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## **Conducting Online Studies in Conceptual Modeling Research: Benefits and Challenges**

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## Conducting Online Studies in Conceptual Modeling Research

### Benefits and Challenges

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Conceptual modeling is an essential activity during information systems development and organizational analysis, and has been a central IS research area for the last decades (Recker et al. 2021). Despite its relevance, the process of modeling has for long received limited attention in conceptual modeling research, with little consideration of human factors and cognitive aspects. Hence, further research on modeling processes is needed to better understand the reasoning of modelers, modeling difficulties and modeling styles (Rosenthal et al. 2022, Strecker et al. 2021). We pursue a research program to contribute to a richer and more complete understanding of individual modeling processes aiming to add to the empirical and theoretical foundation of conceptual modeling research (Strecker et al. 2021). As part of this program, we have been conducting a series of observation studies on modeling processes applying a multimodal observation setup that integrates recording think-aloud protocols and videos of modelers, tracking modeler-tool interactions and surveying modelers. Multimodal observations and analysis are supported by a modeling tool integrated with a modeling research observatory. To continue our research despite the restrictions imposed by the COVID-19 pandemic, we have adapted the research setup to an online setting using a video communication software: Subjects work on a modeling task in the web-based modeling tool while the modeling processes are recorded remotely, including the recording of think aloud protocols and screen recordings, tracking modeler-tool interactions and surveying modelers—observation methods similar to the earlier within-the-same-room observation studies. A pilot study in January 2022 demonstrated methodological challenges of the online setup, e.g., with regard to think-aloud and introducing the used modeling language and modeling tool, as well as technical challenges. However, the setup offers benefits that go beyond coping with pandemic restrictions: For example, subjects are able to participate from any place, allowing to recruit individuals with diverse backgrounds, e.g., regarding first language and modeling experience. In this talk, we would like to discuss benefits and challenges of conducting online studies on individual modeling processes.

### References

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