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Beyond measurement: some crucial questions on research into the professional competences of teachers

If we think about teacher professionalism and try to explain all the things a teacher must be able to do, a cartoon springs to mind. It shows a teacher trying to juggle lots of different balls symbolizing curriculum, assessment, projects, pupils, headmaster, parents, new methods, school development, evaluation and so on. In other words: teachers are expected to manage many tasks in different social contexts in a professional manner, yet these situations are uncertain and can change quickly. That is the one side. The other side is the situation regarding research into teacher professionalism. If we look at the mainstream in international research, it becomes evident that there is a strong bias towards large-scale studies using questionnaires and focussing on the cognitive aspects of teaching and being a teacher. Bearing the above picture of the diverse tasks of teachers in mind, we have to question whether this kind of research reaches the core of teacher professionalism and the requirements of the teacher education community. Consequently, our guiding question in this paper is: Which kind of research is necessary to capture the specificity of teacher competences?

To answer this question, we will first take a look at what is meant by the concept of a 'profession' and then, presuming that teaching *is* a profession, try to critically analyse the current research discourse on teacher competences with its underlying assumptions. Finally, we will look at the blind spots produced in competence research and make some suggestions on how to cope with them.

1. Teaching as a profession

"The idea of a 'profession'," writes Lee S. Shulman in a 1998 article in which he tries to clarify what is usually meant by a profession, "describes a special set of circumstances for deep understanding, complex practice, ethical conduct, and higher-order learning, circumstances that define the complexity of the enterprise and explain the difficulties of prescribing both policies and curriculum in this area." (Shulman 1998/2004: 529) He then goes on to identify the following six characteristics of a profession:

"[T]he obligation of *service* to others, as in a 'calling'; *understanding* of a scholarly or theoretical kind; a domain of skilled performance or *practice*; the exercise of *judgment* under conditions of unavoidable uncertainty; the need for learning from experience as theory and practice interact; and a professional *community* to monitor quality and aggregate knowledge." (ibid.: 530)

Accordingly, the role of professions in society is not simply to control expert knowledge – as is assumed in some accounts of professionalism – but has to be understood as the "organized practice of complex knowledge and skills in the service of others." (ibid.: 530) However, profession is "not 'objectively' definable precisely because of its power and importance in our culture," as Andrew Abbott (1988: 318) points out. According to Abbott, the crucial question in connection with professions is "how societies structure expertise." (ibid.: 323) "As I have repeatedly argued, "Abbott continues, "expertise is also institutionalized in commodities and organizations. To ask why societies incorporate their knowledge in professions is thus not only to ask why societies have specialized, life-time experts, but also why they place expertise in people rather than things or rules." (ibid.)

While Abbott's answer to this question is a systemic one – he argues that we have professions because our market-governed societies prefer personally held resources, whether of knowledge or wealth, to any other type of institutionalization (Abbott 1988: 324f.) – we ourselves would rather draw attention to the complex challenges of professionalism which cannot be met by any set of rules or any type of institution, but instead can only be safely dealt with by the complex capacities of individuals (also see Schrittesser 2011: 95ff.).

A core function that seems to be irreplaceable in any type of society is usually seen to lie in successfully dealing with real or potential crises in highly sensitive areas of that society or culture – such as the legal and the medical systems. Today, in the so-called knowledge society, the education system must also be regarded as such a highly sensitive area when it comes to safeguarding social cohesion and development.

Against this background, professions have a mediating task between collective and individual interests and, as this task is case-oriented, it cannot be easily institutionalized. Teachers, for example, are expected to teach the young in order to make them valuable members of society. At the same time, they should also make sure that each child is perceived as an individual with his or her particular interests and talents. So, while trying to meet collective demands, teachers are also expected to respect the individual student in his or her own right. This task requires not only an official licence, but also special competences – as pointed out in the above Shulman quote. Therefore, along with higher-order learning, each professional also has to acquire domain-specific expertise. The mediating task also asks for a dual commitment to both society as a whole and to the individual client the professional usually has to take care of – be it in a medical, legal or education context (Oevermann 1996). This case orientation again not only demands knowledge and expertise, it also implies a creative and intuitive dimension.

As an example, one of the most frequently named domains of professional competence is reflexivity, which is now almost a leitmotif in the debate on professionalism. From the point of view of the individual, this domain refers to the ability to pay critical attention to one's experiences in order to learn from them (Schön 1983). Yet it also asks for the rule-governed and systematic analysis of one's actions from different points of view (theory, methodology, one' own biography) in order to develop alternative strategies. To accomplish all this, routines and structures are needed which offer a basis for action. At the same time, the creative and intuitive dimensions of knowledge and action constantly redefine these structures, especially when it comes to balancing individual claims and particularities with general preconditions – such as, for example, those which have to be considered in the legal system or in compulsory education.

As a first conclusion, the focus of this concept of professionalism lies on its dynamic and *dialectic* structure and on its quality of drawing both on cognitive as well as on creative and *intuitive* dispositions.

2. Accounts of teacher professionalism: a description of the current situation

The present discourse on teacher professionalism is neither uniform nor consistent. There are differences *between* countries, especially Germany, Austria and Switzerland on the one hand and the English-speaking countries on the other, as well as controversial discussions *within* countries.

In the current *German* discussion, two positions can be contrasted:

Firstly, there are the national research projects on teacher competences which emphasise the idea of being able to measure these competences (e.g. Zlatkin-Troitschanskaia et al. 2009). These are large-scale projects mostly commissioned by the OECD, such as the COACTIV

study (focus on teacher skills in cognitive-orientated teaching) or the TEDS studies (e.g. TEDS-M: Teacher Education and Development Study in Mathematics, TEDS-LT: Teacher Education and Development Study – Learning to Teach). The projects also have an international element so that data can be compared (e.g. TEDS-LT).

Secondly, an increasing number of critical voices are emerging (e.g. Casale et al. 2010). There is the criticism that a new paradigm has been established as a new leading discipline with a focus on psychology-orientated research, whereas education-orientated research has been driven back. Signs of this change are new curricula for teacher education and the tendency to stress quantitative research, the idea behind which is that effects and outcomes of teacher education and teaching should be measured.

If we assume that certain competences – such as reflexivity – represent complex constructs with a tendency towards a "normative overhang" (Klieme & Hartig 2007: 21), we also have to consider their measurability from this perspective. Education theory criticism of the wide range of practices currently used to measure competences picks up on exactly this point and emphasises that from an education theory standpoint any attempt to measure competences must inevitably constitute a reduction. In a pertinent article on competence concepts and their applicability in measuring competences, Eckhard Klieme and Johannes Hartig (2007) admit that any attempt at measurement is by necessity a concretion. They also note that the individual specificities of competences have to be determined clearly and empirically if competences are to serve as an empirical research object. Since competences are complex dispositions, a single observation (as in large-scale tests) does not suffice as evidence of a specific individual competence. Indeed, competences can only be gauged on a range of separate observations in different tasks and situations (Klieme & Hartig 2007: 21). According to Klieme and Hartig (ibid.), only a consistent compendium of separate observations can permit conclusions to be drawn about individual competences. Without such a measurement, any findings will at best be simply "casuistic interpretations of behaviour [...] not a systematic attribution of specific competences." The respective competence must first be defined adequately and specifically in a two-step process. A first step serves to define the relevant situations for the specific competence, which are in turn used to determine how it will be measured. A second step is then used to deduce what constitutes competent behaviour and to define which actions are to be seen as an indication of competence (ibid.). The more complex the characteristics, the harder this process becomes (Klieme & Hartig 2007: 25).

If we follow these guidelines, we find ourselves facing a dilemma when it comes to measuring *professional* competences. On the one hand, we are told that concise measurement is a prerequisite for properly presenting competences in all their different variations. This, however, requires a precise definition of these competences. Yet on the other hand, competences are seen as complex action contexts, which can hardly be defined precisely. The more complex the context (as Klieme and Hartig admit), the harder it is to measure. As a solution to this dilemma, several approaches to measuring competences suggest reducing competences (e.g. to cognitive aspects). However, in the case of professional competences, a reduction of this nature would fail to heed the basic concept of professionalism, which – as shown above – precisely reflects the interweaving of the multi-layered aspects in such an action context. Extracting the cognitive aspects because they are easier to measure would, for example, result in an unacceptable distortion of the theoretical framework, since it would exclude relevant aspects – like the creative, reflective and intuitive components of professional action – from the resulting grid (Schrittesser 2011: 114).

Similar conclusions are reached by the authors of a study examining the development of professional competences of student teachers who had completed an extended work placement (Dieck et al. 2010: 100). In this study, Dieck et al. use a combination of quantitative and qualitative methods to measure competence development. In their

conclusions to the initial study, they note that the quantitative methods had proved *less suitable* for measuring the development of the student teachers' competences during their sandwich year and concluded that suitable methods of standardising and measuring the development of teaching competences on a large scale "still have to be developed" (Dieck et al.: 108).

A feasibility study commissioned by the European Union on the measurement of professional competences also reports the difficulties involved in such an undertaking. Indeed, it would appear there is great demand for empirical evidence regarding the development of competences in vocational education and training (VET) in a broader, i.e. not exclusively educator, context. The European Union is currently pursuing such a goal in its efforts to initiate a so-called PISA-VET. The corresponding feasibility study concluded that while carrying out a large-scale international comparison of the performance of VET systems was difficult, it was nonetheless quite feasible from a research perspective (Baethge et al. 2006: 126). However, as far as a PISA-VET is concerned, there is currently neither consensus on the definition of the term 'competences' nor agreement on how to define and measure them (ibid.: 16). Since it is to be expected that competence measurement will also play an increasing role in VET in the future, the development of adequate concepts for doing so will be a challenging matter, as they will not only have to meet methodological quality criteria, but also have to produce an appropriate return on investment (Edelmann & Tippelt 2007: 143).

In other words, while scientifically legitimate competence measurement is possible in principle, methods which accommodate the complex dimensions of competences have yet to be developed. The construction of such measurements currently faces the dilemma that when the object to be measured reaches a certain level of complexity, it can then no longer be measured in its entirety. Consequently, the object to be measured has to be defined more closely – and thereby reduced – to make it measurable. While in many cases this reduction is presented in the subsequent analysis as a limitation to the findings and insights, the analysis nonetheless generally gives the *impression* of being able to draw conclusions for the *complete* object.

We would like to offer two examples to illustrate this particular dilemma.

Example 1

The first example involves a research project by Johannes König, Rainer Peek and Sigrid Blömeke, which sought to examine the opportunities for quality assurance in teacher education and develop an instrument to measure the pedagogical knowledge of student teachers (König, Peek & Blömeke 2010). To better illustrate our argument, we would like to provide a brief outline of this project, beginning with the authors' own description of their intentions:

"The long-term, global goals of this fundamental change [i.e. the increasing focus on standards and competences as an expression of the extension to the traditional input through output focus, IS] include the development and securing of high-quality teacher education which generates qualified, competent teachers and makes a substantial contribution to increasing the quality of schools and teaching." (ibid.: 73; translation IS) To ensure teacher education satisfies these demands, "suitable modelling and measurement methods are required to verify the goals empirically and thus provide differentiated insight into learning and education processes and the effects and characteristics of education programmes" (ibid.: 74). In this context, the project's contribution can be seen to lie in the identification of the subject-independent pedagogical knowledge of prospective teachers.

Based on this intention, and in line with findings from education research, the project team defined five contextual requirement areas which they considered decisive for professional

teacher action: structuring of lessons, motivation, approach to heterogeneity, class leadership and performance assessment (ibid.: 75). These areas were determined by analysing pertinent documents, such as the education sciences curriculum, examination regulations, etc. Parallel to this, three cognitive dimensions – remembering, understanding/analysing and creating – were identified based on Bloom's extended taxonomy of cognitive processes (Anderson & Krathwohl 2001) and combined with the contextual requirements in a test matrix. One test question concerning performance assessment, for example, asks participants to name the quality criteria required when a "diagnostic assessment should be fair and exact" (König, Peek & Blömeke 2010: 77). The three quality criteria (objectivity, reliability and validity) are included in a multiple choice questionnaire; the corresponding cognitive process being tested in this case is "remembering". Another test question asks about phase model approaches to lessons and the function of the phases. In this case, the answer should take the form of a narrative. The cognitive processes examined in this question are "remembering" (listing the phase models) and "understanding/analysing" (naming the function of each phase). The survey was carried out on students with different teaching goals – primary, middle, comprehensive, special needs and grammar schools – at different stages in their degree, in order to identify their respective growth in knowledge and examine whether the various groups of students differ in the way they assimilate pedagogical knowledge. The results of the study confirm the initial hypothesis that differences in pedagogical knowledge do exist, above all between prospective grammar school teachers and other student teacher groups. The study also shows that all students expand their pedagogical knowledge over the course of their degree, with the exception of prospective grammar school teachers, whose pedagogical knowledge is under-determined at the start of the degree and more or less stagnates throughout the duration of the course. These findings may be interesting in some respects, but only bear a loose relevance to the original intention of the study, namely to identify whether teacher education and training makes a substantial contribution to increasing the quality of schools and teaching (ibid.: 73). In their conclusions, the authors refer to the "limits of the selected method" and note that the "pedagogical knowledge measured in this study is only one example of the cross-disciplinary content of university level teacher education" (ibid.: 82). They also describe the limitations of the method, in particular the fact that the measuring of acquired pedagogical knowledge does not permit any conclusions to be drawn on the competences of prospective teachers and, consequently, on the *contribution to the quality of schools and teaching* (ibid.).

Yet it is precisely this sensitive, decisive area in school and teaching quality that should be secured through good education programmes – and measuring the extent to which this is achieved is one of the stated intentions (at least in the introduction to this study). Although profession and professionalism research has long discounted the notion that knowledge translates directly into competent action, this study indirectly assumes that cross-disciplinary pedagogical knowledge is directly linked to school and teaching quality. No indication is given of the actual form this relationship might take. Ultimately, we have to query the benefits of such an elaborate study and its results, if they do not actually get a firm grip on the matter in question.

The approach adopted in this study illustrates how measurement procedures repeatedly adopt a pragmatic line.[1] Even when the research interest lies elsewhere (in this case the effects of teacher education and pedagogic education in particular), test designs ultimately resort to reduced areas which can be measured in a relatively solid manner.

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[1] The authors would like to note that this question is being addressed in expanded and detailed form in the current "Longitudinal Measurement of the Pedagogic Competences of Student Teachers (LEK)" project sponsored by the German Research Foundation (DFG).

Example 2

The second example concerns the measurability of the ability to reflect – a core element in education professionalism. How can a "range of individual observations of different tasks in different situations" (Klieme & Hartig 2007: 24; translation IS) produce a consistent summary of the characteristics of reflexivity or its associated apparent competence without going down the same path as the previous example and not getting to the crux of the matter? Robert Kreitz takes an enlightening position on this issue in his critical analysis of the validity of the PISA tests. He begins by trying to show that, in many respects, the PISA tasks also represent a reduction in competence measurement similar to the above example. He subsequently notes that to determine which competences schoolchildren have – and don't have – we have to observe, document and analyse how they cope with the tasks they are set. You have to "do in standardised form what teachers would do in favourable circumstances during a lesson: observe and understand how their pupils are tackling the tasks they have been set" (Kreitz 2007: 132; translation IS). What is interesting here in our respect is the demand for a standardised method that does not reduce the complexity of the subject matter – a line of attack that is also one of the intentions behind our own approach and concept. However, one claim pursued by PISA and similar tests remains unfulfilled: carrying out the large-scale observations referred to by Kreitz would be disproportionately more complex than the PISA tests themselves, and they are already extremely complex.

In an article addressing the measurability of reflexivity, Andreas Poenitsch argues in a fashion that builds on the position taken by Kreitz. Poenitsch argues that reflexivity can primarily be seen in the use of language or, more precisely, in the formulations a person uses (Poenitsch 2004: 452). In the empirical study of reflexivity, one could therefore assume that the aim was to examine "how and what someone says and does, how they formulate what they say and who they present themselves as" (ibid.; translation IS). According to Poenitsch, reflexivity can be equated to "an autonomy towards the many human labels influenced, for instance, by 'emotion and passion' or 'tradition and convention'" (ibid.: 542; translation IS). Reflexivity in this sense has something to do with the "ability to abstract, create and tolerate distinctions and differences, as well as the ability to relate something specific to something more general" (ibid.; translation IS). When actually measuring reflexivity, one could determine, for example, "how often someone uses formulations that can be classed as expressions of reflexivity in line with predefined linguistic and grammatical syntactic and semantic criteria" (p. 453; translation IS). The level of objective rather than traditional, conventional or emotional deliberations could also be measured using the concrete formulations a person uses (ibid.). These deliberations open up a viable path towards measuring capacity for reflection *and* its related discourse. We try to follow this path with the intention that the exploration of the field will not only reveal (or not reveal) the diverse forms of articulation used, but will also open up new options for further concretion and operationalization of any domain-specific competence not revealed by conceptual means.

This approach means that the characteristics of, for example, reflexivity are supposed to show in professional practice in various perspectives and allow us to look for and detach the resulting evidence of this competence.

Indeed, this is how the analysis of statements by teachers on their own professional actions in response to the matter of "how and what someone says and does and who they present themselves as" (see above) should be understood. The use of this kind of multi-perspective – and extendible – method is designed to approach the issue from an initial linguistic-hermeneutic perspective, in order to ultimately – regardless of the difficulties and open issues that may arise – successfully design and obtain an increasingly more precise record of manifold individual observations in the Klieme and Hartig (2007: 24) "consistent compendium" sense and thus achieve a "thick description" which provides us with insights

into the structures of meaning of the phenomena studied (Geertz 1983). This also brings us closer to capturing the range of professional activity via many routes encircling the respective phenomena.

3. Conclusions and an alternative example

Two desiderata can be derived from the examples above. One is to show that meaningful designs for the measuring of more complex competences have not yet been found. The dialectic and dynamic structure of professional activity in particular is not captured by the test methods applied so far. The other desideratum to which we would like to draw attention is the reduced concept of knowledge that underlies most of the evidence-based research activities on teacher competences.

One of the main characteristics of the work of teachers is uncertainty (see the Shulman quote above). Teaching has an *interactive* structure, and teachers depend on pupils, their motivation and capability to follow a lesson, as well as the social situation in which the teaching takes place. Neither the behavior of pupils nor the social situation can be planned in detail. There is no guarantee for success, neither for the results nor for the process of learning. Therefore teaching cannot be standardised, but is characterised by *dual uncertainty* (Rabe-Kleberg 1996, Baumert & Kunter 2011: 30).

The question we would then like to raise is: if *uncertainty* is a core feature of teaching, how do teachers cope with insecurity in a classroom context? Coping with uncertain situations requires *practical* knowledge (Schön 1983). This kind of knowledge is experience-based and becomes evident *in actu*, i.e. in the enacting process. It is "tacit knowledge", situated in the body, and usually remains implicit, although it can in principle be articulated. "What actors are 'able to say' about their activities is by no means all that they 'know' about them. Practical knowledge refers to tacit knowledge that is skilfully employed in the enactment of courses of conduct, but which the actor is not able to formulate discursively" (Giddens 1982: 31).

By way of evidence, we would like to give an example from our own research with teachers. The teacher in the following interview, Susanne, tries very hard to find words to explain crucial reference points in her work with pupils. She starts out in correct German, but then resorts to a rather heavy regional dialect, which is however, not fully evident in the translation (Paseka 2011: 151).

> Interviewer: What do you actually base your behaviour as a teacher on?
>
> Susanne: *Hm, on my personality. Yep. I don't want to put on an act.*
>
> Interviewer: Well, yes, but surely that is a very subjective term?
>
> Susanne: *Behaviour you mean I suppose. [...]. Em,[short pause] hm, yep, I try to determine, when I explain something to the children, I look at them and I know if they are understanding something or not. That would be on a teaching or subject level. On a personal level, you just get a certain sense of how people react, what each person needs.*
>
> Interviewer: So it's a kind of feeling. How do you recognise it?
>
> Susanne: *You just do. I think you've either got that certain feeling for people or you haven't [short pause]. I mean in my case it is so, I am a very sensitive person and I just sense a lot. You, yep, [short pause], yep, you just sense it.*

Interviewer: How does this show itself?

Susanne: *Hm [laughs], if you ask me, you can't really describe it. It's just, just things [short pause], like I said, it's like when you're standing somewhere and get the feeling someone's looking at you from behind, and you get the feeling someone's watching you, so you turn around and there it is. These things are untangible [sic!]. You just simply feel them.*

So what actually happens in a *concrete* situation? What does Susanne base her actions on in very complex situations? She has no actual rules to hand, but her "eye for the situation" helps her. She doesn't think, she looks (Wittgenstein, cited in Combe & Kolbe 2004: 845). Susanne watches her pupils and then just knows "if they are understanding something or not". She simply has this knowledge, even if she can't explain where it comes from. She refers to her sense of intuition, her own feelings, and the fact that she considers herself to be a "sensitive person". She cannot say what is precisely going on in the knowledge generation process in this situation, because she cannot put it into actual words. She notes that "these things are untangible" [sic!], in other words, they are things that can only be sensed or felt. By listening to and giving recourse to her own feelings, she immediately finds the orientation she needs in the actual situation. She does not think such an ability can be learned, but instead suggests that "you've either got that certain feeling for people or you haven't".

Similar depictions are also found in other interviews. Looking carefully at what is going on is clearly a central aspect. It is not only what the children say that seems to be important, but their looks and their gestures. People use the responses in their own bodies – their gut reactions and intuition – as additional "senses" when working with others. Empathetic understanding allows teachers to recognise whether pupils are concentrating, whether they are having fun, or whether they have understood something. The signals given by these pupils or the people present in a concrete situation have to be "read" correctly to ensure this ability to act is maintained and allow the "reader" to make decisions. Our bodies and feelings become mediums which facilitate the concrete execution of pedagogic intentions, guidelines or (school-related) organisational action. They help people to make decisions in a flash at a specific moment, in situations of uncertainty or when doing so is unavoidable (Oevermann 1996: 82). Intuition, love and affection are described as necessary prerequisites for creating this empathy and being able to correctly decode the messages sent.

To grasp this type of knowledge, we need to return to the selected interview passage and take a closer look at the use of language, the formulations and words used by Susanne (see Poenitsch 2004: 452). Some divisions can be recognised. Susanne uses a regional dialect, but tries for long stretches to speak standard German. Yet she does not succeed in doing so all the time. Whenever she departs from a cognitive level of explanation for her actions and tries to put her feelings into words, she lapses into her home dialect.

This language division indicates two levels of consciousness: discursive and practical consciousness. Discursive consciousness refers to forms of recall which can be put into words. Practical consciousness refers to those forms of recall which are available through experience without the actors being able to precisely say what it is that they actually "know". "Between discursive and practical consciousness there is no bar; there are only the differences between what can be said and what is characteristically simply done" (Giddens 1984/2009: 7). Practical knowledge is thus incorporated knowledge, which shows itself in actions. It is also tacit (or silent) knowledge, because it virtually cannot be expressed in words. This "tacit-knowledge-in-action", "which does not stem from a prior intellectual operation" (Schön 1983: 51), is used spontaneously. "There are actions, recognitions, and judgments which we know how to carry out spontaneously; we do not have to think about them prior to or during their

performance. We simply find ourselves doing them." (ibid.: 54) The actors are not aware of ever having acquired such knowledge. So they do not reflect on it – at least in the action itself. However, this knowledge is the prerequisite and means of action in situations of uncertainty or when quick decisions are required. In contrast, discursive or declarative knowledge would appear to be of no relevance in concrete action – it remains inert. This means that teachers have to rely on themselves, their own feelings and their own bodies. These steer behaviour "in the act", while structure-giving rules and resources elude conscious perception and form blind spots in the depictions.

4. Some final remarks

On the basis of three examples given above, we have tried to demonstrate the pitfalls which might occur when trying to capture the knowledge and competences of teachers in their full complexity. Our considerations reveal some desiderata, which proved to be a consequence of the applied research methods. Quantitative designs usually fail to capture all the dimensions involved in professional competences and tend to reduce them to cognitive and formal aspects. Qualitative designs, in turn, are more appropriate for in-depth evidence of professional behaviour, but usually lack the potential to cover large case numbers.

As pointed out, the current debate on teacher competences is primarily based on large-scale assessment tests. While capturing cognitive elements of teacher professionalism, they can scarcely grasp emotions, and they cannot reconstruct some of the central aspects of teaching practice, namely the dialectics of emerging emotions and coping processes. Therefore, in our view, more intricate methodological designs will be necessary in order to reconstruct the professional competences of teachers in their full complexity. We need a wider lens of inquiry, which will help us to focus on further aspects of teaching and to grasp the creative moment in situations of uncertainty.

There are a number of potential options available. One would be to work with case vignettes (written or visual), which allow dilemma interviews with teachers or associative thoughts. The data could then be analysed in a more quantitative manner (Oser & Heinzer 2009, Voss & Kunter 2011) or by qualitative methods like "objective hermeneutics" or the "documentary method" (see example in Paseka 2011). Another option would be to resort to a more extensive use of multimethod research, and to cooperate more in the research communities and across methodological borders and beliefs by using all kinds of (meaningful!) combinations of qualitative with quantitative approaches in data collection as well as in data analysis. Indeed, as we have tried to show: complex research objects demand elaborate research designs to best answer the given research questions.

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