



Anja Kraus

PERSPECTIVES ON PERFORMATIVITY

Pedagogical Knowledge in
Teacher Education

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Anna Herbert and Anja Kraus

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Educational practices consist of intentions, movements, bodies, language, things and spaces. Empirical research on educational practices and their contexts entails diverse theoretical, methodological and methodical questions. By taking over the European perspective it becomes apparent that the theoretical and the practical understanding of pedagogical terms framing educational practices like education, didactics, methods etc. differs very much from one language area and culture of interpretation to another. We regard this as an expression of cultural diversity.

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Anja Kraus

Perspectives on Performativity

Pedagogical Knowledge in
Teacher Education



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1. Introduction and Outline

A chain is only as strong as its weakest link.

In the recent decades, the once controversially debated professionalization of the teaching vocation has also become an academization of teacher education (BREIDENSTEIN et al. 2002). In most European countries, teacher education has entered the remit of the universities. The natural and social sciences as well as the humanities are involved in their academic curricula. As a result, study programs designed to train teachers for work in university-track secondary schooling (i. e. German *Gymnasium*) have sharpened their focus on pedagogy. Conversely, study programs aimed towards those wishing to work in pre-, primary, or vocational schools have developed their disciplinary focus more than they have ever done before.

Study programs for teachers are traditionally defined by strong interdisciplinarity (see KRAUS 2015, p. 13 f.). According to the objectives for teacher education as defined by the Council of Europe in 2007, teacher education should take place in three phases: the initial training (the academic study program), a phase of “early career support,” and a third phase of continued learning under supervision (“mutual monitoring support”). This third phase takes place parallel to regular professional activity in school (see COMMISSION OF THE EUROPEAN COMMUNITY 2007). Practical experience within the discipline or in other fields (especially abroad) is heavily encouraged during the initial training, as the European Qualification Framework focuses on “life-long learning” (see EUROPEAN COMMISSION LEARNING OPPORTUNITIES AND QUALIFICATIONS IN EUROPE 2008).

This book examines teacher education in terms of the development of the skills necessary for recognizing pedagogical situations and practically applying theories and models of teaching and learning in order to encourage and improve educational processes in schools. It examines how these abilities can be modeled theoretically and conveyed within the pedagogical-practical as well as in the scientific-transdisciplinary setting of academic courses. The focus of this book thus lies not on teaching qualifications within a discipline or on the performance of pupils and their teachers, but on pedagogical operations in the classroom and on the pedagogical knowledge applied there. Its chief interest is aligned with the central focus of the scientific discipline of *Schulpädagogik*, “school pedagogy.” School pedagogy investigates processes in schools and school lessons by looking at the practices of the acting persons, especially those of teachers and pupils. It also examines

the institutional and social conditions and contexts of schooling and schools, and the professionalization of teachers.

The question of practical pedagogical knowledge in the classroom lies at the core of school pedagogy. Today it is common to place research on professional development, curriculum studies, and didactics, to which the research area “educational knowledge and practices in the classroom” often belongs, in the light of empirical research on education. In this study, this will be done in the context of the educational sciences, more specifically in the context of pedagogical anthropology. Unfortunately, school pedagogical research receives much less attention than general educational sciences, and its theoretical models are often ignored in favor of those from psychology.

Pedagogical knowledge today thus often falls within two main discourses. The first discourse is the idea of standardization, represented mainly in psychological and psychometrical approaches. On the other hand, the second discourse concerns the many different knowledge forms which also partly defy articulation or objectification. This idea has its roots in the history of pedagogy and in the historic-anthropological branch of the educational sciences. In the following, both interpretations are confronted with each other in an alternating fashion that spirals from general considerations into greater detail. In constantly referring to these two realms of discourse, the idea of this book is gradually developed.

Pedagogical knowledge has only recently become the focus of empirical quantitative research, especially in psychologically and psychometrically influenced survey studies such as TEDS-LT (2008–2012), KoKoHs (2011–2019), BilWiss (2009–2013), and many others.¹ Research based on such evidence² seeks to pro-

1 See e. g.: <https://www.erziehungswissenschaften.hu-berlin.de/de/institut/abteilungen/didaktik/forschung>

2 Sieglinde JORNITZ (2009, p. 68) defines the concept of evidence in empirical research within the educational sciences as follows: “The matter becomes so clear by a single glance that every additional inquiry or discussion is superfluous. Criticism and scepticism have no effect on the evident.” According to JORNITZ (2009, p. 71f.) “[...] an evidence-based [...] education no longer focuses on the ‘production’ of new research findings, but rather only the synopsis and re-analysis of completed research. Re-analysis does not denote the problematization of the validity of individual statements, which is predominantly considered as given. If the results of the studies match, they are consolidated into evidence; if they deviate from the matching tendency, they are considered non-evident and consequently disregarded. Research thus establishes evidence as a confirmation, through already existent evidence. The higher evidence draws from the conformity of the lower. This reflects the effort to yield with scientific evidence, which draws from the fact that each experiment has to be repeatable at will, and thus

vide scientifically new and reliable results by means of controlled and randomized intervention studies and questionnaires. From such results, a base knowledge of pedagogical practice has been generated and then applied with the aim of optimizing systems, institutions, concepts, and specific cases of interest, such as the improvement of a teaching model or other best practice examples.

The theoretical starting point of such studies is not shared by this book. Instead, it contributes to the anthropologically oriented educational sciences, which examine diverse forms of knowledge and a plurality of scientific models, theories, and paradigms regarding pedagogical knowledge, as well as various possibilities for their empirical research. Christoph WULF (1994, p. 7f.)³ defines pedagogical knowledge as is used in pedagogical anthropology as follows:

warrants the validity of knowledge. [...] At the same time, research aims to provide knowledge of the kind that allows the optimization of interventions in practice. Unlike the natural sciences, the educational sciences must thus negate the idea of conducting fundamental research. Evidence is intended to refer not only to the explanation context, but also directly to the usage context. It wants to be practical as an indication of what you should do, e. g., for teaching success.” Rudolf TIPPELT & Jutta REICH-CLAASSEN (2010, p. 23) argue that the concept of evidence must include process-oriented approaches. They write: “Alternatives – such as the non-experience-based guidance by ideas and ideologies or by pedagogical classical authors – nowadays deliver no adequate references for opportunities for action and reform measures. What is needed is rather a rational, understanding, engaging and, in parts, evidence-based research on education and training. This may, however, not solely be based on output-oriented indicators, but also the design processes of teaching and learning and their evaluation must be kept in perspective, for the sake of a comprehensive quality assurance.” The evidence concept is thus also increasingly claimed for qualitative empirical research approaches or modified to that effect (a comprehensive critical overview of the evidence debate in the pedagogy field is provided by BELLMANN & MÜLLER 2011).

- 3 The author of this book has translated all the quotes from German. The quote in German: “Pädagogisches Wissen ist nicht auf die Ergebnisse pädagogischen Wissens beschränkt. Es umfasst viele Formen des Wissens. Zu ihnen gehören philosophische, wissenschaftliche, ästhetische, praktische Symbol- und Zeichensysteme, die in komplexen Beziehungen zueinander stehen. [...] Anthropologie als geschlossenes normatives Wissenssystem gibt es nicht mehr. Entsprechendes gilt für pädagogische Anthropologie. Ihr Wissen ist Teil der Allgemeinen Erziehungswissenschaft, aber auch des pädagogischen Wissens insgesamt. Nicht nur im erziehungswissenschaftlichen, sondern auch im praktischen pädagogischen Wissen spielt anthropologisches Wissen seit jeher eine wichtige Rolle. Wie jeder Wissenschaftler [jede Wissenschaftlerin] hat jeder Erziehende [jede Erziehende] ein anthropologisches Wissen, ohne das der [die] eine nicht wissenschaftlich arbeiten und der [die] andere nicht praktisch handeln kann. In beiden Fällen handelt es sich häufig um implizites anthropologisches Wissen. Als im-

“Pedagogical knowledge is not limited to its results. It includes many forms of knowledge, such as philosophical, scientific, aesthetic, practical symbols and sign systems standing in complex relationships to one another. [...] Anthropology as a closed normative knowledge system no longer exists. The same applies to educational anthropology. Its knowledge is, moreover, part of the theories on education, but also of practical pedagogical knowledge as a whole. Anthropological knowledge has always played an important role, not only in the educational sciences, but also in [the development of] practical pedagogical knowledge. Like every scientist, every educator possesses anthropological knowledge, without which the one could not work scientifically and the other could not act practically. In both cases, it is often a question of implicit anthropological knowledge. In its implicit form, it is difficult to reflect and modify anthropological knowledge. Therefore it is essential for the educational sciences and for professional educators to gain awareness of the anthropological assumptions that guide their work.”

The acquisition of pedagogical knowledge is here directed towards explicit and implicit anthropological assumptions based on theoretical and/or on practical pedagogical approaches. Furthermore, a broad concept of knowledge must be considered, which includes various forms and logics of knowledge. Cultural studies can be employed for the scientific elaboration of this knowledge, since it considers “[...] the symbolic relationship of heterogeneous discourses that only become mutually accessible via their contexts” (WIMMER 2002, p. 117). Research in the educational sciences has always been devoted to educational knowledge, although to date less to empirically demonstrable practical knowledge, but rather as a synonym for education in general (for example, KADE et al. 2011).

This reflects the extraordinary complexity of the situation, which this book does not seek to oversimplify. Instead, its objective is to determine the specifics of the practical knowledge of teachers in regards to their pedagogical practices⁴ in the classroom. In a second step it links this specialist knowledge to a certain form of empiricism. Seen from this perspective, scientific approaches to their subjects in the field are not legitimized at first hand by research methodology. Instead, these

plizites, kann anthropologisches Wissen nur schwer reflektiert und verändert werden. Deshalb ist es für die Erziehungswissenschaft und für professionelle Erzieher[innen] unerlässlich, ein Bewußtsein der ihre Arbeit leitenden anthropologischen Annahmen zu gewinnen.”

- 4 Social *practices* are generally defined as *regularities of action* or *regulated action patterns*. Whether an action is actually a *practice* and to which social order it refers, is already the subject of an interpretive effort and not the result of an observation. At the level of observable phenomena, it is only the *actions* that the researchers can observe (see BUDDE in prep.).

approaches aim at corresponding with the anthropological concept of knowledge as well as with the logic of action in the field (see quotation above). The systematics of this book provide fundamental support for the empirical educational sciences, especially in their relation to pedagogical knowledge in the classroom and its meaning for teacher education. Correspondingly, in terms of professional pedagogical work in educational institutions, the question of “quality” currently has a central role: it is primarily founded on empirical-metric conceptual models of empirical research.

Nowadays, the idea of “quality” of education is connected to an evidence-based and product-oriented governance of education systems. Quality research has its origin in applied organizational theory. It is usually interpreted as quality *management*. Quality management, with the support of the paradigm of New Public Management ideology, seeks primarily to optimize the use of resources. In this context, resources are understood as “capital” (or types of capital); a profit increase is (originally) intended as the evidence of the marketability of a product. “Quality appears as the objective and universal, i. e. observable and universally valid, feature of a product” (HONIG 2002, p. 5). Work processes and certain practices are evaluated in quality research for their results (or products) on the basis of a pre-defined quality scale. Thus, the evaluation of the results serves as an evidence-based examination of the quality of the work processes. The processes and practices associated with product creation are assessed on a scale that is result-based. No further details are provided to determine how a “good practice” can be distinguished. This kind of research is mostly concerned with the modeling of competencies and the implementation of models and forms of increasing institutionalization, incorporation, and routinization.

In the context of pedagogy, quality research evaluates results seen as pedagogically desirable: for example, learning performance. Wilfried Bos (2009, Slide 9) formulates the objective of output control for education systems as follows: “The productivity of education systems, the quality of individual educational institutions and the educational success of individuals is made measurable in order to allow for a more effective control of educational processes.” Through system-wide standardized tests, the performance results of students are collected. The performance of schools or teachers are derived from these results, as well as other rational indications of the continued development of the system (cf. MAAG MERKI 2010). Pedagogical quality, as applied here to standardized pedagogical goals and their normalization, thus coincides with the general ambition to do “[...] everything you always wanted to do better, more consistently,” (HONIG 2002, p. 5), and especially to test it in an ubiquitous and comparative manner. The development and improvement of such systems is thus based on the principle of governance and

according to pre-determined expectations, their standardization, and subsequent evaluation. Educational institutions today are ruled by educational standards that serve as measures for competence-based learning. These standards are expressed in governmental papers and agreements as well as within systems of school inspection. Mainly comparative empirical studies (like PISA or TIMSS) serve as a reference.

However, in this conception of quality management, little consideration is given to the fact that educational practices do not necessarily generate empirically detectable products, and that many efforts, especially regarding an increase in performances, are not even detectable (see, as one of the first, WAHL 1975). Correspondingly, the reflective traditions of pedagogy were, for a long time, unaware of the quality question. However, in recent years the quality concept has been widely accepted, albeit with partial hesitation. This has occurred under considerable political pressure⁵ to collect and assess pedagogical quality (cf. HONIG 2002, p. 2).

However, according to what studies there are, the detailed communication of such research results to schools, as well as their relevance in the development of quality of concrete classroom education, is barely detectable (ALTRICHTER & SOUKUP-ALTRICHTER 2014, p. 54). Herbert ALTRICHTER & Katharina SOUKUP-ALTRICHTER (2014, p. 56) see the solution to this problem in a reinforced “[...] multiperspectivity, i.e. multiple information from different sources and perspectives.” This approach is pursued here. Recent studies in ethnography indicate that good pedagogical practice does not arise from the fact that it has been evaluated: “It must moreover be known how it is produced” (NEUMANN 2012, p. 37). For this purpose it is particularly necessary to recognize the “idiosyncracies of practice” and come within reach of the concrete everyday experiences of the actors (CLOOS et al. 2009, p. 37). In this book, in the context of classroom education we are pri-

5 See the “Framework Program of the Federal Ministry of Education and Research for the Promotion of Empirical Research on Education.” Here it says: “Educational and scientific systems are increasingly becoming key factors in international competition. The new control in the education system, which is data-based and result-oriented, requires a powerful empirical educational research. The Framework Program of the BMBF will help to structurally strengthen empirical research on education in Germany, to develop it qualitatively, to strengthen its inclusion in international networks, to provide knowledge for the reform of the education and science system, and to scientifically substantiate central instruments of an output and evidence-based policy (educational standards; benchmarking; external evaluation of schools; educational reporting)” Source: <http://www.empirische-bildungsforschung-bmbf.de/> [last accessed: 08/07/2012; later only quoted on: www.schulweb.de/de/seiten/drucken.html?seite=6106, last accessed: 02/06/2015].

marily concerned with establishing awareness for the anthropological assumptions that guide pedagogical work. Quality, in this case, does not automatically refer to “good quality,” it instead describes an orientation according to pedagogical objectives in the context of classroom education, whose optimal effect is described below as “choreography.”

To model “quality of education” in terms of “choreography,” an action-theoretical approach informed by a phenomenologically and performativity-theoretical perspective has been chosen in this book. From the perspective of anthropological pedagogy, the need for practical and theoretical pedagogy to align with a conceptual model of performativity is described by Christoph WULF & Jörg ZIRFAS (2007) as follows: “Children and teenagers are not educated by the mere fact that upbringing and education are discussed, but instead by the staging and performance of educational processes” (WULF & ZIRFAS 2007, synopsis). If we take performativity-informed research on practices as the basis of the approach to teacher education unfolded here, the understanding of performativity is thus quite different from the common-sense understanding of performance. It is summarized by Nora LANDKAMMER et al. (2009, internet resource) as follows: “Performativity as a perspective reveals that reality is produced by the (re-)enactment of socially prepared possibilities for action.”

In the following, the anthropological perspective is sharpened by focusing on a central problem of pedagogical knowledge and practice, and thus also of teacher education: the gap between pedagogical theory and practice. This problem will first be described in some of its different facets. Then, in a back-and-forth movement, an argumentation will be unfolded.

In using performativity-informed research on practices as the basis of an approach to teacher education, the following theoretical considerations form the core tenets of this examination: (1) Niklas LUHMANN & Karl-Eberhard SCHORR ([1982] 2000) had already sensitized pedagogical theory formation in the 1980s to the idea that pedagogical action does not often herald what it intends.⁶ (2) The implications of ethnographic research on practices and heterogeneity, according to which pedagogical action and knowledge forms are involved in a variety of fields that can only be empirically determined, should be taken seriously (HONIG 2001). (3) In the context of childhood research, the high personal contribution of those who are being educated must bring to their education is further accentuated (HONIG 1999). (4) In general, pedagogy – especially within the context of pedagogical

6 At the same time, it proposes control opportunities and regulations from a system-theoretical perspective that promote professionalization of the occupational profile.

anthropology – must maintain awareness for the diversity of its paradigms. These tenets will now be considered with respect to their level of empiricism:

LUHMANN & SCHORR ([1982] 2000) pointed out that concepts of educational practices and action knowledge relevant for the professional practice of teachers are faced, virtually inevitably, with a gap between theory and practice in the teaching profession. It is repeatedly emphasized in theoretical outlines that pedagogical practices, including teacher training, are complicated by the fact that available theoretical knowledge and professional action do not always go hand-in-hand. One should pay a closer look at this idea: quite a few scientific studies on the knowledge of teachers would seem to indicate that it is predominantly purpose-rational and explicit. It also barely exhibits references to scientific paradigms and methods.⁷ However, this is hardly plausible from a purely logical perspective. The gap between (scientifically) theoretical and practical pedagogy, i.e. between knowledge and skills, might not always be visible or noticeable in practice, but it must be bridged in manifold ways. This begins with addressing a student as a student and continues through the design of sensible educational long-term scenarios with many learners. If theory and practice in pedagogy would not be compatible, there simply would be no pedagogy.

At the same time, pedagogical action constantly requires decisions that go beyond regular knowledge and means-ends relationships. It can therefore be assumed that teachers possess many different forms of knowledge, in particular those suitable for the combination of pedagogical theories with practical action. The question is how these forms of knowledge are elicited or determined, and how they can be learned. Education is primarily dependent on the acceptance, understanding, and adoption or assimilation of knowledge by the person being educated. Education, according to Helmut HEID (1994, p. 59), is “[...] not a delimitable singular real phenomenon that is existent for itself, but at best a perspective on reality constituted through communicative and social acts and made subject in problem statements.”

While the pedagogical perspective’s aim towards the assumption of responsibility for the shaping of one’s own life, of others, and of the world, is abstract, it is also clearly defined in practice. These practices unfold in dependence on the specific conditions in the field, and thus only partially. Educational practices presuppose special knowledge about pedagogy and about the circumstances of

7 For example, a survey of teachers by TERHART et al. (1994) shows that, by their own admission, teachers rarely refer to the content of their own academic curricula or to scientific theories in the exercise of their profession, but almost exclusively to their own practical experience.

education. Correspondingly, the pedagogical forms of knowledge associated with pedagogical practices are diverse and difficult to generalize. Dieter LENZEN (1997, p. 15)⁸ writes on the awareness of pedagogy for the diversity of its own paradigms:

“It seems to me [...] that pedagogy [...] must be twofold: an interaction-logical science and a reflective science. What does that mean? I think that the model of technology-impact assessment is a good example of what the reflective educational sciences require: an assessment of the effects of pedagogy. In a period of dramatic differentiation in the educational and social sector, this must encompass both a reflective analysis of educational and social realities, as far as these are a result of pedagogically practical actions, as well as scientifically presented orientations for action. Countless examples could be employed to demonstrate which types of reflection may have prevented unintended implications of pedagogical or educational policies.”

In this (in Germany) frequently quoted text, the educational sciences are charged quite centrally with an awareness of the relativity of their own approaches and of their possible implications for fields of educational practice. This encompasses a consideration of the diversity of knowledge forms in the pedagogical fields.⁹ However, there is another school of thought that historically has been much stronger in Germany, one that emphasizes the gap between theory/scientific research and practice/action. Accordingly, the notion that the university stage of teacher education should only serve academic-disciplinary training was widespread in educational research for quite a long time. It was considered wrong to promote professionalization at this stage. This argumentation was supported by the signif-

8 In German: “Mir scheint [...], daß Erziehungswissenschaft [...] eine doppelte sein muß: Handlungswissenschaft und reflexive Wissenschaft. Was bedeutet das? – Ich denke, daß das Modell der Technikfolgenabschätzung ein gutes Beispiel für das gibt, was Reflexive Erziehungswissenschaft benötigt: Pädagogikfolgenabschätzung. Diese muß sich in Zeiten einer dramatischen Ausdifferenzierung des Erziehungs- und Sektors sowohl beziehen auf eine reflexive Analyse der erzieherischen und sozialen Wirklichkeit. Soweit dieses Resultat des pädagogisch-praktischen Handelns ist, als auch auf die wissenschaftlich vorgetragenen Handlungsorientierungen selbst. An zahllosen Beispielen ließe sich zeigen, welcher Typus von Reflexion möglicherweise geeignet gewesen wäre, Implikationen pädagogischer oder bildungspolitischer Maßnahmen zu verhindern, die eigentlich nicht beabsichtigt waren.”

9 Reflexivity with respect to scientific paradigms is particularly considered at Swedish universities as a central qualification objective for scientists, e.g. within the context of post-graduate programs. (HÖGSKOLEVERKET 2003, p. 21 and SVERIGES UNIVERSITETS-LÄRAREFÖRBUND 2005, p. 6 ff.)

icant differences between the scientific and the pedagogically practical fields of action (BREIDENSTEIN 2012, p. 42 ff.), as well as by theories on the sciences.

In contrast to pedagogically practical activity, scientific theories usually do not aim at providing rules applicable for acting in the field. The acquisition of scientific-reflective knowledge is understood (as opposed to knowledge in the school context) as eternally incomplete and critical; it is methodically reduced and simultaneously complex. Results, especially in the exact sciences, are often counterintuitive. Additionally, the acquisition of scientific-reflective knowledge is linked to a relief from practical decisions and compulsions to act. The text logics of scientific studies and their results are also only to a very limited extent compatible with the logic of pedagogical practices. At the universities, the intent to educate is neither tracked nor cultivated nor practiced, but, at best, researched.

Pedagogical actions, however, are undoubtedly always bound to normative objectives. Furthermore, a pedagogical relationship or situation, in contrast to a scientific research setting, does not simply exist or is produced: it always arises only situationally, it is used, maintained, and interrupted. Pedagogy not only deals with collectively shared norms, but also (often in a contradictory way) with detailed individual requirements, needs, and ideas. Pedagogically normative objectives are generated by the operating person as well as by various other instances: political provisos, socio-culturally determined requirements, environment, etc. (DEWE 1997, p. 221 ff.). It proves difficult to consider them all simultaneously in theory. In pedagogical practices, what can be expected from them is compared with practically generated normativity. Therefore, it can be assumed that coping with the complex challenges in the educational fields cannot be scientifically-empirically detected without complications (cf. KRAUS 2015).¹⁰ A preparation for professional practice based only on theoretical models is thus not self-evident.

10 Here, with recourse to Alwin DIEMER (1964), the noematic science concept is delimited from the noetic one. The noetic concept is considered an adequate response to the specific challenges of a science and practice-oriented teacher education. While noematic science is oriented toward hypotheses and results, noetic science considers the perspectivity of knowledge, as well as its dependence on various forms of knowledge forms and sizes, variable object constitutions, and diverse methodological approaches and thematic orientations. Supposedly valid results can be subverted and undermined, for example, by external, discursive, or other developments such as material or cultural contingency. According to the philosopher Herbert SCHNÄDELBACH (1983), a so-called “research science” is characterized by the fact that it continually tests uncertainty concerning the validity of its own premises. BACHELARD (1971) speaks of the “self-confidence of the sciences.” Forms of knowledge and types of rationality or knowledge formats come into effect by being referred to – verbally, materially – in any

At the same time, many empirical studies prove that the implementation of educational and socio-scientific theories in the practice of professional activity is indeed possible and well-established. For example, Bernd DEWE (1997) demonstrated that teachers-to-be apply certain theories to observations and experiences made in their school practice and also theoretically justify their own practical actions. This he did on the basis of practical reports and lesson plans created by students as part of their studies on teaching practice. The agreement between theory and practice is, as Bernd DEWE (1997, p. 227) explains, an integral moment of pedagogical practice. As already indicated, this study focuses on the modes of practically bridging this gap by referring to a rather simple argument: the gap between theory and practice seems to barely affect practice in the pedagogical field, and it seems to pose little irritation to the academic studies on pedagogy. One could thus develop the impression that, although frequently referred to, the gap is not perceived to even exist. It is covered, skipped, or bridged in various forms in the two professional profiles focused on pedagogy. However, if the gap would not exist (at least in principle), then that would mean that theories in the educational sciences would only marginally differ from practical pedagogical reflections. The differences that effectively exist between them could then be attributed to different work forms and conditions.

Such speculations are bold. Some of the differences between the two professions and their inherent reflexivity have already been emphasized above. The origin of these differences is, however, not the subject of argumentation here. Instead, it will be argued that the gap between pedagogical theory and practice does exist, but it is partially bridged by single actions or theories. That educators do apply theoretical knowledge to their practical experience shall not even be questioned. The professional reflectivity of teachers does transform the theories and results of the educational, cultural, and social sciences into the practice of professional action, and this is not disputed. The central question is how this can be conceived without simply masking the gap. Pedagogically practical actions can be justified with pedagogical theories. The allegation that theories in the educational and social sciences lack practical relevance cannot be proven empirically. Still, the theory-practice transfer definitely lacks sufficient research. This also applies to the

form. Something thus provides increasingly clearer testimony of a certain knowledge format as the way in which this knowledge was generated is increasingly recognizable within it (a vehicle that is screwed together, a manuscript that is revised, a bird's nest that is knitted). In its performativity-theoretical, phenomenological, and praxeological interpretation, such a genetic perspective of science is found to be particularly relevant for the elaboration of educational knowledge forms for teacher education.