

Integration in Inter- and Transdisciplinary Research

PhD 06a: Methods

Methods for integration in inter- and transdisciplinary research (Working Title)

Rationale

The work in this perspective focuses on the question of how integration is realized in inter- and transdisciplinary research for sustainability transformation. Integration is addressed on two levels: On the level of the interdisciplinary PhD-team and on the level of transdisciplinary case studies. It is informed by a transformative research methodology that has been developed by Paulo Freire in the 20th century in Brazil. The research interest is to explore the potential of Freires methodology and according methods for inter- and transdisciplinary research and their suitability for different dimensions of integration. The research is in itself formative, as integration within the PhD-team and selected transdisciplinary case studies serve as cases for application and analysis.

Background / State of Research

Integration has been identified as a core challenge in inter- and transdisciplinary research (Stokols et al. 2013, Bammer 2013, Roy et al. 2010, Pohl et al. 2008). The collaboration of researchers from different disciplines, knowledge cultures and fields of action is demanding on a communicative, social, cultural and epistemic level (Bergmann et al. 2012). Thus, integration is not merely an additive procedure but must be considered as an important task of the research process and requires particular attention throughout the entire research process (Strasser et al. 2014, Jahn et al. 2012). Despite different approaches and integration methods that have been developed in different research fields, real integration often fails (Roy et al. 2010, Jahn et al. 2012). A promising way of increasing success is to support inter- and transdisciplinary research teams by creating boards of integration (Strasser et al. 2014) or by realizing formative accompanying research that is supporting and studying integration for and with the team. In transformative research for sustainable development successful integration is particularly challenging. Besides integrating different ways of knowing and acting, heterogeneous ways of belonging to and appropriation of the situation of concern have to be considered and negotiated, and learning processes on how to reach sustainability transformations have to be achieved. In his work on alphabetisation and liberation of the oppressed, Paulo Freire has developed a transformative research methodology (Freire 1978) that aims at learning through integration of different ways of belonging and appropriation and at transforming existential situations. The exploration of the potential of this research methodology and according methods for research on sustainability transformations has been initiated only recently (Brandner & Vilsmaier 2013; Brandner 2017) and should be deepened with this research.

Approach and Research Design

The research will be organized in five steps. First, the Freirean concept of research and associated methods will be analyzed against the background of sustainability transformation and transdisciplinary sustainability research, focusing on the challenge of integration. Second, selected methods (e.g., methods of concept work, visual methods) will be contextualized in current discourses and adopted for application in inter- and transdisciplinary research situations. Third, these methods will be applied in the interdisciplinary PhD-team and selected case studies that are carried out in the Robert Bosch research group.

These PhD scholarships are part of the larger project „Processes of Sustainability Transformation“ funded by the Robert Bosch foundation. Please refer to www.processes-of-sustainability-transformation.org for application procedure

Implementations will take into consideration the different dimensions of integration. Due to the synchronal start of Robert Bosch research group and this PhD project, dimensions of integration that are particularly relevant at the beginning of an inter- or transdisciplinary research process will be realized in context of the transdisciplinary case studies only, while the focus within the interdisciplinary PhD-team will be on epistemic integration. Fourth, the implementations will be studied in situ and ex-post. For in situ analysis within the PhD-team, cooperation with the supervisor or visiting scientist is required; for research in the transdisciplinary case studies with the PhD student that is realizing the case study. Finally, results will be linked to the discourse of transformative research, integration in inter- and transdisciplinary research teams and will be discussed with all researchers involved.

Expected Results

The research aims at complementing the repertoire of methods for integration in inter- and transdisciplinary research teams and adds to the discourse of transformation by linking Paulo Freire's transformative research methodology to current discourses in sustainability. Furthermore, the research will support the integration process of the interdisciplinary PhD-team and of transdisciplinary case studies realized in Robert Bosch research group.

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