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Conditions for Success in the Digital Transformation of University Teaching

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Abstract: This article attempts to adapt the empirically validated conditions for success of transformative project work to the digital transformation of university teaching. Universities are undergoing a process of change - not least as a result of the Corona pandemic - with regard to the design of learning and teaching. This process can be described as transformative, as interdisciplinary collaboration within the university but also in relation to other actors in the bidding landscape can bring about a fundamental change not only in structures but also in terms of culture. This paper focuses on the normative principles of transformative research, which are applied to the field of higher education.

Paper: Introduction

In March 2020, a decision-making opportunity unexpectedly arose for universities: in a situation characterized by a high degree of uncertainty in the university transformation system and the need to maintain university operations despite all this, university teachers and university management were faced with the challenge of developing themselves and their role in a very short time under completely new framework conditions. The digital transformation made its way - faster than expected - into the everyday practice of teaching. This innovation push has accelerated many processes with regard to the digitization of teaching. How can it now be made possible for a digital transformation of university teaching to succeed? A digital transformation of university teaching must take place in collaboration between different disciplines and across institution-immanent hierarchies. Such collaboration is already being used in transformative research to ensure that projects succeed. In an interview study, the same conditions for success for transformative research were developed. These can also be useful for university-wide, process-based change.

Methodical approach to acquire the conditions of success

Based on the principles for transdisciplinary research proposed by Defila und Di Giulio (2016), normative principles of transformative research were developed by means of a qualitative interview

study and an extensive literature search in the form of a review (Döring & Bortz, 2016, p. 898f). In the process, a total of 23 guided interviews with science partners and practice partners from transformative projects were conducted from December 2020 to March 2021. The qualitative approach enabled an insight into the subjective reality of the interviewees' experiences. Thus, individual backgrounds for decisions, behavior and motivations as well as their interrelations could be identified and used for the elaboration of the principles. The guided interviews were conducted with the help of a video conferencing system. The transcription was made with simple rules according to Dresing und Pehl (2018). The data were analyzed computer-aided with the software MAXQDA after the transcripts had been anonymized (Mayermann & Porzelt, 2014). The approach to data analysis was content analytic according to Kuckartz (2018). The review focused on the existing literature on transdisciplinary and transformative research (exemplified by Schneidewind & Singer-Brodowski, 2014; WBGU, 2011 etc.). As a result, the normative principles of transformative research can be described as follows (Blank et al., 2021).

Conditions for success in the digital transformation in higher education

The normative principles of transformative research, which were developed on the basis of the literature and validated through the interviews, can now be used as conditions for success for a digital transformation in higher education. In the following, the conditions for success of transformative research are presented. These have been adapted to the field of higher education teaching. The purpose of this adaption is to describe which conditions can be helpful in ensuring that the digital transformation at universities can succeed:

Table 1: Adaption

The content of the normative principles of transformative research is transferred to the digital transformation in higher education. Upon examination, it becomes apparent that the principles presented in the left-hand column can provide meaningful impetus for work in higher education policy development. For example, driving actors within and across institutions can not only initiate the digital transformation, but also catalyze it in a certain direction. As in processes of transformative research, knowledge about the outcome and the desirable target state is necessary in order to derive the path towards a strategy for future university teaching. Ideally, this process should be carried out together with all actors concerned, in an understandable, transparent manner and at eye level across hierarchies. This means that stakeholders must be identified who can contribute their expertise to the process of developing university teaching. This can be the university management as the strategy giver, but it is also primarily the teaching staff who, as subject promoters, contribute the greatest expertise with regard to their teaching. Central support structures can also play an important role. This collaboration is fostered through an iterative reflection process. The findings and results of this transformative process can then be transferred to other universities and institutions.

Conclusion

The normative principles of transformative research not only allow them to be used for transformative projects, but also to be broadly applied to different areas in which a transformation is to be initialized, advanced, and catalyzed. In this paper, an attempt was made to apply these principles to higher education teaching and its transformation towards a future teaching equipped with digital elements. This approach offers the opportunity to reflect on the strategic development process in higher education institutions. Particularly as a result of the Corona pandemic and the associated digitization push in teaching, universities must further develop their teaching-learning concepts. Digitization plays a central role not only in individual courses, but above all as a strategic building block for universities as a whole.

References: Table 1: Adaption

Normative principles of transformative research	Adaptation to the field of higher education
Transformative research is advanced by drivers.	The digital transformation can be started and driven in a certain direction by driving actors university-wide.
Transformative research generates target, system and transformation knowledge.	Knowledge is developed about the starting situation, about the target perspective, and action knowledge about how the starting situation can be linked to the target situation - in other words, how the transformation in the area of digital university teaching must be designed.
Transformative research is characterized by transdisciplinary collaboration and knowledge integration.	Through collaboration among all university constituents, knowledge integration across all sectors - from administration to faculty to students - can lead to successful transformation.
Transformative research is characterized by transparent and understandable communication at eye level.	Collaboration takes place in a transparent manner that is comprehensible to all. By communicating at eye level, hierarchies that are inherent in the university landscape can be overcome and thus contribute to the success of the digital transformation.

<p>Transformative research is characterized by iterative reflexivity in transdisciplinary collaboration.</p>	<p>The process of digitally transforming university teaching takes place in an iterative process of reflection that runs throughout the transdisciplinary collaboration, from.</p>
<p>Transformative research achieves transferable and scalable results.</p>	<p>The process of transformation involves the development of strategic and structural action strategies as well as concrete implementation scenarios of digital teaching that can be decontextualized, generalized and thus used beyond the individual university.</p>

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