

Buchborn, Thade; Völker, Jonas

Conducting documentary design research. Insights into methodology, research approach and practice

Buchborn, Thade [Hrsg.]; Hallitzky, Maria [Hrsg.]; Hinzke, Jan-Hendrik [Hrsg.]; Martens, Matthias [Hrsg.]; Spendrin, Karla [Hrsg.]: Schulpraxis – Entwickeln – Erforschen. Konzepte und Praxis entwicklungsorientierter Bildungsforschung. Bad Heilbrunn : Verlag Julius Klinkhardt 2025, S. 56-75. - (Unterricht – Schule – Gesellschaft)



Quellenangabe/ Reference:

Buchborn, Thade; Völker, Jonas: Conducting documentary design research. Insights into methodology, research approach and practice - In: Buchborn, Thade [Hrsg.]; Hallitzky, Maria [Hrsg.]; Hinzke, Jan-Hendrik [Hrsg.]; Martens, Matthias [Hrsg.]; Spendrin, Karla [Hrsg.]: Schulpraxis – Entwickeln – Erforschen. Konzepte und Praxis entwicklungsorientierter Bildungsforschung. Bad Heilbrunn : Verlag Julius Klinkhardt 2025, S. 56-75 - URN: urn:nbn:de:0111-pedocs-346617 - DOI: 10.25656/01:34661; 10.35468/6204-03

<https://nbn-resolving.org/urn:nbn:de:0111-pedocs-346617>

<https://doi.org/10.25656/01:34661>

in Kooperation mit / in cooperation with:



<http://www.klinkhardt.de>

Nutzungsbedingungen

Dieses Dokument steht unter folgender Creative Commons-Lizenz: <http://creativecommons.org/licenses/by-nd/4.0/deed.de> - Sie dürfen das Werk bzw. den Inhalt vervielfältigen, verbreiten und öffentlich zugänglich machen, solange Sie den Namen des Autors/Rechteinhabers in der von ihm festgelegten Weise nennen und das Werk bzw. diesen Inhalt nicht bearbeiten, abwandeln oder in anderer Weise verändern.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use

This document is published under following Creative Commons-License: <http://creativecommons.org/licenses/by-nd/4.0/deed.en> - You may copy, distribute and transmit, adapt or exhibit the work in the public as long as you attribute the work in the manner specified by the author or licensor. You are not allowed to alter or transform this work or its contents at all.

By using this particular document, you accept the above-stated conditions of use.



Kontakt / Contact:

peDOCS
DIPF | Leibniz-Institut für Bildungsforschung und Bildungsinformation
Informationszentrum (IZ) Bildung
E-Mail: pedocs@dipf.de
Internet: www.pedocs.de

Mitglied der:


Leibniz-Gemeinschaft

Thade Buchborn und Jonas Völker

Conducting Documentary Design Research. Insights into methodology, research approach and practice

Zusammenfassung:

In den vergangenen Jahren wurden unterschiedliche Ansätze entwicklungsorientierter Bildungsforschung erarbeitet. Zentrale Herausforderungen in der Forschungspraxis bestehen darin, empirische Forschungsmethoden stimmig zu integrieren und systematische Bezüge zwischen Forschung und Entwicklung herzustellen. Im vorliegenden Beitrag widmen wir uns diesen Herausforderungen, in dem wir am Beispiel einer Studie zu kultureller Vielfalt im Musikunterricht unseren Ansatz der dokumentarischen Entwicklungsforschung präsentieren und methodologisch reflektieren. Wir zeigen wie wir die dokumentarische Methode in ein entwicklungsorientiertes Forschungsformat integrieren. Dabei diskutieren wir insbesondere das Verhältnis der Normativität fachdidaktischer Designentwicklung und der in der dokumentarischen Rekonstruktion notwendigen Offenheit für die Relevanzsysteme der Akteur:innen und beschreiben, welche Maßnahmen wir in der Forschungspraxis ergreifen, um den für die rekonstruktive Arbeit notwendigen Wechsel der AnalyseEinstellung vollziehen zu können.

Schlüsselwörter: design-based research, dokumentarische Entwicklungsforschung, dokumentarische Methode, kulturelle Vielfalt, Musikpädagogik

Abstract:

Various approaches to educational design(-based) research have been developed in recent years. Key challenges in research practice lie in the coherent integration of empirical research methods and the establishment of systematic links between research and design. In this chapter, we address these challenges by presenting and methodologically reflecting on our approach to documentary design research using the example of a study on cultural diversity in music lessons. We show how we integrate the documentary method into a design-orientated research format. In particular,

we discuss the relationship between the normativity of educational design development and the openness towards the actors' relevance systems that is necessary in documentary reconstruction and describe the measures we take in research practice in order to be able to carry out the change of analytical attitude necessary for reconstructive work.

Keywords: cultural diversity, design-based research, documentary method, documentary design research, music education

1 Introduction

Since the 1990s, various approaches in educational research have been developed that closely link research to the development of educational designs, pedagogical formats and teaching materials (Bakker 2018). This spectrum of research formats includes design-based research (The Design-Based Research Collective 2003; Reinmann 2017) and educational design research (McKenney & Reeves 2019; 2013; Bakker 2018; Reinmann 2014), as well as "Entwicklungsorientierte Bildungsforschung" (Reinmann 2005) and "Fachdidaktische Entwicklungsforschung" (Prediger et al. 2012; Hußmann et al. 2013) within the German-language discourse. In the following, we refer to this range of approaches collectively as design-based research (DBR).

In recent years, the number of studies following a DBR approach is growing in education and subject-matter teaching and learning (Anderson & Shattuck 2012; Zheng 2015) as well as in music education (Buchborn et al. 2022). As we were able to show in a review focussing on studies in music education (Buchborn et al. 2022), a central challenge of the approach lies in the coherent integration of empirical procedures. Further, bringing together educational expectations of usefulness and an unbiased interest in the generation of knowledge (DGfE 2022, p. 1; see also Buchborn 2022).

In this chapter, we will address these two points. We ask how empirical insights support a design process and reflect on the relationship between the normativity of educational design and the openness towards the actors' relevance systems in documentary reconstruction.

After describing how objectives with regard to research and design are intertwined in our studies (2.), we provide insights into the methodological foundations of our approach and illustrate how we gain reconstructive insights into the interactions in the music classroom using the documentary method (3.). In the next step (4.) we discuss our approach to documentary design research drawing on typical features of design-based research studies – such as the iterative and cyclical character (4.1), the interventionist character and practice orientation (4.2), the interplay of prospective and reflexive components

(4.3) and the aspect of generating theory (4.4). Then we reflect on a central methodological challenge in our work: balancing the relationship between educational normativity and openness towards actors' relevance systems (5.). We end by addressing future steps in methodological reflection and further development of documentary design research and related approaches that implement the documentary method in development-orientated research formats (6.).

2 Intertwined objectives in research and design

In the last years, we have developed and implemented an approach we refer to as *documentary design research*, which integrates the documentary method (Bohnsack 2014) within a DBR framework.¹ We developed this approach in different studies in music education on blended learning formats for applied piano teaching in higher education (Endres & Buchborn in this volume), group composing (Theisohn 2023) and improvising in secondary school (Treß 2022). In this text, we refer to a research project on cultural diversity in school music education (Völker 2023) to illustrate why and how we interconnect reconstructive research and the development of educational designs. Although there are a large number of theoretical and conceptual considerations in the field of cultural diversity in music education, the existing learning and teaching materials are often not based on these current theories and educational theory considerations are often not translated into school practice (Völker 2023, pp. 34-36). One aim of the study was therefore to develop teaching-learning materials and design principles for music lessons that are based on current educational theory considerations in this subject area. In addition to this, empirical studies, especially those focussing on learner perspectives within music lessons are rare (Buchborn 2020). However, knowledge on how students act in teaching and learning situations focussing on cultural diversity in the music classroom would be an important point of reference for the development of suitable teaching-learning materials and design principles. This example shows that our studies usually begin with the identification of a need for development and a related research interest. Furthermore, it highlights the interdependence between research and development in our studies. In order to be able to develop impulses for a change in school practice, it is important to gain insights into the norms and logics of this practice. This is why the aim of our research is not only to understand what students think about a particular

1 While we have provided general methodological insights in a first chapter in German (Buchborn 2022), we aim to present our considerations on documentary design research and provide further insights into our research practice within this text in English.

subject matter and its treatment in the classroom, but also to gain empirical insights into how they actually deal with this subject matter in classroom practice. This knowledge serves as a reference point for the development of teaching-learning materials and design principles that suit to students' knowledge at the level of deeper meaning structures (Klieme 2006, p. 767) when dealing with the chosen subject matter. This is why we identified the documentary method as a suitable approach to focus on this level of action, interaction and learning processes in the music classroom.

3 Gaining insights into (music) classroom interactions

The documentary method (Bohnsack 2021) aims to reconstruct the knowledge that guides action in everyday praxis. The approach is underpinned by Ralf Bohnsack's praxeological sociology of knowledge (2017) which is rooted in Karl Mannheim's sociological considerations from the 1920s. The methodology is based on the assumption that the members of a social group have a shared knowledge that guides their actions, which they build up through shared or structurally similar experiences in social action contexts. Within this knowledge, Bohnsack distinguishes between communicative knowledge (e. g. everyday theories, norms, opinions) and conjunctive knowledge, which is generally not reflexively accessible to the actors and thus remains implicit. However, it manifests itself in the logic of everyday behaviour – the *modus operandi* of praxis – and can thus be reconstructed with the help of the documentary method. The approach was applied for research in schools and classroom practice and methodologically further developed in the context of documentary classroom research (Asbrand & Martens 2018; Martens & Asbrand 2022)². To reconstruct interactions in the music classroom, in which verbal, physical and musical interactions often interact, especially the use of video observations as proposed in video-based documentary classroom research was a suitable approach (Martens & Asbrand 2022). We adapted this method for the specific demands of our studies in music education (Buchborn et al. 2019; Theisoehn et al. 2020; Treß 2020). In documentary interpretation, we distinguish between two essential procedural steps: First, the *formulating interpretation* asks what the actors say or what can be seen in the videotaped sequence, without drawing causal conclusions or making assumptions about motives. *Reflective inter-*

2 Because of the developmental character of our studies, additionally, insights from documentary evaluation research (Bohnsack & Nentwig-Gesemann 2010a) serves as a reference point. In this context, the documentary method has already been applied in iterative settings aiming at changing the research field. Further, its potential as an application-oriented research approach has been method(olog)ically reflected on the basis of this research experience (Bohnsack & Nentwig-Gesemann 2010b).

pretation, on the other hand, focuses on the question of how social interaction takes place. Both the formal organization of the interaction itself and collectively shared or divergent orientations and knowledge are the subject of the reconstruction. In the following section, we use an example of interpretation of the study on cultural diversity to show how the method is applied in research practice and to illustrate what kind of empirical insights we gain following this approach.

3.1 Reconstructing action-guiding knowledge: an example

The selected sequence, titled “Man on camel” (see fig. 2), immediately follows the initial listening to the song *Bint el Shalabiya* by Ensemble Arabandi in a music lesson. During this phase, the students engage in a discussion prompted by the task: “Name situations and experiences that the music reminds you of”. Reconstructing the students’ interactions, during this group work phase helps us to gain empirical insights into the students’ perception of a largely unknown piece of music.

The transcript³, accompanied by two photograms, provides a visual and textual representation of both the verbal and physical (gestures and body movements) interaction among the five female students at group table B (For a detailed interpretation of the sequence, see Völker 2020)⁴:



Transcript with integrated pre-iconographic description	Photograms
149 Sf1: it somehow reminds me of such a really ugly man riding a camel 150 through the desert 151 Sf2: nodding @yeah@ 152 Sf4: ↳more () like an arabic 153 Sf3: ↳Yeah too 154 Sf5: ↳such such um guys who then still have 155 such slots, outlines the eye sockets with thumb and index finger starting from the root 156 of the nose; subsequently takes the hands clenched into fists at a 90° angle in front of the 157 body and moves the upper body and head forward and backward while laughing 158 Sf1: ↳yes yes exactly those 159 Sf4: ↳who ride through the dessert like this, yes 160 Sf2: ↳that look so monstrous @ (2)@ 161 Sf1: Alright a man riding (.) looks to Sw2 we don't write monster 162 because otherwise it's somehow already racist	 (L. 155-156)  (L. 156-157)

Fig. 1: Transcript of the sequence “Man on camel”

3 Inspired by the way of transcribing classroom interaction by Martens & Asbrand (2022) we developed several transcription formats that allow us to capture musical interactions and how it is interwoven with gestures, body movement and verbal interaction (Buchborn et al. 2019; Theisohn et al. 2020; Treß 2020).

4 All excerpts from the data in this contribution are originally in German and are translated to English by the authors.

Sf1 initiates the sequence by introducing the theme, offering an initial perspective. She draws a connection between the music and an image of a very unattractive man riding on a camel through the desert. The choice of the verb "remind" suggests a personal experience or connection on her part. Her expression remains quite general, using "such a" indicating that she is not specifying a particular individual. The term "ugly" might be interpreted as a consciously derogatory description of the imagined man, especially with the adverb "really" intensifying this impression. Additionally, she situates the man in the desert and attributes the activity of "riding a camel" to him. Sf2, Sf3, and Sf4 express direct agreement with Sf1's observations.

Expanding on the theme, Sf5 associates it with men who have a distinct eye slit, possibly alluding to Bedouins or Tuaregs. Notably, while Sf1 initially spoke in broad terms about a man, Sf5 already employs the plural form, suggesting a collective reference. Moreover, it's worth noting the physical expression captured in the transcript, which reveal implicit knowledge beyond verbal expression. Sf5 not only references the distinctive eye slit but also mimics a riding motion, demonstrating a deeper engagement with the imagery evoked by the music.

Sf1 acknowledges this and is about to elaborate further, but she is interrupted by Sf4, who draws attention to both Sf5's riding gesture and Sf1's initial orientation. Sf2 picks up from where Sf4 left off and describes the rider as monstrous. Finally, Sf1 revisits Sf2's association and points out the potential issue of writing about monsters, noting that it could be construed as racist. This suggests that Sf1 is aware of her role as a student and the norm that racist statements are not tolerated in the institutional context of the school.

The sequence holds initial reconstruction results that have been shown to be shared understandings in comparative analyses with other sequences. Here are exemplary interpretation results: In this sequence, *ethnic projections or representations of the 'other'* become apparent. Initially, these projections are based on the association with a surrogate figure, namely the man on the camel. As the conversation progresses and through interactive negotiation, the attributed characteristics are then extended to a specific social group. What becomes evident are *culture-essentialist*, at times even *derogatory attributions towards the collective associated with the music*. This is accompanied by an *implicit distancing and demarcation from the addressed group*. This can be illustrated through descriptors like „monstrous“ or attributions of „monster“. These terms outline a fantasy figure that appears to lack a real counterpart for the students. It reflects a sense of detachment among the students when describing music that might be so distant from their current life situation that it leads them into the realm of fairy tales and fables. Furthermore, the interactive negotiation of these attributions also reveals the *institutionalized normative role*

expectations. Sf1 demonstrates an awareness of her *student job*⁵ (Breidenstein 2006, p. 260, see also Martens & Asbrand 2021) and also of the norm prohibiting racist remarks within the framework of the lesson. Overall, it can be observed that the receptive approach of an unprepared first listening to the music among the students activates ethnically holistic foreign images.

In our studies, interpretations like this serve as the starting point for the further development of educational designs. The reconstructions of action-guiding knowledge as well as the institutional and subject-related framing of the teaching and learning situation provide detailed empirical insights into classroom practice. These findings add perspectives for educational research and can at the same time be translated into concrete recommendations for educational action. In the next section we will show how the different poles of construction and reconstruction are constructively related to each other within the framework of our design research approach as the reconstructive results provide didactic implications for the lesson design.

4 Following a design-based research approach

While in the previous sections we have illustrated how we have gained reconstructive insights into interactions in the music classroom using the documentary method, we now turn to the characteristics of the development-oriented research approach of our studies⁶. They correspond to the five characteristics of DBR as described in the discourse: Our studies are iterative and cyclical, have an interventionist character, are ecologically valid and practice-orientated, contain prospective and reflective components, and are theory-generating (Cobb et al. 2003; Bakker 2018, p. 18; Prediger et al. 2015, p. 879). Drawing upon these characteristics, we will illustrate how we design our praxeologically based studies in the DBR research format and apply the working methods of the documentary method within this framework.

4.1 Iterative and cyclic research and design process

We organize our research process in an iterative and cyclical research process (Bakker 2018, p. 18). The first step involves structuring the learning object in accordance with subject-specific and subject-didactic theories, culminating in the development of an initial lesson design. This design process is primarily theory-driven, integrating aspects of educational theory and subject didactics as well as empirical findings on topics that are relevant to the design development.

⁵ Breidenstein and Jergus (2008) translated the term „Schülerjob“ also as „doing pupil“.

⁶ Following Bakker (2018, pp. 6-7), we understand DBR not as a methodology but as a research approach or format.

In the next step, there is collaboration with the teachers who are involved in adapting the design for the specific practical situation. This is followed by the implementation of the design and the reflective part of the study, which is divided into two phases: Immediately after the testing, and sometimes after each lesson in the case of multi-day designs, there is a joint reflection on the intervention. During these reflection sessions, participating teachers and researchers contribute their respective expertise in didactics and practical teaching as well as their experiences with the learning group and their impressions from the participant observations during the lesson implementation. Against this backdrop, successful moments as well as challenges in the implementation and, if necessary, alternative learning and teaching approaches are explored with regard to a redesign. In the next phase, the video data collected is reviewed and selected sequences are interpreted using the video-based documentary classroom research as described above. With reference to the empirical and educational insights gained in this way, the lesson plan is redesigned and re-tested. This iterative sequence of (further) development, testing, reflection and documentary interpretation ultimately results in a cyclical procedure. Usually, our research and development processes run through two to three complete cycles, sometimes with several parallel trials of the design and associated data collection per cycle. For instance, in the study on cultural diversity, three design cycles were conducted (fig. 1).

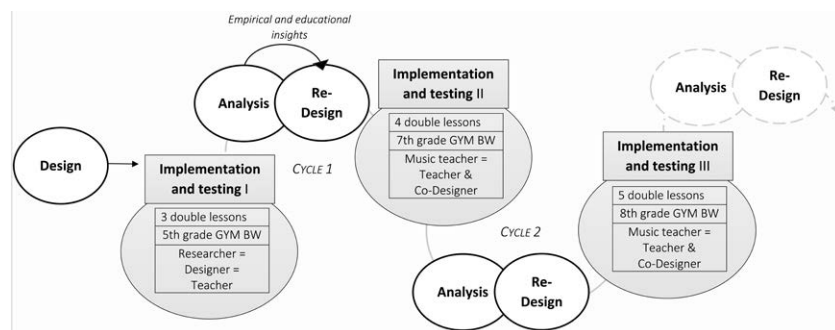


Fig. 2: Research design (see Völker 2023, p. 60)

Looking at this research process in more detail, changes in terms of instructional organization that can be attributed to the design development process are already evident (see fig. 1). In Cycle 1 Jonas Völker took on a triple role as a designer, researcher, and teacher, as the teacher co-designing the unit with him fell ill on a short notice. This experience led to the conclusion that juggling

these three roles simultaneously was too demanding. As a consequence, in cycles 2 and 3, the design was conducted in closer cooperation with teachers. They were invited to act as co-designers, adapting the proposed design to their specific classroom situation (Endres & Buchborn, in this volume).

Furthermore, additional considerations led to a fundamental revision of the framework in cycle 2. Cycle 1 took place in three double lessons in a 5th-grade class at a secondary school in Baden-Württemberg. Discussions with the accompanying teacher as well as empirical insights into how learners dealt with the given tasks show that the developed teaching and learning materials were not suitable for the grade level. This led to the decision to further develop the design for a higher grade level. Moreover, the estimated time for the designed content was evaluated as too short which led to an extension of the design to four respectively five lessons in the following cycles.

4.2 The interventionist character and practice orientation

As we develop designs for music lessons in school and test them in practice, our studies have the interventionist character typical of DBR (Bakker 2018, p. 18). Using the example of the study on cultural diversity we already discussed at the beginning that we choose this approach in order to develop and test new educational designs or to open up new subject areas. At the same time, our interventions in classroom practices help us to research processes of action that are underrepresented in the field.

Closely linked to the interventionist character is the aspect of practical relevance, typical of DBR studies (Hußmann et al. 2013, p. 29). In this context, particular emphasis should be placed on the "practical contributions" (McKenney & Reeves 2019, p. 19), i.e. the results of DBR's teaching development. Prediger et al. (2012) describe "specified and structured learning objects" and "teaching-learning arrangements" as "development products" of their studies and also assign the developed "design principles" to these (p. 7).

The development results of Jonas Völker's study encompass teaching-learning arrangements designed to engage with a piece of Arabic music. For example, the design of cycle 2 consists of four stages: Firstly, the lesson was introduced by an (unprepared) listening to the Arabic song *Bint el Shalabiya* (see 3.1). Following this, the song was practiced as part of class music-making, involving singing and accompanying it with percussion instruments. In the next stage, the students get to know Samir Mansour. Mansour was born in Damascus, Syria, and lives in Stuttgart since 1999. He became passionate about European orchestral music as a child (back in Syria), which led to university studies with a major in tuba at the Damascus Conservatory of Music. After his music studies, Mansour served as both a tuba player in the Syrian Symphony Or-

chestra and as an oud⁷ player in the State Syrian Orchestra for Arabic Music. Today, he primarily works as an oud player and singer, as well as a lecturer at the Popakademie Baden-Württemberg, Germany. Mansour is presented to the students as an artist within the local music cultural scene – rather than portraying him as a musician from a distant country. In the fourth stage, titled "A song travels around the world", the students get to know various versions of the song *Bint el Shalabiya* in different languages and genres, thereby becoming familiar with its integration into various musical practices. The aim is to encourage students to recognize the transcultural nature of music in a globalized musical landscape and to challenge the tendency to exclusive categorize music based on geographical origins.

Working with designs like this in school shows the application orientation of our studies which also correspond with their ecological validity: "Because the research is situated within real classrooms, the conditions of the study already represent the complexity of conditions of practice" (Prediger et al. 2015, p. 879). This is precisely where our approach begins, by reconstructing the norms as well as the hidden logics (*modus operandi*) that guide actions of 'real' practice contexts and referring to this reconstructive level in the further development of practice. We already gave insights into this aspect by illustrating how we reconstructed the action-guiding knowledge of students dealing with the described tasks in cycle 2 and will now show how this empirical knowledge guided the process of redesign, especially the redefinition of the design principles.

4.3 From reconstructive to prospective components

The design principles are located at the interface between reconstructive research and prospective development. In the reflection of the lessons they serve as guidelines for evaluation and can be redefined on the basis of new empirical knowledge. In the next step, they provide research-based guidance for the lesson design.

In Jonas Völkers study this can be illustrated by the example of two design principles. These design principles were initially developed on the basis of literature and were increasingly differentiated in the course of the study with reference to the empirical findings obtained.

Design Principle 1 *Educational Presentation and Discussion of Multiple Belongings* (Völker 2023, pp. 217-224) is primarily addressed in two lesson stages: "Samir Mansour introduces himself" and "A song travels around the world." Through the analysis of instructional and learning processes, student interactions were examined for moments of success and obstacles in relation to the

⁷ The oud is an Arabic lute.

defined objective: fostering interest in and openness towards a piece of music that was initially unfamiliar to the students. In this context, design elements were developed and modified accordingly. For example, additional songs from different languages and music styles were integrated into the stage “A song travels around the world“. Additionally, the stage 3 and 4 were swapped to introduce Mansour as one of the interpreters of the globally popular song.

Fig. 3: Changes from cycle 2 to 3

Cycle 2	Cycle 3
First Listening & Free Movement	
Classroom music-making Bint el Shalabiya	Classroom music-making Bint el Shalabiya
Samir Mansour introduces himself	A song travels around the world
A song travels around the world	Samir Mansour introduces himself
	Design an own version of the song

Design Principle 2 is directly related to the interpreted sequence (3.1). To avoid the reinforcement of stereotypical foreign images, a *musical-practical, creative initial encounter with the subject matter* (Völker 2023, pp. 213-217) was selected in Cycle 3 (see fig 3). By strengthening the practical elements of teaching through classroom music-making activities and the creation of their own version of the song in Cycle 3, the predominant emphasis on the song’s origin was redirected. Instead, students now primarily focus on meeting the practical musical demands, thereby shifting the narrative away from cultural stereotypes. The insights gained into the composition, structure, and form of the song also serve as reference points for subsequent receptive approaches. The example shows how educational norms, learning and teaching experiences and reconstructive insights lead to a reconfiguration of the design principles that serve as a reference point in the design process. Describing the interplay of reconstruction and development already pointed to the different levels of results we aim for in documentary design research. This will be further illustrated in the next chapter.

4.4 Levels of theory generation: reconstruction and development results

A central characteristic of DBR is the intention to generate theories about learning and about measures that have been developed to support this learning (Bakker 2018, p. 18). In line with our praxeological foundation, we understand classroom practice as a complex interaction process shaped by the norms and

implicit logics of subject teaching and the institution of school. As demonstrated in the example above, the documentary method gives us empirical access to this (school) practice as well as to the implicit and explicit knowledge that guide the actions in the music classroom (Bohnsack 2017, p. 103): the implicit performative experiential knowledge and the explicit pedagogical-didactic programme, the role requirements of the school and the classroom and the identity norms of students and teachers (p. 100). Our methodological foundation therefore gives us access to certain levels of theoretical insights. Further aspects become accessible through the developmental format.

We aim to structure, reconstruct, and specify the learning objects, develop design principles (s. above) and theories on learning and interaction processes in lesson contexts, reconstruct action-guiding knowledge that underlie the everyday learning and teaching practice and develop theories on the institutional and subject-specific framing of teaching practice. In comparative analysis, it is possible to abstract from individual sequences and generate results that go beyond the specific subject of investigation – in this case, the lesson design. In the following, we will illustrate two of these levels of theoretical results by examples referring to the study on cultural diversity in the music classroom again.

Theories of (subject-related) action and interaction processes: Basic orientation towards the construction of collective identities

A central finding of the documentary reconstructions of group work in the researched music lessons is the *basic orientation towards the construction of collective identities* observed across all learning groups following their initial exposure to the Arabic song *Bint el Shalabiya*. The students' initial encounter with the song triggers a dichotomous categorization of music into the familiar and unfamiliar. However, as demonstrated in the example interpretation (3.1), this listening experience not only updates musical concepts but also brings to light ethnic-holistic notions. On a practical level, this dichotomous perception manifests in the distinction between the self ('us') and an external group ('the others'). Thereby, differences between interactively negotiated group memberships are constructed, leading to either demarcation from others or the affirmation of one's own self-image.

Two forms of *Doing Difference* (West & Fenstermaker 1995) can be distinguished here. On the one hand, the empirical data documents global and abstract constructions of difference rooted in ethnic stereotypes, as exemplified by the following statement from a student:

"Well, I didn't say it comes from Africa, but I can totally imagine them drumming around the fire. Because they also dance somehow, and I can imagine that very well." (Statement by a student in a classroom discussion; see Völker 2023, p. 156)

On the other hand, personal demarcations are established within peer interactions, both through self-representations ("Canuck music [...] As if a German would listen to something like that")⁸ and through attributions by others ("You are an Arabian [*in the direction of a classmate*] She comes from the land of Arabia"). What both forms have in common is that they unfold primarily along ethnic lines. It plays a crucial role whether students perceive themselves as "others" with a migration background or as members of the majority society. Those who publicly position themselves as experts in Arabic music or related topics often present their migration background as an asset, which frequently accompanies distancing and devaluation towards the majority society. Conversely, students without a migrant background rely on their membership in the majority society, delegitimizing the claims of other groups to secure their own interpretive authority. In this process, it becomes apparent that students from both 'groups' resort to homologous patterns of action. Thus, ethnic projections and global attributions ("Germany is all about Schlager music") as well as the formation of fictive communities and self-ethnization in response to such attributions ("because we both are such 'deutsche Kartoffeln'"⁹) are evident among both students with migrant backgrounds and members of the majority society. It is essential to consider that societal power dynamics and asymmetries have an impact on music lessons in schools and that the outlined patterns of action are thus only partially comparable against the background of different experiences of discrimination (Honnens 2023).

The documentary interpretations highlight the reciprocity between self- and other-attributions, where representations of others also serve to situate one-self, while self-representations involve demarcation from the other group. Accordingly, students often navigate within the dichotomous tension between self and other attributions. All reconstructed patterns of action are rooted in the *basic orientation towards the construction of collective identities*, which contributes in both coping with and confirming these dichotomous orders.

The results of this study reveal the significant influence of students' extracurricular or pre-school conceptions on their engagement with the learning and teaching subject. These conceptions are implicit, socialized and not readily accessible to students through reflection. Within discussions in music education regarding cultural diversity, such forms of knowledge have been largely overlooked. However,

8 All student quotes in this section are derived from peer-cultural negotiations within group work and thus take place behind the scenes (Nolda 2014) of the classroom's public sphere. Although it should be noted at this point that the students were aware that their conversations were being recorded as part of the research project, they nevertheless spoke with remarkable openness and candour – without holding back, as seen in 3.1.

9 "Deutsche Kartoffel" literally means "German potato" and is an informal, pejorative term used to refer to a person from Germany.

it is imperative to consider them in order to design music lessons that align with the often advocated goals of culturally sensitive and reflective music learning.

Theories regarding the institutional framing of teaching and learning practice

In addition to providing insights into subject-specific processes of action and interaction, the documentary reconstructions allow for (local) theory formation regarding the institutional framing of teaching and learning practices, as well as typical action patterns of students in coping with them. As a result of Völker's documentary reconstruction, three overlapping and sometimes conflicting orientations emerge within the interaction system of learning and teaching: the subject-related *orientation towards the construction of collective identities* (see above), the *orientation typical of learning and teaching towards the completion of school tasks* and the *orientation towards the establishment and stabilization of peer cultural norms* (Völker 2023, p. 196).

The videotaped lesson sequences show that negotiations of meaning in lessons occur *behind the scenes* in peer-cultural relationships. This often reveals a tension between the subjective beliefs of individual students on the one hand and the orientation towards establishing consensus within their respective peer groups on the other hand. It becomes evident that the individual ideas of students are often subordinated to or transformed in consideration of group dynamics. The negotiated positions, in turn, frequently come into conflict with existing school norms and role expectations (as seen above: "we don't write monster because otherwise it's somehow already racist"). The ambivalence between classroom norms and peer-cultural norms is expressed in an orientation towards the school task. Regarding the accompanying negotiation processes, it is apparent that public classroom statements and the written outcomes of group work often do not reflect the actual views of the students or peer groups. Instead, the contributions frequently mirror their expectations of their *student job*.

As previously demonstrated, these orientations manifest *behind the scenes* of the classroom's public sphere and thus cannot be incorporated by teachers into the assessment and development of their teaching. Classroom video recordings of students' negotiation processes during group work provide access to typically unobservable dynamics and facilitates the translation of gained theories about students' action-guiding knowledge into didactic consequences. Thus, documentary reconstructions expand the normativity of educational design and practice. This will be further examined in the next section. At the same time, the results extend beyond the specific classroom practice and research subject and are applicable to further research areas.

5 Educational normativity and openness towards the actors' relevance systems

Central to our approach to documentary design research is the question of the relationship between the normativity of educational development work and the principle of openness towards the actors' relevance systems, which is constitutive of the documentary research approach (Bohnsack 2014, pp. 65–67; for classroom research Asbrand & Martens 2018, pp. 24–29). The example of the study on cultural diversity shows how research and design are closely related, yet lesson planning and direct reflection from the teacher's perspective are distinct from documentary reconstruction.

Educational theory and subject-specific educational considerations guide the design of lessons (see 4.1 and 4.2). These need to be made explicit and systematically reflected upon. At the same time, we assume that implicit evaluation standards also guide our actions in practical educational situations, even though we may not have direct control over them in our setting.

In the documentary reconstruction of the observed learning and teaching practice, however, evaluations based on corresponding teaching norms must be excluded, as well as the question of factual truth and normative correctness (Asbrand & Martens 2018, p. 33) regarding the observed practice of the actors. To this end, the procedural steps of the documentary method enable us as researchers to distance ourselves from classroom practice, even if we have conducted it ourselves as teachers or are strongly involved through our role as developers (Lähneemann 2010). By this we carry out the necessary change of the analytical attitude (Asbrand & Martens 2018, p. 24; see fig. 4).

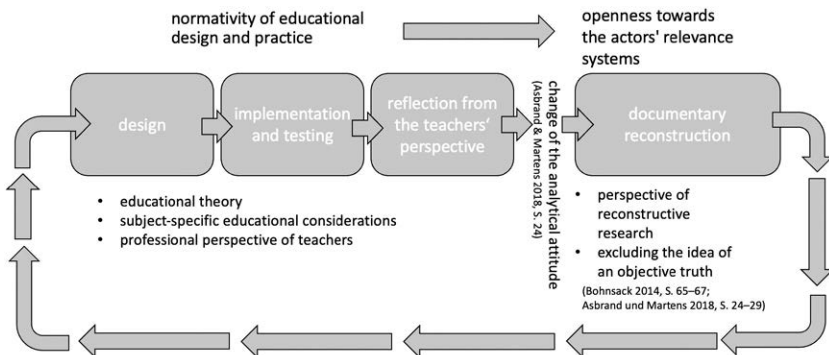


Fig. 4: The relationship between educational normativity of educational design and an openness towards the actors' relevance systems in documentary reconstruction

In our projects, these processes of distancing are also supported by collaborating in teams of researchers and teachers. In early stages of the design process, it can be helpful for researchers to conduct the lessons themselves in order to gain experience with the design, while teachers have the opportunity to familiarize themselves with the design as observers. However, especially in later cycles when the design has been further developed, we prefer to delegate the teaching responsibilities to the teachers involved. This further increases the ecological validity of the setting (as discussed earlier) and enables the researchers to take on the role of the observers during the survey situation. This makes it easier to maintain distance from classroom activities, especially in the later phase of documentary interpretation – particularly when analysing the teacher's practice. Furthermore, the exchange of ideas in research groups plays a central role in our projects. The joint interpretation continuously puts the results of the reconstruction work to the test during the research process. Additionally, hidden normative positions or didactic convictions of the researchers often become visible in the critical discussion with others.

In addition to distancing through the procedural steps of documentary interpretation of individual cases, comparative analysis (Bohnsack 2013, p. 270) offers the possibility of replacing the researchers' own, often implicitly effective comparative horizons with empirical, intersubjectively comprehensible comparative horizons. This step helps to relativise the location-bound nature of the interpretation and, to some extent, makes it accessible for self-reflection (Bohnsack 2010, p. 34; Treß i.d.B). It becomes clear that by integrating the documentary method into our DBR formats, we separate normative procedural steps in the development, implementation and direct reflection of lessons from reconstruction, which is guided by the principle of excluding the idea of an objective truth. In this way, the logics of school praxis and scientific research are related to each other in our research design.

6 Conclusion and Outlook

Referring to the study on cultural diversity in the music classroom we illustrated how we interconnect research and development in documentary design research. Using the praxeological sociology of knowledge as a methodological foundation for our studies and the documentary method as an approach to our reconstructive work enables us to get detailed insights into the logics of (music) educational practice. This knowledge serves as a coherent starting point for the (further) development of educational designs. We hope that the development products of our studies – including empirically grounded design principles, learning and teaching concepts and materials –, as well as our empirical findings that go beyond the specific educational design, provide inspiration

and guidance for the further development of music education in school and can serve as an impetus for change of everyday learning and teaching practice. To have an impact on educational practice, an important task for the future lies in the development and implementation of formats in which practitioners and researchers closely collaborate. Additionally, it is essential to establish communication formats for sharing research results and facilitating mutual knowledge transfer (see Endres & Buchborn in this volume).

In this context, it will be particularly beneficial to make aspects of research practice itself, such as cooperation and communication in multi-professional teams or the experiences of researchers acting in a double role (see Malmberg et al. in this volume; Treß i.d.B.), the subject of reconstructive research. This will provide new, differentiated insights into research practice in these comparatively young research formats, leading to new methodological insights. Since "research [...] – in the sense of the modern epistemological discussion – only arrives at new epistemological insights and methodological standards from its practice, as its 'application'" (Bohnsack 2010, p. 53, translated by the authors), we hope that in this way – which is quite typical for the reflection of the procedures of the documentary method and the elaboration of its underlying methodology – a well-founded methodological elaboration of our approach to documentary design research in subject didactics will be possible. Following this idea, other issues also require further systematic reflection in our research practice: The interrelation of the logics of the research practice with the subject-didactic development work, which is sometimes determined by pragmatics and the pressure to act in everyday school life; the relationship between the focussed exemplary and detailed empirical work and the 'big picture' of designing learning and teaching formats and acting in educational practice (see also Aigner 2013) or the interrelation of empirical findings and theory-based, subject-didactic and practical teaching considerations. We hope that the increased use of the documentary method in development-orientated context such as school development research (Asbrand & Martens 2021) and design-based research will foster a fruitful research practice and a constructive methodological discussion in the future.

Literatur

- Aigner, W. (2013). Fülle in schulischen Praxisforschungsprojekten. Eine Herausforderung für die forschende Auswertung. *Diskussion Musikpädagogik*, 57/13, 14-20.
- Anderson, T. & Shattuck, Julie (2012). Design-Based Research. *Educational Researcher*, 41 (1), 16-25.
- Asbrand, B. & Martens, M. (2018). *Dokumentarische Unterrichtsforschung*. Wiesbaden: Springer VS.
- Asbrand, B. & Martens, M. (2021). Kollaboration von Wissenschaft und Schulpraxis. Zum Potenzial der dokumentarischen Evaluationsforschung für die Schul- und Unterrichtsentwicklung. In E. Zala-Mezö, J. Häbig & N. Bremm (Eds.), *Dokumentarische Methode in der Schulentwicklungsforschung* (S. 217-237). Münster: Waxmann.

- Bakker, A. (2018). *Design Research in Education: A Practical Guide for Early Career Researchers*. Milton: Routledge.
- Bohnsack, R. (2010). Qualitative Evaluationsforschung und dokumentarische Methode. In R. Bohnsack & I. Nentwig-Gesemann (Eds.), *Dokumentarische Evaluationsforschung: Theoretische Grundlagen und Beispiele aus der Praxis* (pp. 23-62). Opladen: Budrich.
- Bohnsack, R. (2014). *Rekonstruktive Sozialforschung: Einführung in qualitative Methoden* (9th Ed.). Stuttgart: UTB.
- Bohnsack, R. (2017). *Praxeologische Wissenssoziologie*. Stuttgart: UTB.
- Bohnsack, R. & Nentwig-Gesemann, I. (Eds.) (2010a). *Dokumentarische Evaluationsforschung: Theoretische Grundlagen und Beispiele aus der Praxis*. Opladen: Budrich.
- Bohnsack, R. & Nentwig-Gesemann, I. (2010b). Einleitung: Dokumentarische Evaluationsforschung. In R. Bohnsack & I. Nentwig-Gesemann (Eds.), *Dokumentarische Evaluationsforschung: Theoretische Grundlagen und Beispiele aus der Praxis* (pp. 9-20). Opladen: Budrich.
- Buchborn, T. (2020). Interkulturalität, Migration und Musikunterricht. Spannungsfelder zwischen Schulpraxis und Theorie und daraus resultierende Herausforderungen für Musikdidaktik, Lehrer:innenbildung und Forschung. In T. Buchborn, E.-M. Tralle & J. Völker (Eds.), *Interkulturalität – Musik – Pädagogik* (vol. 8, pp. 9-32). Hildesheim: Olms.
- Buchborn, T. (2022). Zwischen Konstruktion und Rekonstruktion. Zur Anwendung der Dokumentarischen Methode in einem entwickelnden Forschungsformat. In M. Martens, B. Asbrand, T. Buchborn & J. Menthe (Eds.), *Dokumentarische Unterrichtsforschung in den Fachdidaktiken. Theoretische Grundlagen und Forschungspraxis* (pp. 55-74). Wiesbaden: Springer VS.
- Buchborn, T., Schmid, S., Treß, J. & Völker, J. (2022). Mapping the field. Themengebiete und Forschungsverfahren musikpädagogischer Design-Based Research Studien. In U. Konrad & A. Lehmann-Wermser (Eds.), *Musikpädagogische Forschung zwischen Theoriebildung und Praxisveränderung* (pp. 105-136). Hannover: ifmpf.
- Buchborn, T., Theisohn, E. & Treß, J. (2019). Kreative musikalische Handlungsprozesse erforschen. Einblicke in ein Verfahren der videobasierten Rekonstruktion von Gruppenimprovisations- und -kompositionsprozessen von Schülerinnen und Schülern. In V. Weidner & C. Rolle (Eds.), *Praxen und Diskurse aus Sicht musikpädagogischer Forschung* (vol. 40, pp. 69-85). Münster, New York: Waxmann.
- Breidenstein, G. (2006). *Teilnahme am Unterricht. Ethnographische Studien zum Schülerjob* (Studien zu Schul- und Bildungsforschung, vol. 24). Wiesbaden: VS Verlag für Sozialwissenschaften. <https://doi.org/10.1007/978-3-531-90308-8>
- Breidenstein, G. & Jergus, K. (2008). Doing Pupil among Peers. Ethnographic Observations. In H.-H. Krüger, W. Helsper, G. Foljanty-Jost, R.-T. Kramer & M. Hummrich (Eds.), *Family, School, Youth Culture. International Perspectives of Pupil research* (pp. 115-134). Lausanne: Lang.
- Cobb, P., Confrey, J., diSessa, A., Lehrer, R. & Schauble, L. (2003). Design Experiments in Educational Research. *Educational Researcher*, 1(32), 9-13.
- DGfE (2022). *Schulpraxis – Entwickeln – Erforschen: Konzepte und Praxis entwicklungsorientierter Bildungsforschung. Call for Contributions* [PDF-document], Deutsche Gesellschaft für Erziehungswissenschaft, Sektion Schulpädagogik. Kommission Schulforschung und Didaktik.
- Endres, A. & Buchborn, T. (in this volume). Didaktische und rekonstruktive Perspektiven auf Hochschullehre. Zusammenarbeit Forschenden und Lehrenden in der dokumentarischen Entwicklungsforschung. In T. Buchborn, M. Hallitzky, J.-H. Hinzke, M. Martens & K. Spendrin (Eds.), *Schulpraxis – Entwickeln – Erforschen: Konzepte und Praxis entwicklungsorientierter Bildungsforschung*. Bad Heilbrunn: Klinkhardt.
- Honnens, J. (2023). Kulturreflexive Musikpädagogik als dokumentarische Entwicklungsforschung. Rezension zu: Völker, Jonas (2023). „Als ob ein Deutscher sowas hört?!“ Orientierungen von Schülerinnen und Schülern im interkulturellen Musikunterricht. *Beiträge Empirischer Musikpädagogik*, 14. <https://www.b-em.info/index.php/ojs/article/view/234>

- Hußmann, S., Thiele, J., Hinz, R., Prediger, S. & Ralle, B. (2013). Gegenstandsorientierte Unterrichtsdiseins entwickeln und erforschen. Fachdidaktische Entwicklungsforschung im Dortmunder Modell. In M. Komorek & S. Prediger (Eds.), *Der lange Weg zum Unterrichtsdiseins: Zur Begründung und Umsetzung fachdidaktischer Forschungs- und Entwicklungsprogramme* (pp. 25-42). Münster, New York: Waxmann.
- Klieme, E. (2006). Empirische Unterrichtsforschung: aktuelle Entwicklungen, theoretische Grundlagen und fachspezifische Befunde. Einführung in den Thementeil. *Zeitschrift für Pädagogik*, 52(6), 765-773.
- Komorek, M. & Prediger, S. (Eds.). (2013). *Der lange Weg zum Unterrichtsdiseins: Zur Begründung und Umsetzung fachdidaktischer Forschungs- und Entwicklungsprogramme*. Münster, New York: Waxmann.
- Lähnemann, C. (2010). Freiarbeit in Schulklassen – Selbstevaluation mit der dokumentarischen Methode. In R. Bohnsack & I. Nentwig-Gesemann (Eds.), *Dokumentarische Evaluationsforschung: Theoretische Grundlagen und Beispiele aus der Praxis* (pp. 117-137). Opladen: Budrich.
- Luhmann, N. (1984). *Soziale Systeme*. Berlin: Suhrkamp.
- Martens, M. & Asbrand, B. (2021). „Schülerjob“ revisited: Zur Passung von Lehr- und Lernhabitus im Unterricht. *Zeitschrift für Bildungsforschung*, 11(1), 55-73. <https://doi.org/10.1007/s35834-021-00309-3>
- Martens, M. & Asbrand, B. (2022). Documentary Classroom Research. Theory and Methodology. In M. Martens, B. Asbrand, T. Buchborn & J. Menthe (Eds.), *Dokumentarische Unterrichtsforschung in den Fachdidaktiken. Theoretische Grundlagen und Forschungspraxis* (pp. 19-38). Wiesbaden: Springer VS.
- McKenney, S. & Reeves, T. C. (2013). Educational Design Research. In J. M. Spector, M. D. Merrill, J. Elen & M. J. Bishop (Eds.), *Handbook of Research on Educational Communications and Technology* (4th Ed., pp. 131-140). Wiesbaden: Springer.
- McKenney, S. & Reeves, T. C. (2019). *Conducting Educational Design Research* (2nd Ed.). New York: Routledge.
- Nolda, S. (2014). Hinterbühne – Vorderbühne. In J. Kade, S. Nolda, J. Dinkelaker & M. Herrle (Eds.), *Videographische Kursforschung. Empirie des Lehrens und Lernens Erwachsener* (pp. 283-299). Stuttgart: Kohlhammer.
- Prediger, S., Gravemeijer, K. & Confrey, J. (2015). Design research with a focus on learning processes: An overview on achievements and challenges. *ZDM Mathematics Education* 47(6), 877-891.
- Prediger, S., Link, M., Hinz, R., Hußmann, S., Thiele, J. & Ralle, B. (2012). Lehr-Lernprozesse initiieren und erforschen. Fachdidaktische Entwicklungsforschung im Dortmunder Modell. Webversion. *MNU Journal*, 8(65), 1-9.
- Reinmann, G. (2014). Welchen Stellenwert hat die Entwicklung im Kontext von Design Research? Wie wird Entwicklung zu einem wissenschaftlichen Akt? In D. Euler & P. Sloane (Eds.), *Design-based Research* (vol. 27, pp. 63-78). Stuttgart: Steiner.
- Reinmann, G. (2017). Design-Based Research. In D. Schemme & H. Novak (Eds.), *Gestaltungsorientierte Forschung – Basis für soziale Innovationen. Erprobte Ansätze im Zusammenwirken von Wissenschaft und Forschung* (pp. 49-61). Bielefeld: Bertelsmann.
- The Design-Based Research Collective. (2003). Design-Based Research: An Emerging Paradigm for Educational Inquiry. *Educational Researcher*, 32(1), 5-8. <https://doi.org/10.3102/0013189X032001005>
- Theisohn, E. (2023). Kreieren – Kollaborieren – Komponieren. Empirische und didaktische Perspektiven auf das gemeinsame Komponieren im Musikunterricht. Bielefeld: Transcript.
- Theisohn, E., Buchborn, T., Treß, J. & Völker, J. (2020). Fachspezifische Praktiken des Musikunterrichts rekonstruieren. Potenziale der dokumentarischen Videointerpretation für die Erforschung musikbezogener Lehr-Lernprozesse in entwickelnden Forschungsformaten. In M. Corsten, K. Hauenschild, M. Pierburg, B. Schmid-Thieme, U. Schütte & D. Wolff (Eds.), *Qualitative Videoanalyse in Schule und Unterricht* (pp. 139-150). Weinheim: Beltz Juventa.

- Treß, J. (2020). What do improvising students know? The significance of (implicit) knowledge in musical group improvisations of secondary school students. In A. Sangiorgio & W. Mastnak (Eds.), *Creative Interactions. Dynamic Processes in Group Music Activities*. University of Music and Performing Arts Munich. <https://nbn-resolving.org/urn:nbn:de:bvb:m29-0000007200>
- Treß, J. (2022). *Zwischen Distanzierung und Kollektivierung. Gruppenimprovisation im Musikunterricht initiieren und rekonstruieren*. Wiesbaden: Springer VS.
- Treß, J. (2025). Musikunterricht entwickeln, durchführen und rekonstruieren in Personalunion. Eine (Selbst-)Reflexion der Standortgebundenheit im Rahmen der Dokumentarischen Entwicklungsforschung. In diesem Band, pp. 235-252.
- Vogd, W. (2006). *Die Organisation Krankenhaus im Wandel. Eine dokumentarische Evaluation aus Perspektive der ärztlichen Akteure*. Bern: Huber.
- Völker, J. (2020). „...als ob ein Deutscher sowas hört“. Kulturelle Repräsentationen und ethnische Projektionen im interkulturell orientierten Musikunterricht. In T. Buchborn, E.-M. Tralle & J. Völker (Eds.), *Interkulturalität – Musik – Pädagogik* (vol. 8, pp. 173-187). Hildesheim: Olms.
- Völker, J. (2023). „Als ob ein Deutscher sowas hört?!“ Orientierungen von Schülerinnen und Schülern im interkulturellen Musikunterricht (Schriften der Hochschule für Musik Freiburg, vol. 10). Hildesheim: Olms.
- West, C. & Fenstermaker, S. (1995). Doing Difference. *Gender and Society*, 9(1), 8-37. <http://www.jstor.org/stable/189596>
- Zheng, L. (2015). A systematic literature review of design-based research from 2004 to 2013. *Journal of Computers in Education*, 2(4), 399-420.

Autoren

Buchborn, Thade, Prof. Dr.

ORCID: 0000-0001-7709-0743

Professor für Musikpädagogik (Lehramt), Hochschule für Musik Freiburg.
Arbeitsschwerpunkte: Digitalisierung, kulturelle Vielfalt, kreatives Handeln, Songwriting und Komponieren im Musikunterricht, Praxen kultureller Bildung im ländlichen Raum, rekonstruktive Sozialforschung, entwicklungsorientierte Bildungsforschung.
t.buchborn@mh-freiburg.de

Völker, Jonas, Prof. Dr.

ORCID: 0009-0004-1643-8303

Professor für Musikdidaktik (Lehramt), Hochschule für Musik Detmold.
Arbeitsschwerpunkte: Ökologische Musikpädagogik, kritisch-reflexiver und künstlerisch-kreativer Einsatz generativer KI im Musikunterricht, (post-)digitales Musiklernen, Partizipation in der Lehramtsausbildung Musik, kulturelle Vielfalt im Musikunterricht, rekonstruktive Sozialforschung, entwicklungsorientierte Bildungsforschung.
jonas.voelker@hfm-detmold.de