

Contribution Type Discussion Article

Title [Design-based research on the way to mainstream research? Comments on the plea for phronesis by Bardone and Bauters](#)

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In Reply to EDeR | Volume 1 | Issue 1 | 2017 | Article 03

Bardone, E. & Bauters, M. (2017). A phronetic approach to educational design-based research: Issues and aspirations. *EDeR - Educational Design Research*, 1(1), 1-21. <http://dx.doi.org/10.15460/eder.1.1.1025>

Abstract Bardone and Bauters suggest a re-conceptualization of design-based research using the classical term “phronesis” and question some methodological developments referring to the role of intervention and theory in design-based research. This discussion article is a comment on the text of Bardone and Bauters and pursues two aims: On the one hand the term “phronesis” is connected to the traditional concept of “pädagogischer Takt” (literally: “pedagogical tact”) to stimulate a joint discourse of both traditions. On the other hand, two main suggestions of Bardone und Bauters are critically examined, namely their proposal to conceptualize intervention in design-based research exclusively as an action, and their call for deriving generalizations via experiences instead of theories. The discussion article finally argues for maintaining the integrative power of design-based research by avoiding one-sided interpretations.

Keywords phronesis
pädagogischer Takt | pedagogical tact
Intervention
theory

DOI dx.doi.org/10.15460/eder.1.1.1050

Citation Reinmann, G. (2017). EDeR - Design-based research on the way to mainstream research? Comments on the plea for phronesis by Bardone and Bauters. *EDeR - Educational Design Research*, 1(1), 1-5. [http:// dx.doi.org/10.15460/eder.1.1.1050](http://dx.doi.org/10.15460/eder.1.1.1050)

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Design-based research on the way to mainstream research?

Comments on the plea for phronesis by Bardone and Bauters

Gabi Reinmann

1.0 The topic and mission of Bardone and Bauters' text and my objective

The article of Bardone and Bauters (2017) suggests a re-conceptualization of design-based research using the classical term or philosophical concept “phronesis”. They do this because from their perspective design-based research increasingly adopts an understanding of research modeled after the natural sciences – although it had initially made an explicit effort to situate and contextualize educational research and to replace laboratory studies with an analysis of authentic educational problems and their solutions. However, this claim would be seriously undermined if representatives of design-based research tried to connect with mainstream research – possibly via the application of a rather static conceptualization of intervention and/or a traditional view of theory.

First the authors explain the concept “phronesis” comparing it to the attendant concepts “episteme” (science or theoretical respectively explaining/predicting or nomothetic knowledge) and “techne” (application of scientific knowledge or production knowledge respectively output-oriented knowledge). According to the authors, educational research generally focuses on the generation of theories (episteme) and their application in practical situations as productive knowledge (techne). While it is generally known for quite some time that this division does not function well, the debate around the gap between theory and practice has never ceased. On the contrary: In recent years policymakers and practitioners are renewing and fuelling the debate with their repeated calls for evidence-based education (Baumert & Tillmann, in 2016).

Bardone and Bauters (2017) point at the risk that the notion of intervention in design-based research becomes purely object-like in the course of this general development, although an educational intervention could be solely understood as an action. Besides, they criticize that design-based research authors strive for the formulation of principles or local theories following an aspiration for (albeit limited) generalizability, thus strengthening an understanding of theory that is derived from the natural sciences. As an alternative, they advocate putting a focus on experiences of teachers and learners and to search for generalizations from there.

In the following text I would like to discuss the term “phronesis” and introduce the German traditional concept of “pädagogischer Takt” (literally: “pedagogical tact”) which is well known in the German-speaking community of pedagogical theorists and

practitioners. In doing so, I intend to stimulate a comparison and a potential integration of both lines of discourse. On the other hand, I would like to critically examine both suggestions of Bardone und Bauters (2017), namely their proposal to conceptualize intervention in design-based research exclusively as action, and their call for deriving generalizations via experiences instead of theories. I combine this with a plea for maintaining the integrative power of design-based research by avoiding one-sided interpretations.

2.0 Phronesis and “pädagogischer Takt“ (pedagogical tact)

First of all, you have to agree with Bardone and Bauters (2017) when they criticize that educational research tries to follow and imitate ideals and standards of the natural sciences: I always wonder why and how empirical researchers often ignore the argument that education (as an umbrella term for different objects of educational research) is of course no naturally given phenomenon with static qualities. Instead, it is a cultural phenomenon, inextricably intertwined with human action, historically embedded and conditioned by situative factors. Indeed, this critique is anything but new. Current discussions about evidence-based practices in education summarize many arguments (some of them well known and some of them rather new) for and against an understanding of theory and research that is rooted in the natural sciences. I think the authors are also right in their conclusion that episteme and techne are not sufficient to understand, analyze and support the design of teaching, learning and education. They are convinced that the solution lies in the concept of phronesis which seems to be a very popular concept at the moment. In the context of university teaching, Carolin Kreber (2015) is a proponent of phronesis, too. Unlike Bardone und Bauters (2017) she rather interprets phronesis as a central supplement for evidence-based educational practice that is mainly articulated in the terms of episteme and techne.

Bardone and Bauters (2017), as well as Kreber (2015), note that it is difficult to circumscribe the concept of phronesis with contemporary words or modern analogous concepts. Attempting an adequate German translation one could say “praktische Klugheit“ or “Urteilkraft“. I suppose that there is also a semantic connection to the concept of “pädagogischer Takt“ – a concept with a long tradition among educational researchers as well as educational practitioners. The term stems from Johann Friedrich Herbart (1776-1841) who had reflected rather comprehensively on the relation between theory and practice in education already around 200 years ago. Herbart precisely recognized that theories are never useful for a particular case in the context of education. Nevertheless, he also opposed the notion of practice without any relation to theory. But how to bridge the resulting gap? Here one can bring in the concept of “pädagogischer Takt“ which allows the general to reference the particular in a way that is still preserving its particularity; and exactly this is not just possible if one subsumes any case under an abstract rule (Klika & Schubert, 2013, p. 12 f.). Herbart points out that while on one

hand one can only learn how to realize “pädagogischer Takt” and attendant skills and cleverness through action, an examination of (scientific) theories is still required on the other.

In teacher education “pädagogischer Takt” was a crucial element for a long time. However, the trust in this construct has decreased. At the same time the expectation has been growing that “scientific” evidence will directly improve teaching and learning (Burghardt, Krinninger & Seichter, 2015). Understandably, the search begins once again for establishing new ways of mastering the relationship between theory and research on one side, and practice on the other. And this should be achieved taking into account the peculiarity of the educational practice, while at the same time making use of scientific knowledge for the orientation of action. The currently favoured ideas around the notion of phronesis resemble the concept of “pädagogischer Takt”, I would like to suggest. So it could be fertile to compare the two concepts and to deliberate whether they could be complementary or rather mutually subsumed.

However, I am not sure if it is a reasonable move to build up phronesis as an opposite pole to the evidence-based stance currently held up in educational research. Kreber (2015), e.g., argues for the extension of the contemporary understanding of evidence-based educational practice by using the concept of phronesis not as a substitute, but as an additional category to improve the relation between theory and practice in education. This is a line of argumentation which I would rather affiliate with. I think that what matters above all is scrutinizing which type of academically legitimate evidence we need to gather for supporting and designing teaching and learning in ways that can be scientifically legitimized. And this could very well be empirical evidence; in the end it depends, (a) which kind of empirical act is underlying the evidence and (b) for which kind of questions we need evidence (empirical or of another kind).

3.0 **Techne and episteme and the role of development for (scientific) knowledge**

Bardone and Bauters (2017) rely on a concept of intervention which is all action: In order to meet the original requirements of design-based research, intervention should be understood as an open process including the participation of teachers/lecturers (and learners/students), but not as a product or techne. Behind the product conception the authors suspect an engineering model and a tendency to turn educational interventions into mechanically used formulas and techniques. In my opinion this expresses a reductionist view of intervention: What prevents us from viewing intervention as a process and at the same time as a product, thus ascribing a situative and materialized character? Say e.g. a lecturer has developed a new procedure to support of inquiry-based learning in a design-based research microcycle; she described this procedure verbally and worked out some learning material; possibly she made a video of some pilot-implementations. Then artefacts are generated and now accessib-

le. These artefacts are product-like in the sense that they can be presented and adopted, transferred, (re-)used and applied in different settings (materialized aspect of the intervention). Students are able to experience the new procedure to support inquiry-based learning and its potential effect on their engagement and learning, not until it is realized in a concrete situation as part of shared actions. Realizing the procedure in action inevitably includes uncertain and unpredictable moments and is actualized more or less differently in every situation (which marks the situated aspect of the intervention).

So I think that *techne* does not exclude *phronesis* – on the contrary: Both are depending on each other and both are legitimate. *Techne* as well as *phronesis* are part of design-based research: Without the materialized aspect of an intervention not only an essential design element is absent in the design-based research process, but also an interim stage for scientific insight and knowledge creation is missing that is made possible precisely through the development of an intervention that is also materialized (Reinmann, 2014).

Bardone and Bauters (2017) also argue for an alternative view of theory that again builds on the concept of *phronesis*. Among other aspects, they note that invariances and patterns or models, methods and principles – therefore *episteme* – could not be suitable forms of generalization in the context of design-based research because they would not sufficiently take into account the particular in education (inclusive the personalization and situatedness of action). The particular (versus the general) could be assessed only by experience of individuals in particular cases by narratives, in order to use it as impulse for others who are acting in other situations. I am not convinced by this argumentation which needlessly pits the particular against the general and gives away an important opportunity: Why can't we search for the general in form of principles, invariances or patterns on an abstract level, while being conscious that they only have an action-orienting character and that they are bound to the particular and lead to the particular on the concrete level? Say e.g., the above mentioned procedure to support inquiry-based learning is implemented in three different classes in the context of higher education by three different lecturers with three different groups of students, then on the one hand three different and special spaces of experience emerge (concrete level). On the other hand, you can compare systematically how lecturers and students acted in these classes, how they have realized and perceived the described procedure with what outcome, and analyze similarities and differences alongside special dimensions you are interested in. This provides a basis for emerging patterns as well as principles or other forms of generalization (on the abstract level).

My conclusion is: *Episteme* does not exclude *phronesis* either. Instead, both concepts are depending on each other in the context of education and educational research. Theoretical knowledge (*episteme*) is generally possible in design-based research only through particular experiences (*phronesis*). In my point

of view, both are an integral component of design-based research: Design-based research has started out asserting a claim for bridging the gap between the general and the particular, to fulfil scientific and practical interests and requirements alike. The act of design or development as a connecting link between the knowledge creation process (episteme) and immediate use in practice (techne) plays again a central role here (Reinmann, 2014). This act of design and development of an intervention – and its implementation through action under the perspective of phronesis respectively – appears to be extremely fertile. For me this is a strong impulse coming from the text of Bardone and Bauters (2017). However, substituting episteme and techne with phronesis raises the risk to undermine the integrative potential of design-based research.

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Journal Details

EDeR – Educational Design Research

An International Journal for Design-Based Research in Education
ISSN: 2511-0667
uhh.de/EDeR
#EDeRJournal (our hashtag on social media services)

Published by

Hamburg Center for University Teaching and Learning (HUL)

University of Hamburg
Schlüterstraße 51
20146 Hamburg
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+49 40 42838-9650 (fax)
EDeR.HUL@uni-hamburg.de
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In collaboration with

Hamburg University Press

Verlag der Staats- und Universitätsbibliothek Hamburg –

Landesbetrieb

Von-Melle-Park 3

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