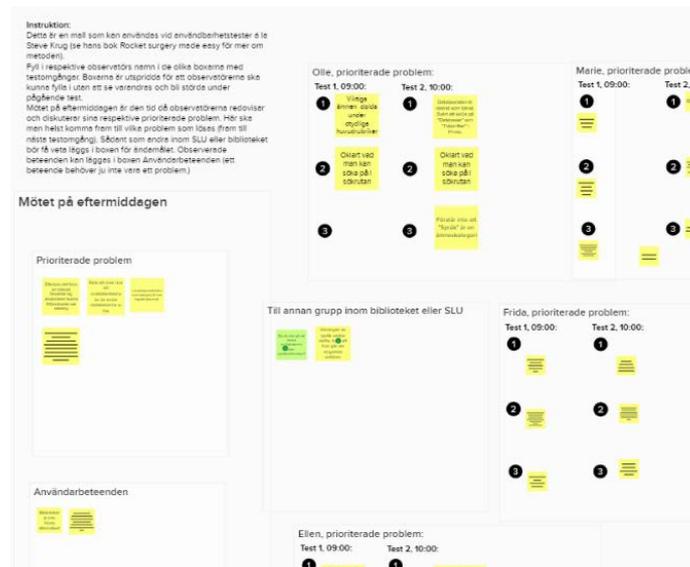
The test leader checks that all observers who are to be present have entered as they should before starting the test. In parallel to the Zoom meeting, the test leader and observers also have a Microsoft Teams chat channel open where any technical glitches can be announced and discussed. The observers enter the meeting with their sound and camera turned off, this needs to be set as default for the Zoom meeting by the person sending the invitation.

The test leader reads the prepared script and starts recording the test, if consent to record is given by the respondent. The test leader stops the recording between each participant. The recording is useful if any observer suddenly can't hear, or if we wish to show other colleagues who are not observing the test what happened. They can also be used for reminding observers what happened, if there is a discussion at a later date.

During the ongoing test, the test leader publishes the questions one at a time in the chat of the Zoom meeting for all to see and asks the participant to read them aloud. This way the observers can also read the question, which is helpful if there are any sound quality issues. After the last question or task is completed, the test leader thanks the participant and asks them to leave the meeting without stopping sharing their screen, again to ensure that their face is never shown to observers.

To ensure ease of organising a test, we have documented all of the steps carefully in a cheat sheet, and we also have standardised emails for recruiting and communicating with participants.

After the test sessions, we typically do three in one morning, the observers meet to discuss what they have seen and heard. We use the online whiteboard tool Mural to list and map out the observed issues and behaviours and observers are asked to prioritise them according to what they feel are the most urgent problems to fix from the end user perspective. The issues are discussed, and if needed prioritised again, as to what we will move forward to find solutions for. All this is in line with the Steve Krug method (2010), but we have also added boxes in our Mural template to capture user behaviours that are not necessarily problems and if there are any issues that should be fixed by another team at the library.



Example of a Mural used for processing the observed problems and behaviours.

## Findings & limitations

We see several benefits with this kind of remote testing. It makes it feasible to conduct tests with participants and observers at all of our different campuses, thus helping us ensure we have a level quality of service regardless of where in the world the end user is located. Remote testing will potentially also help us recruit a more diverse group of test participants, as the pool of potential participants grows significantly when we are not bound to running the test on a specific campus.

We see it as an advantage that test participants can use their regular computer equipment and software, since this provides a realistic test setting with a more reliable result. It might also reduce stress for the respondent around using unfamiliar equipment.

A very practical benefit is improved sound quality for observers, as the test participant is also instructed to use a headset with microphone, instead of speaking out loud next to the test leader and using a table microphone.

One limitation with remote testing is that it might be more difficult to conduct a test with a visually impaired participant using a screen reader to navigate. This is however not something that we have tried so far. There might also be a limitation when recruiting participants, as maybe not all are equally comfortable with the remote setting. This effect could be mitigated by also conducting more traditional on campus testing.

## Conclusions and applications of the results

We plan to continue using this method of usability testing even when meeting at our campuses is possible again, as we see several benefits with remote testing. Our university has not only its three main campuses spread out across Sweden, but also activities in many other locations throughout the country and the world, and even on a ship! Considering that our end users are spread far and wide in Sweden and the world, the advantages of remote usability testing outweigh the few downsides for us. A university having multiple campuses is not unique to our university, not in Sweden, nor in the world, so we believe many others could benefit from remote usability testing. A lesson learned is also that if there is a will there is a way. We managed to switch successfully to remote testing by taking the time to think through the necessary steps, documenting them carefully and doing trial runs in our remote test environment. We did not need to invest in special software or extra equipment, and conducting a test today does not take longer than before. Workflow changes can always feel intimidating initially, but if you focus on your purpose or your “why”, that can make it easier to see what needs doing to make the change happen. We hope that our presentation and paper might inspire others who have not already tried remote testing to do so.

## References

Krug, S. (2010), *Rocket Surgery Made Easy: The Do-It-Yourself Guide To Finding and Fixing Usability Problems*, New Riders Publishing, Berkeley, CA.

Friberg, A. (2016), “Continuous Usability Testing: The Importance of Being Iterative When It Comes to Assessment and Development of the Library’s Digital Services”, paper presented at Library Assessment Conference, October 31–November 2, Arlington, VA, available at: <https://www.libraryassessment.org/wp-content/uploads/bm-doc/35-friberg-2016.pdf> (accessed 15 October 2021).