Eva Müller-Hill und Jessica Feiertag

Multiperspective Expert Workshops as a Framework for In-Service Teacher Trainings

Abstract. In the following article, we will sketch the theoretical foundations and give a general description of the multiperspective expert workshop (MEW) concept as a framework for in-service teacher trainings. We will specify the concept in the context of a mentorship qualification programme for teachers, which constitutes a particularly interesting case for the MEW framework due to the 'double orientation' that is required from teachers participating in the training. This means that in-service teachers act as critical professionals who reflect on their own teaching practice and expertise, in addition to being mentors for pre-service teachers, and thus in charge of enabling their mentees to learn from that practice and expertise. In this paper, we moreover present first results from a pilot workshop conducted as part of the mentorship qualification programme, and draw preliminary conclusions from these results.

Keywords. teacher training, teacher as expert, multiperspective expert workshop, mentoring

Multiperspektivische Expertenworkshops als ein Rahmungsformat für berufsbegleitende Lehrerweiterbildungen

Zusammenfassung. Dieser Beitrag skizziert die theoretische Basis und liefert eine allgemeine Beschreibung der Multiperspektivischen Expertenworkshops als Rahmungsformat für die berufsbegleitende Lehrer:innenweiterbildung. Die Konzeption wird am Beispiel einer Mentor:innenqualifizierungsmaßnahme konkretisiert, was insbesondere mit Blick auf die geforderte „doppelte Orientierung" der teilnehmenden Lehrpersonen von Interesse ist: Zum einen reflektieren sie ihre eigene berufliche Praxis und Expertise kritisch, zum anderen lernen sie sich als Mentor:innen für Lehramtsstudierende zu verstehen, deren

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berufliche Praxis und Expertise gerade als Vorbild für die Mentees dienen soll. Der Beitrag umfasst Ergebnisse eines Pilotworkshops im Rahmen der Mentor:innenqualifizierung und bietet erste Schlussfolgerungen aus diesen Ergebnissen mit Blick auf das Rahmungsformat an.

Schlüsselwörter. Fort- und Weiterbildung von Lehrkräften, Lehrer als Experte, multiperspektivischer Expertenworkshop, Mentoring

1 Introduction

Several studies identify obstacles to an effective professional development of in-service teachers. Besides organisational or logistical obstacles, e.g., lack of time, there is an important type of obstacles that concern the personal commitment of teachers:

> The development of a personal commitment turned out to be important factor [sic] in the growth process continuing over difficult periods of uncertainty due to conflicting values and practices. Committed teachers were able to tolerate these ambiguities and to carry on, thus resisting the tendency to return to familiar practices or to withdraw from active participation. (Järvinen et al. 1995, p. 131)

In the context of teacher trainings, which pose one possibility of learning activities for in-service teachers, there are two obstacles that can be subsumed under the category of personal commitment. First, in-service teachers' feeling that their own teaching expertise will not be taken seriously enough; second, a low impact estimation regarding their individual teaching practice (cf., e. g., Guskey 2002; Jäger and Bodensohn 2007). Hence, important strategies for designing effective in-service teacher trainings are: taking into account each participant's practical knowledge, experiences and perspective, paying attention to individual situational constraints and teaching practices, and giving participating teachers the chance to construct operative knowledge in order to develop their teaching practice effectively and sustainably.

Our article is now organized as follows: In section 2, we focus on key conditions for strengthening the commitment of participant teachers. In section 3, we briefly explicate the theoretical foundations and provide a general description of multiperspective expert workshops (MEW). We show in how far this particular framework for in-service teacher trainings takes the teachers' self-image as

experts as a starting point, which is identified as a key condition for engaging participant teachers in section 2. We illustrate the concept for the workshop in the context of a mentorship qualification programme for teachers in section 4, and present first results from a pilot workshop carried out by the authors of this paper at the University of Rostock in the winter term 2017/18. The article finishes in section 5 with two spotlight observations from the pilot phase that indicate issues for further development.

2 Key Conditions for Individual Professionalization through In-Service Teacher Trainings as a Motivation for the MEW-Design

Besides a balanced relation between und reasonable interplay of theory and practice, Day (1999) addresses teachers' expectations concerning in-service teacher trainings. In this regard, we highlight three important needs that the trainings have to meet as a condition for the success of individual professionalization:

(1) Content needs: increasing knowledge/awareness, reinforcing and reassuring current thinking while also encouraging participants to see issues from different perspectives.
(2) Utilization needs: providing direct curriculum development benefits and applicability to classroom practice.
(3) Process needs: presenting a balance of activities which are well-structured and involve working with colleagues and sharing experience. (Day 1999, p. 147–148)

As we will argue, interview data from an explorative qualitative interview study that was conducted by the second author with participants (n = 4) from the pilot workshop in 2017/18, indicates that another determining factor for individual professionalization processes in teacher trainings may be a teacher's self-image as an expert. In line with this, we take the following requirement as an additional key condition for successful professionalization within and through in-service teacher trainings:

Explicating and considering the self-image of participant teachers as experts through
- situatedness,
- reflectiveness,
- discursiveness.

We elaborate these points in the following. In particular, we use concrete quotations from the interviews to illustrate different aspects about the self-image of the teachers as experts (unless stated otherwise, the word 'expert' is used here in a pre-theoretical, everyday way of speaking). The quotations are taken from interviews with in-service mathematics teachers in secondary education (at three different 'Gymnasium'-level schools in Mecklenburg-Vorpommern), including both male and female teachers ranging from less than 5 years to more than 30 years in service. In the following, we will use the abbreviations T2, T3 and T4 to refer to three teachers whose statements are quoted here as representative of the larger group. One aspect confirmed by the data is that teachers appear to be keenly aware of content needs, utilization needs, and process needs in the sense of Day (1999). This emphasizes a point already made, e.g., by Rösken (2009) as a key condition for successful teacher trainings: "Once more, the emphasis is on honoring the potential of teachers since they are the experts for their specific learning" (p. 72). As the interviews show, teachers L2 and L3 feel strongly about contents that they conceive as valuable and relevant to satisfy these needs:[1]

> L2: Lately, I realized that it is possible to draw 3D in GeoGebra. […] And I had no idea how that works. And so we supposed to have a professional training on that. And we really had that training, because for teaching – it's a great program, it gets quickly installed, and it is helpful to foster student's imagination.
> L3: Often, teacher trainings are offered rather sparsely, and do not really relate to the topics we have to teach in class. We would like to employ an expert teacher trainer exclusively for our mathematics teachers […].
> L3: There are trainings where I would say "I picked up a lot". And there are trainings where I say: "Okay, this was in a way interesting, but I already forgot about it." Depends on whether I actually needed the topic, or whether it was just some general issue.

In the same way, L3 seems to consider herself as an expert for "normal classroom practice" and "standard teaching contents":

> I(nterviewer): Are there professional trainings that you would judge as being superfluous?
> L3: Yes, those which start from zero. You should always assume that colleagues already have some basic knowledge. And there are those [trainings] which focus too much on theory. When they do not relate to practice. […]

1 The quotes are literal transcriptions from spoken German. To avoid too much bias, they have been translated more or less word by word into English.

> And those which do not relate to school. So (.) I don't need a training on, say, functions or something. This is school stuff, actually it's already there.

In particular, these quotations are in accordance with some facets of what we know well from studies from other fields of expertise, such as clinical nursing practice (cf., e. g., Benner 1984; Daley 1999), which similarly contrast *expert learning* with *novice learning*:

> Experts solidly grounded their learning in the needs of their clients and the context of their practice. Experts indicated that they "had a blueprint in their mind" of what their client needed and would make sure they had the information needed to meet those needs. Experts also indicated that they would actively learn new information because "that is what I need to know to work here". Experts viewed formal learning opportunities as "background material" and felt that it was "being in the practice that mattered". […] Experts indicated that they would go "searching themselves" for what they needed to learn. (Daley 1999, p. 140)

However, other interview passages give hints that the self-image and learning processes of teachers differ from, or are at least ambiguous with respect to, expert learning as conceptualized, e. g., by Daley (1999): L2 and L4 appear to be rather passive in the sense that they would like to "consume" information and hints (such as a selection of good introductions and motivations for students [L4]) and "get instructed how to apply them in class" (L2).

> L2: I would really like to hear something about these issues more often. I would like to receive more direct instruction on how one can apply this properly in class.
> I: What are the issues a teacher training should deal with to draw your interest?
> L4: Mhhh finding new approaches, different access for students. […] some nice introductions, some good approaches to motivation.

L3's report points to a similar direction: in the sense that it is one thing to pick up content and hints during a training unit, but another thing to decide later, during teaching practice, if and how these can be used or not.

L3: "Sometimes […] so, I had this training for difficult students to deal with – ehm – this was an interesting training, but I really cannot implement this in my own teaching. "

In contrast to these findings, according to the analysis of Daley (1999) expert learning processes are, usually characterised by a highly self-dependent, "very active role [of the professional] in seeking out the information she needed" (p. 140), where progression is made through active knowledge construction by the learning individual via dialogue and sharing:

> [Experts] primarily learned through a process of dialogue and sharing, going to "the person with the best information" […] and then they would "toss around ideas" or "listen to what that person knew". […] Experts describes their learning as similar to constructivist learning processes, demonstrating an active creation of their own knowledge base by seeking out and assimilating information into their current knowledge base. This process then changed the character and meaning of both the new information and the previous experience because the expert would derive a deeper level of meaning and understanding in the process. […] [E]xperts indicated that they felt a great responsibility to learn so that they could share information with colleagues. […] [They] learned so that they could share and at the same time learned within the process of sharing. (Ibid., p. 140–142)

We adhere to the approach that fostering successful individual professionalization processes and the development of individual teaching practices through teacher trainings means to design such trainings with respect to concepts of active and self-responsible expert learning as described above. Also Rösken (2009) points out (with reference to Krainer 1996) that in-service teacher trainings that are designed as a learning opportunity in the spirit of passive novice learning run a higher risk of failing:

> [R]ather traditional in-service approaches, which are based on bringing outside knowledge to the teachers, not at least fail due to the increasing demands on schools and teaching. In order to deal with the complexity, more attention should be given to the internal knowledge already existing, that is, teachers' competencies and strengths. (Rösken 2009, p. 72)

Empirically grounded concepts of "learning experts" from other fields of expertise (e. g., Daley 1999, as sketched above), or theoretical concepts of "teachers as experts" in the sense of Bromme (1992, 2014; see also sect. 3 below) are fruitful and well-established reference points to this end. However, we argue that these concepts have to be complemented by the actual self-image of (the participating) teachers as experts, and that teacher training designs should take these different expert concepts into account in order to foster personal commitment among the participating teachers. A properly designed teacher training in this sense

will make participant teachers experience different understandings, scopes and limitations of what it can mean to be an expert and to be treated as such within training units, which, in turn, is intended to stimulate among the participants a subjective reflection and discursive negotiation of expert roles and professionalization. This should be particularly fruitful regarding training units for a mentorship program to guide pre-service teachers' internships at school (see section 4). While becoming professional mentors for trainee teachers, in-service teachers have to deal with a double orientation regarding their own professionalization: first, as critical professionals who reflect on their own teaching practice and professional expertise, and, second, as mentors in charge of enabling their mentees to learn from that practice and expertise.

Our approach attempts to incorporate such a design into the already existing concept of so-called expert workshops. These are modified by means of an iterative alternation of situational and reflective elements. We describe the conceptual background of the design of these elements, as well as the general structure of our resulting MEW-framework in the following section 3. In section 4, we concretize these elements and their implementation, including aspects such as scheduling and working material, using the example of the two pilot MEW conducted by the authors of this paper on the generation and use of mathematical concepts in the school classroom. The MEW was part of a modularized teacher training on pre-service teachers' apprenticeship mentoring at the University of Rostock within the framework of the project "LEHREN in M-V – LEHRer*innenbildung reformierEN" ("Reforming Teacher Education in Mecklenburg-Vorpommern").

3 Conceptual and Structural Basics of the MEW Framework

The so-called expert workshop is a well-established format in vocational training and curriculum development (see, e. g., Bader 1995, 2003; Collum 1999; Kleiner et al. 2002; Norton 1997; Reinhold et al. 2003). In the following, we will provide some information about the key concepts that our multiperspective expert workshop variant is based on, and how we adapted them in our approach.

3.1 Conceptual Basis, Aims and Products of the MEWs

A crucial concept we adopt for our workshop format is that of 'teachers as experts' (Bromme 1992, 2014). According to Bromme, a teacher is an expert if her in-service working experience amounts to sufficient knowledge and proficiency to contribute to her students' learning and to maintain her student's interest and

motivation (for more details, see ibid.; Besser 2014; Baumert and Kunter 2006). We agree with Bromme's demand for enhancing the status of practical knowledge and skills in relation to theoretical knowledge in workshops, but in the sense of reflecting actual practice and practical knowledge (in the sense of 'work process knowledge', see below) also from the perspective of scientific, theoretical knowledge (Häcker and Rihm 2005, sec. 3. 2. 1).

A second concept from the expert workshop debate that we use concerns 'professional fields of action'. In the pedagogical domain, generally, a professional field of action describes connected actions and processes within professional practice. It can serve as a basis for developing learning fields for, e. g., vocational education, or professional trainings (see, e. g., KMK (Sekretariat der Kultusministerkonferenz 2011).

For our purpose, we understand 'fields of action' slightly differently as compound descriptions of

- intersubjectively negotiated "work process knowledge" (Boreham et al. 2002) that is immediately necessary in order to manage certain connected and typical work tasks, and that is individually acquired through experience by each participant,
- systematically structured, theoretical knowledge needed to that same end.

To distinguish our understanding from the KMK reading, we will use the term 'areas of action' in the following.

A necessary feature of the work task descriptions that constitute an area of action is completeness regarding the relevant phases of the corresponding action (Kleiner et al. 2002, p. 23). In the case of teacher trainings, such phases can, e.g., be 'lesson preparation', 'lesson implementation', 'lesson reflection'. Regarding work tasks in the case of mentoring, these phases can be extended to 'preliminary discussion and planning', 'implementation and supervision', and 'feedback and reflection'. For the third concept, 'reflectiveness', we rely on an adapted version of the reflection levels as introduced by Schön (1983). These adapted levels are:

(1) Step back from a concrete situation, one's own action, etc., and describe it from a distance.
(2) Identify problems and/or potentials of the described situation, course of action, etc.

(3) Give alternatives, approaches, possibilities to exhaust the identified potentials / solve the identified problems.
(4) Import experiences from similar situations to assess the given alternatives, approaches, etc.

The underlying understanding of 'reflection' here is similar to what Häcker and Rihm call "active detachment" ("aktive Distanzierung", Häcker and Rihm 2005, sec. 1), which describes the process of considering and assessing one's actions from a distance with the aim of widening one's scope of action. Such reflection outcomes remain embedded in "biographically acquired affective-cognitive reference systems" (Ciompi 1988; 1997; cited after Häcker and Rihm 2005) and are bound to a given situation.

This leads us the fourth concept, 'situatedness'. Our conception of situatedness encompasses two aspects: First, the concept refers to the relevant, concrete, actual classroom situations experienced by the teachers, as we take experience-based knowledge in general to stay bound to the situations in which it was acquired (cf., e. g., Bauersfeld 1983). Second, we consider situational elements as "personal and spatiotemporal resources, organisational structures inside and outside the classroom, the quality of support systems" (Häcker and Rihm 2005, sec. 3.1) that systematically constrain each teacher's daily work experience.

The fifth conceptual component is 'discursiveness' in the sense of the so-called neo-Socratic method (cf. Kessels 1997; Birnbacher and Krohn 2012). This method builds on the constructive negotiation of different viewpoints, and aims at establishing and explicating a modest consensus between these, while carving out whatever contradictory or complementary aspects remain. It is particularly suited for the (self-)facilitation of learning processes in groups.

3.2 Workshop Structure

Our adapted conception of a multiperspective expert workshop fosters cooperative work and development within and across different expert groups from different institutions and disciplines regarding in teacher education. This involves at least three fields of expertise: mathematics education, teaching practice, and education science. The aim is to develop

– a suitable language to describe relevant concepts, situations, and phenomena of daily classroom practice specific to the workshop issue, and

– corresponding manageable points of orientation for communication, (self-) monitoring, and action.

The outcome of a single MEW unit, including the results of (a) and (b), are a number of descriptions of relevant areas of action, expectedly on some interim level of elaboration (see sec. 4 for concrete examples). With respect to the interim status of each unit's outcome, the MEW structure is characterized by alternating dialogical and reflection phases (fig. 1). In each phase, the reflection level, the grade of expressiveness, and the taper ratio of the collective results are assumed to increase. We briefly describe the different phases on a very general level in the following and sketch a concrete realization in section 4.

In our concept, individual homework tasks of instructed reflection frame each workshop unit. A first individual written reflection that has to be prepared a few days before the workshop unit sets the thematic stage for the initial reflection within the unit. A second written reflection after the workshop unit works as a learning diary for the participant teachers and encourages them to record their thoughts about the effectiveness of the workshop unit's themes and methods for their own learning.

Within the workshop unit, an initial 'Reflection Phase' focuses on individual, situation-based descriptions by the participating teachers of teaching and learning phenomena in class with respect to the workshop theme. Each participant works individually in this phase.

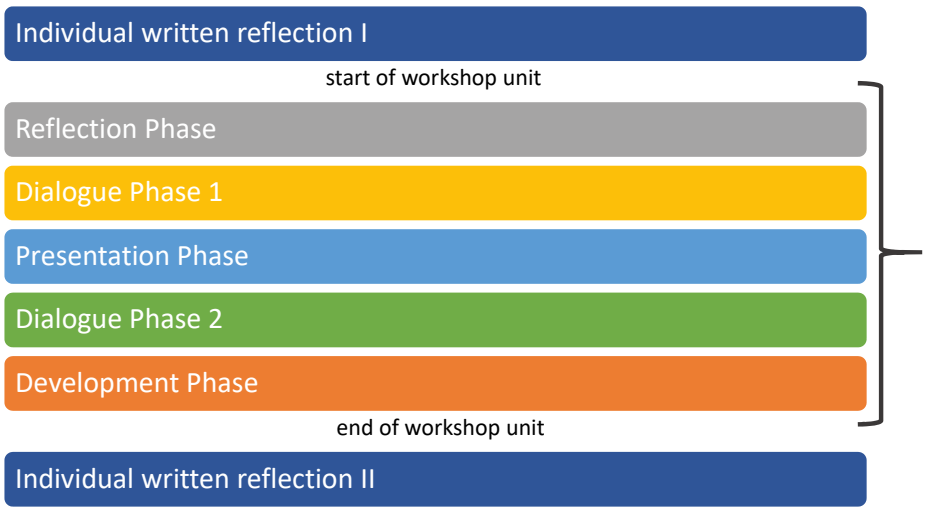

Fig. 1: Phases of a MEW unit

In 'Dialogue Phase 1', the different expert groups (each of which ideally consists of at least one expert per field of expertise mentioned above) compare the results of the individual reflection task and analyse them with regard to aspects that stand out as rather typical or untypical. Participants are requested to group, structure, and MEW-Phases condense the resulting aspect collection.

In the 'Presentation Phase', all expert groups present the results of their group work, explicate conceptual commitments made during the working process, and highlight points or questions where they could not reach consensus. Only minimal feedback from the other expert groups, in the sense of, e.g., comprehension questions, is requested in this phase.

In Dialogue Phase 2, common and contrasting points of the different results presented in the Presentation Phase are brought up, starting another loop of grouping and condensing. This is the first time the expert groups are explicitly asked to identify and label emerging, relevant areas of action. Dialogue Phases 1 and 2, in particular, but also the Presentation and the Development Phase, are navigated using Socratic dialogue techniques in order to foster cooperative, dynamic group learning in the sense described above (see Kessels 1997 and Birnbacher and Krohn 2012 for technical details on that method).

In the Development Phase, finally, all expert groups collaborate in developing a collective product, i. e., schematic descriptions of relevant areas of action regarding the specific workshop issue. These descriptions do not claim absolute validity or completeness, but are meant as a reasonably flexible and manageable, consensual products that can be assimilated and modified regarding individual and situational purposes and constraints.

In the following section 4, we will now give one concrete example of a possible specification and implementation, a course of action, and corresponding working material, elaborated with respect to the general ideas and structure described above.

4 Concretizing the MEW Framework for the Case of Student Apprenticeship Mentoring – Specific Workshop Material and First Results from a Pilot Run

We report here on a particular MEW conducted in the winter term 2017/18 at the University of Rostock by the authors of this paper as part of a pilot run of a modularized teacher training on pre-service teachers' apprenticeship mentor-

ing within the framework of the project "LEHREN in M-V – LEHRer*innenbildung reformierEN" ("Reforming Teacher Education in Mecklenburg-Vorpommern"). The training series consisted of five mathematics-specific modules, and of five general modules. Participating teachers attended all ten modules within one year, each module embraced one or two full-time units. The content focus of the two units we report on here was "conceptual work and development in the classroom for the subject of mathematics". The corresponding module was the second mathematics-specific module the teachers attended.

From the three aforementioned fields of expertise, only two were present in person: four participants from teaching practice at three different secondary schools in Mecklenburg-Vorpommern, and two researchers from mathematics education (the authors)[2]. The field of education science came in via theoretical inputs about

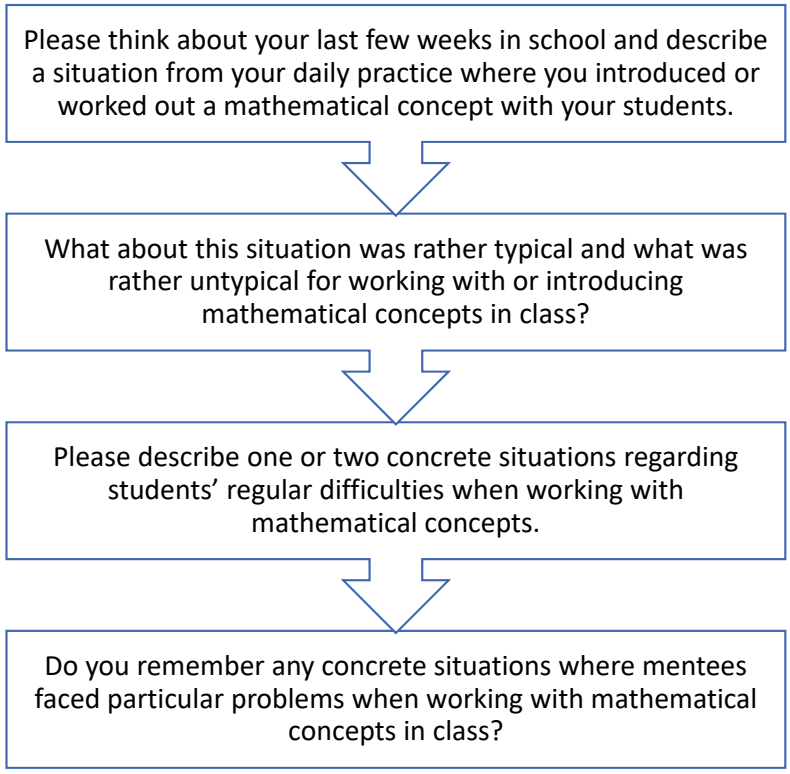

Fig. 2: Preliminary homework reflection tasks.

2 The first author has several years of research practice in philosophy of mathematics and mathematics education, as well as several years of university teaching practice in philo-

concept formation in general during the Presentation Phase, and via earlier, not subject-specific training units within the series, covering relevant topics for mentoring from education science. Each participant teacher prepared the Reflection Phase by working on a preliminary reflection task (fig. 2) at home, which had to be handed in some days before the workshop. The results of the homework reflection were also incorporated in the first and second Dialogue Phase.

The target of the Reflection Phase was the teachers' actual handling of mathematical concepts within their own classroom practice.

During the initial Reflection Phase, the participant teachers were asked to choose a mathematical concept from a list, which they were then to individually prepare for the following workshop phase with the help of questions such as those listed in fig. 3.

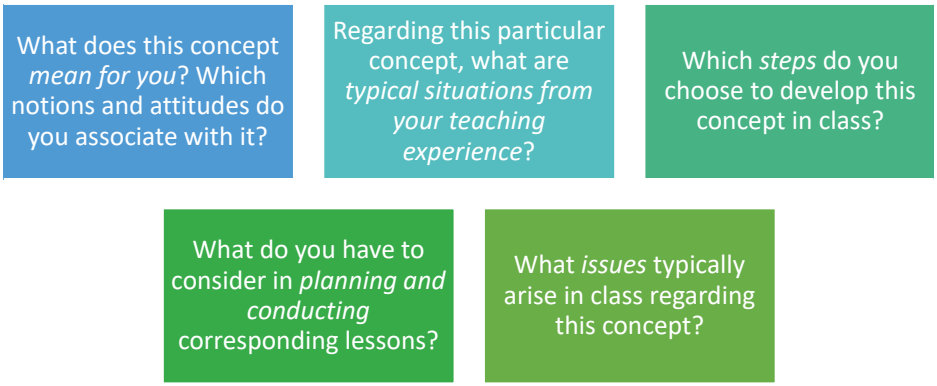

Fig. 3: Individual reflection tasks within the workshop unit.

In Dialogue Phase 1, participant teachers worked cooperatively as two expert pairs and later in a whole expert group (consisting of both pairs of teachers), compared their notes on the questions from the Reflection Phase, worked out typical and untypical aspects regarding the use and role of mathematical concepts in class from their expert view (e. g., "importance to clarify terminology" and "use of examples and counterexamples" as familiar typical aspects), and structured and condensed their aspect collection. We used the task formulations

sophy, mathematics education, and mathematics. By the time the MEW was conducted, the second author held a first state exam in mathematics and was working on a PhD-project in mathematics education. She had taught courses both at school and at university level.

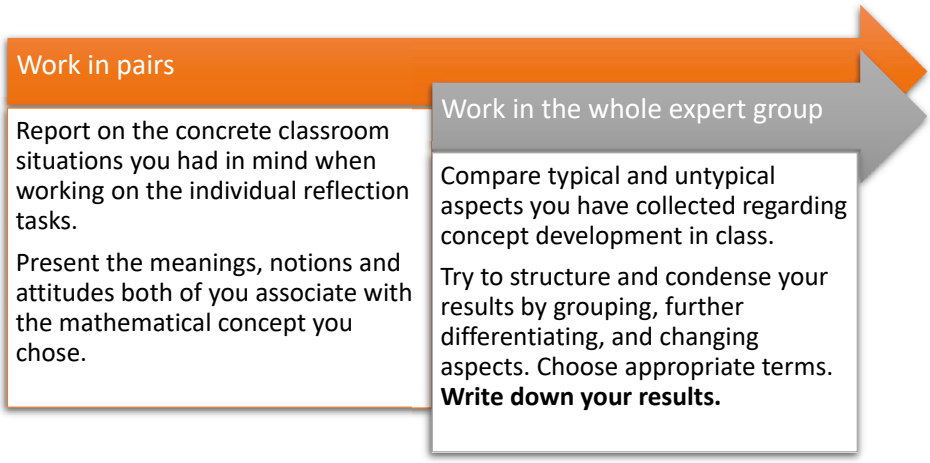

Fig. 4: Navigation for Dialogue Phase 1.

in fig. 4 as an optional additional navigation tool for the dialogical activity of the teacher's expert group.

The Presentation Phase started with the experts from teaching practice presenting their results from Dialogue Phase 1. To retain discursiveness as mentioned in section 3, the teachers were particularly encouraged to emphasize consensual aspects as well as remaining differences, and explicate chosen terminology. The experts from mathematics education continued with a presentation of didactic models and approaches from learning theory on conceptual development that are also taught to pre-service teacher students in their mathematics education courses. The presentation included short 'silent impulse'-elements such as "In which situations is the acquaintance with structuring tools relevant for you as a mathematics teacher?" (regarding the content presented on structuring tools like semantic webs, etc.) or "In which situations do you use prototypes in your own teaching when working on concept development? Where do you encounter prototypes employed by students?" (regarding the content presented on the role of prototypes for concept development). The silent impulses were meant to stimulate both the reflection of practical experiences with respect to theory and of theoretical input with respect practice.

Dialogue Phase 2 started with an elaborated reflection of the theoretical input with respect to the requirements of the teaching practice. We here used the guiding question "Which elements from didactic and learning theory should become an effective and action-guiding part of the professional knowledge of (aspiring) teachers?". In this phase, all participants worked across their expert groups.

Again, we used task formulations (fig. 5) as an optional additional navigation tool to help dialogical activity, and worked with a compact working definition of the concept of "areas of action" (see fig. 6).

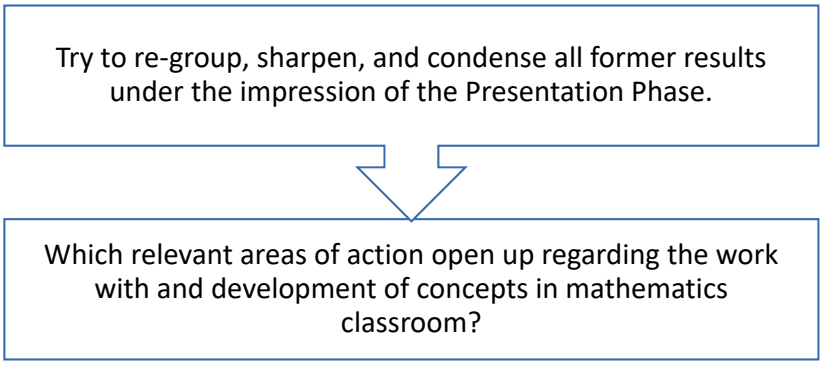

Fig. 5: Tak formulations.

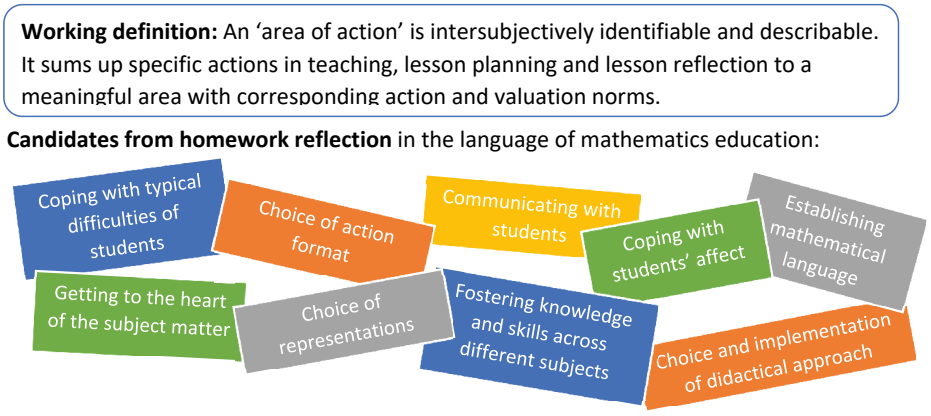

Fig. 6: Working definition 'area of action'.

At this point, the results from the individual homework reflection tasks came into play as possible candidates for structuring the results into areas of action. In order to pre-structure the descriptions of possible areas of action for the Development Phase, we used the matrix reproduced in fig. 7.

As final output of the first workshop unit, four rather fragmentary descriptions of areas of action were identified: "lesson planning", "coping with typical student's difficulties", "bringing content knowledge and subject specificity ("Fachlichkeit") into application", and "addressee-oriented teaching". These descriptions are

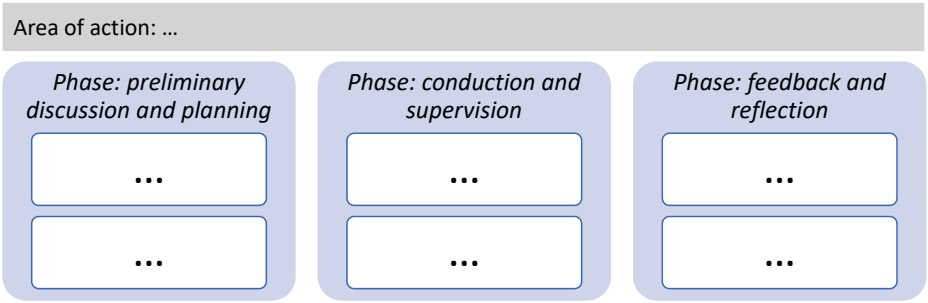

Fig. 7: Matrix for description of areas of action.

supposed to support mentors and mentees in necessary planning and communication processes as part of the design and reflection of proper learning situations for mentees.

However, the actual descriptions developed within the workshop unit were not complete, and a number of entries did not have the form of proper working tasks. Moreover, there was no thorough differentiation between the relevant phases regarding lesson planning. Hence, we chose to ask each participant to individually review the results of the Development Phase in preparation of the follow-up workshop unit as well as do another loop of revising and carving out the description schemas within the follow-up unit. Regarding the former, each participant was requested to work over the actual scheme descriptions individually, mark unclear passages, reformulate aspects, etc., according to the following criteria: reasonable structuring and grade of differentiation, definable areas of action,

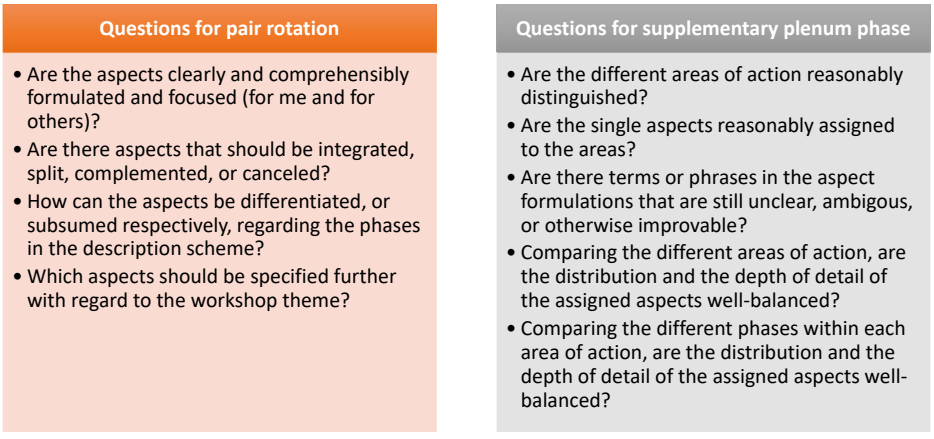

Fig. 8: Guiding questions for rotation and plenum phases.

and adequate focus of aspect formulation. The latter was organised as a rotation phase as part of the next workshop unit, where (eventually mixed) couples of teachers and a mathematics educator reworked each of the four descriptions (one after the other) in respect of the questions displayed in fig. 8. In a supplementary plenary phase, the results of the different groups were brought together as revised interim descriptions of the areas of action in question.

The new interim status of the revised descriptions was assessed as acceptable by the participants at the end of the day. Those descriptions are meant to offer points of orientation that will stay subject to modification, both as part of the regular collaboration between university and practicing teachers in the development and improvement of pre-service teachers' internships at schools and regarding individual adjustment by mentor teachers when employing such schemas, e. g., in consultations with their mentees.

5 Spotlight Observations from the MEW Pilot Run and Issues for Further Development

Instead of a detailed discussion, and with regard to the work-in-progress state of the reported project, we mention two main issues for future work on the MEW concept that emerged from the pilot workshop units. We label the first issue using a question that our participant teachers brought up frequently when we asked them to write down their results:

1. "And now, what exactly should we write?"

A regular stumbling point for the workflow during our first training units was the transition from oral discourse and informal exchange processes to fixing results in written form and thus manifest products of negotiation. After four workshop units conducted with the same in-service teachers and mathematics educators since the pilot run, we register a substantial improvement in this regard, which is presumably achieved through growing experience with the working format. Nevertheless, we will continue working on this point in order to also reduce the stumbling effect in the first units of the second run of the training series.

As a second issue, we identified the following:

2. Balance between instruction and construction

During various phases of our first training units, we experienced the need of instructive or navigating elements to foster progress and increase the levels of reflection. On the other hand, there were Dialogue and Development Phases, in which some participants spontaneously constructed new elements on the structural level of the theoretical framework of areas of action itself (e. g., 'communication' was identified and then conceptualized as a core area of action with regard to mentoring processes).

Besides these instructive and navigating elements, we found that it is generally valuable to have time frames of more than one day for one thematic MEW. Breaking up a MEW into different, temporally separated workshop units is likely to foster the quality of the results, increase the general reflexion level during the workshop phases, and facilitate construction processes, even on the structural level of the description schemas. As another means to enhance the quality and level in respect of content, we will elaborate individual reflection tasks that explicitly target the structural level of the workshop products for the second run of the training series.

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