Institut zur Qualitätsentwicklung im Bildungswesen
Forschungsdatenzentrum
WISSENSCHAFTLICHE EINRICHTUNG DER LÄNDER AN DER HUMBOLDT-UNIVERSITÄT ZU BERLIN E.V.

Workshop: Introduction to conceptual replication analysis

Lecturer: Dennis Kondžić (Freie Universität Berlin)

Date: Part 1: Thursday, 13.03.2025, 14:00 – 18:00 h

Part 2: Friday, 14.03.2025, 14:00 – 18:00 h

Abstract

Replication studies play an important role in the scientific process. Not only do they help increase the credibility of research findings, but they can also help identify sources of effect heterogeneity.

This workshop will introduce participants to the design and analysis of conceptual replications, which systematically vary study characteristics to examine effect heterogeneity. Participants will learn what conceptual replications are, understand a methodological framework for designing conceptual replication studies, and apply current research strategies to identify sources of effect heterogeneity. Emphasis will be placed on the methodological challenges of systematically comparing study results.

The workshop will include exercises where participants will have the opportunity to conceptualize replication designs based on their own research questions. This will include operationalizing intended study variations, applying replication designs and analysis strategies to keep factors constant across studies, and selecting appropriate criteria for measuring replication success.

Participants will work with data from replication projects and gain experience with methods for analyzing replication success. In addition, recommendations and R syntax templates will be provided to help participants apply these techniques in R.

Contents.

Learning objectives:

By the end of this workshop, participants will be able to:

1. Understand the scope and benefits of conceptual replications, particularly the value of systematic study comparisons

2. Be familiar with different approaches to designing conceptual replications and gain practical experience in identifying sources of effect heterogeneity in study results.
3. Learn how to define and measure replication success, and select and apply appropriate analysis methods for their research goal.

Previous knowledge required.

Participants should have basic knowledge of the statistical software *R*, the *lavaan* package, and regression analysis.

Literature.

Schmidt, S. (2009). Shall we really do it again? The powerful concept of replication is neglected in the social sciences. *Review of General Psychology, 13*(2), 90–100. https://doi.org/10.1037/a0015108

Anderson, S. F., & Maxwell, S. E. (2016). There's more than one way to conduct a replication study: Beyond statistical significance. *Psychological Methods*, *21*(1), 1–12. https://doi.org/10.1037/met0000051

Steiner, P. M., Wong, V. C., & Anglin, K. (2019). A causal replication framework for designing and assessing replication efforts. *Zeitschrift für Psychologie*, *227*(4), 280–292. https://doi.org/10.1027/2151-2604/a000385

Software requirements.

Participants will need a laptop with the latest version of the R analysis software and the latest version of an appropriate editor (e.g., RStudio). Students should also have the following packages pre-installed in R: 'psych', 'lavaan', and 'ReplicationSuccess'.