Doing research online in 2020 - what if you cannot?

Bing Liu[a], *

[a] *Chair of Cartography, Technical University of Munich, bing.l@tum.de*

* Corresponding author

Abstract:

I was fully prepared for my first Ph.D. user study starting the next Monday, when asked to work from home that Friday morning. I was kind of relieved as the situation was really worrying in Germany: no one wanted to open the door on subway. But what about the user study?

During the following days, I received many emails asking for help of online questionnaires or interviews. I accepted and tried to do similar alteration of my own work. I read many articles about how to do online research, adapted my Unity project, recorded video demos, discussed with my supervisor and mentor, and they disagreed.

My Ph.D. topic involves using augmented reality (AR) for navigation, i.e. displaying holograms for indicating directions and other information in head-mounted devices (HMD). While it's easy to make a first-person-view demo walking with the HMD and distribute it online, the users just watch it as a daily video without proprioception, and even worse – with a highly restricted view field. The results will be questionable in the context of AR.

After the "wasted" one month, I didn't try to conduct online user study any more. Instead, I checked the whole Ph.D. topic - what is the overall aim? Is there any other possible research question? What can I do without conducting user study? In the meantime, I attended an online conference focusing on VR/AR as planned earlier (not exactly, as it had been planned in California). I prepared online presentation and recorded it. It was a great opportunity to get feedback and comments about my work. I got the best paper reward in Doctoral Colloquium, an achievement and comfort in 2020. Besides, I cleared my mind a bit, which helps me to do the work later.

For the user study, I had to wait till the situation got better in Germany and conducted it on site, with more difficulties recruiting users and even entering the university. I took the time to attend more seminars and talk to many people. That period seems to be wasted at first glance. But it opened my mind and made me thinking:

Many people are getting their personal AR/VR devices, is it possible to reach those people for user study?

As the environment of each user is completely different, how can we design a project that can be used?

How can we deal with the bias as such users are more likely to be quite positive about AR/VR?