

Design Research in Education: Methodology and Theoretical Background

In Cooperation with the GRADE Center Education

Objective

To give participants insight into the rationale behind design research and to provide opportunities to discuss challenges and possible solutions.

- Better understanding of the theory and practice of design research
- Increased enthusiasm to tackle perceived hurdles
- Ideas about how to partition the study of a learning ecology (tasks, tools, forms of argument, forms of interaction)

Description

To overcome the gap between educational research and practice, new kinds of educational research have been developed and are still in progress. An interesting genre of practice-oriented approaches aiming for improvement and sustainable change is educational design research (Van den Akker et al., 2006), also called design experiments (Cobb et al., 2003; Collins, 1990). Where most educational research is about how education was or is, design research is about how education could be. One of its key criteria is ecological validity (Brown, 1992) and another is a focus on "humble" theory development – working toward theories of learning and change grounded in the particulars of design.

Methodology

This workshop entails round tables and personal consultation to ensure ample live interaction with participants and the workshop leaders. Furthermore, there will be discussion of successful as well as unsuccessful cases and brief lectures on the following topics (Bakker, 2018):

1. What is design research (design experiments, design-based research, formative experiments, design studies) in comparison to action research, other intervention studies, and formative interventions?
2. How to conduct design research? Possible research questions, delineation in studies, use of design principles, conjecture maps, and hypothetical learning trajectories.
3. What are common challenges and ways to handle these? Think of co-design with teachers, lack of control but an emphasis on comparison, and reporting results.

Conditions

The target audience is early career researchers who consider doing design research or already use it. We also welcome educational researchers who want to know more about it, for example because they supervise students or teachers who want to combine design and research. We ask participants to read a few core texts and invite them to send a document with their research proposal or a wish list of what they would like to be discussed during either round tables or personal consultation, depending on the participant's preference.

Organizational Information

Language	English
Target group	Doctoral candidates at all stages and Postdocs from Humanities and Social Sciences. Members of the GRADE Center Education will be given priority. (Admission possible with workshop application)
Date	Thursday-Friday, 27-28 May 2021, Time will be announced later.
Registration	Online registration through the GRADE Center Education grade-education@em.uni-frankfurt.de

Trainer



Prof. Dr. Arthur Bakker
Utrecht University,
The Netherlands

- **Most recent projects:** about embodied cognition; interest in and attitude towards science and mathematics; statistics and vocational education (e.g., boundary crossing)
- Published a book about design research in education in 2018 (Design Research in Education: A Practical Guide for Early Career Researchers)