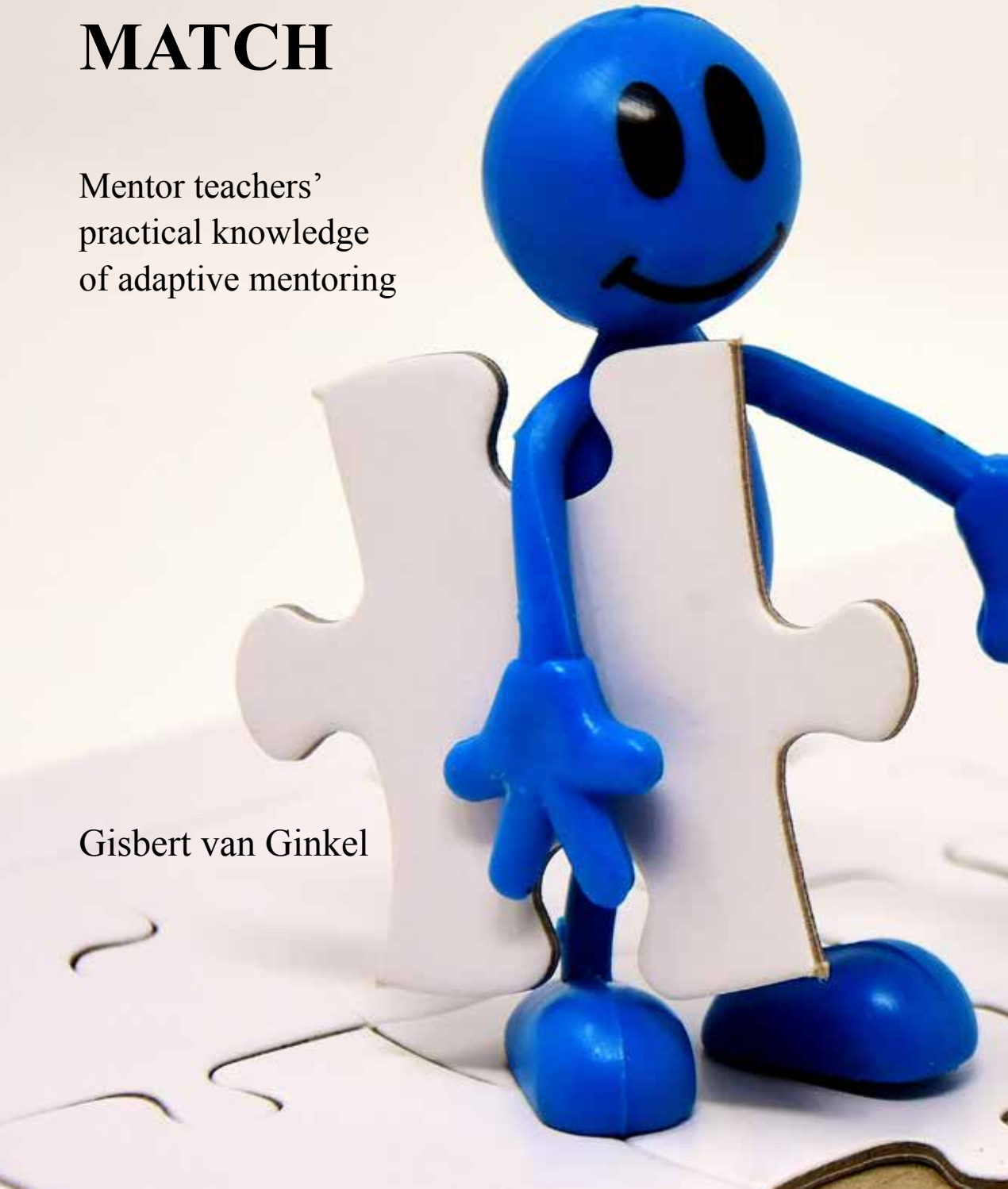
MAKING MENTORING MATCH

Mentor teachers' practical knowledge of adaptive mentoring



Gisbert van Ginkel

Making mentoring match

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ICLON, Leiden University Graduate School of Teaching

ico

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So I ask them, 'well, tell me how you want me to mentor you',
I say 'it's my professionalism that I can adjust to that'.

(Citation from a mentor teacher who participated in the studies described in this dissertation)

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1

GENERAL INTRODUCTION

The focus of this dissertation is on mentor teachers' practical knowledge of adaptive mentoring. It explores mentor teacher's heuristics for adaptively responding to their mentee teachers' learning, and the knowledge and dispositions underlying these heuristics. This introductory chapter presents the relevance of the study (1.1), the aim and research question of the study (1.2) and the conceptual framework that guides the design of the study (1.3), the overall study design (1.4), and the outline of the dissertation (1.5).

1.1 Relevance of the study: the need for knowledgeable adaptive mentors

Mentored workplace learning has since long been a core strategy for professional development of novice teachers during initial teacher education and subsequent induction into the profession (Grimmet & Ratzlaff, 1986). Mentoring relationships are seen as vital for the successful preparation and induction of novice teachers (Fairbanks, Freedman, & Kahn, 2000; Long, McKenzie-Robblee, et al., 2012; Marable & Raimondi, 2007), and a good match between the mentor and novice teacher is considered key to making such mentoring relationships work (Bullough, 2012; Hale, 2000; Hobson, Ashby, Malderez, & Tomlinson, 2009; Kessels, 2010; Kroeze, 2014).

Matching in this sense refers to match-making (how mentors and mentees are matched), as well as to adaptation (how mentors adapt their mentoring to match individual differences in novice teachers' learning). Match-making in programs for teacher preparation is typically formal, or arranged (Kroeze, 2014); mentor-mentee dyads are formed as a by-product of teacher placement in schools through the teacher education program, as opposed to informal matching in which mentor and mentee choose each other based on mutual affiliation. As a result, this

formal match-making tends to be limited to appointing novices to the teacher that is available as a mentor in school (Bullough, 2012). Any further matching may be based on subject area (Waterman & He, 2011) and proximity in work location (Carter & Francis, 2001), but will in general not extend to matching based on learning styles, teaching beliefs, specific levels of development or mutual affiliation (Bullough, Young, Hall, Draper, & Smith, 2008). It has also been argued that because compatibility is highly difficult to anticipate beforehand, such match-making is unlikely to be practically feasible (Cox, 2005).

As a result, the onus is on mentor teachers to make this match; they are expected to be capable of adaptively responding to the momentary and individual learning needs of their mentee teachers, as these arise in their process of learning to teach (Rajuan, Beijaard, & Verloop, 2010). Mentor teachers therefore need to be capable of adaptively responding to the momentary and individual learning needs of their mentee teachers, as these arise in the process of learning to teach. This requires mentor knowledge of novice teacher learning and of mentoring activities to provide an adaptive response to this learning. Such knowledge is a critical, but still underdeveloped component in the knowledge base of mentoring (Achinstein & Athanases, 2005; Brondyk & Searby, 2013; Hiebert & Morris, 2009; Jones & Straker, 2006).

1.2 Aim and research question

Teacher mentoring is increasingly seen as a professional practice with a distinct knowledge base, in which mentors need to create appropriate learning opportunities by drawing upon their strategic knowledge of teaching, learning to teach and their knowledge of their mentee teacher as a learner (Schwille, 2008). Simultaneously, it is acknowledged that just as the knowledge base of teacher educators more in general, this knowledge base is still relatively underdeveloped (Hiebert & Morris, 2009; Jones & Straker, 2006). In the last decade, the Dutch Association for Teacher Educators has developed a professional standard for teacher educators. This standard explicitly includes mentor teachers as (school-based) teacher educators. It thereby attempts to recognize, similar to international developments (Schwille, 2008), that mentoring is a professional role and practice with a distinct knowledge base.

In this study, we aim to contribute to the knowledge base of mentoring as a professional practice by focussing on mentor teachers' own, practical knowledge of adaptive mentoring. Drawing on practitioner knowledge can help to inform and develop the knowledge base of professional mentoring (Hiebert, Gallimore, & Stigler, 2002; Verloop, Van Driel, & Meijer, 2001). Hiebert, Gallimore & Stigler (2002) argued that in order for practitioner knowledge to become professional knowledge, it "must be public, it must be represented in a form that enables it to be accumulated and shared with other members of the profession, and it must be continually verified and improved " (p. 4). This study aims to contribute to the knowledge base of mentoring in teacher education, through (1) uncovering elements of mentor teachers' practical knowledge of their mentee teachers' learning and of ways to adaptively respond to this learning, (2) providing descriptive accounts of its content, and (3) elucidating specific characteristics of this knowledge through the use of theoretical perspectives. The central question this study aims to answer is: *What is the content of mentor teachers' practical knowledge of adaptive response to their mentee teachers' learning?*

1.3 Conceptual framework

1.3.1 Mentoring in teacher education and induction

The term mentoring has become common to refer to the organized/arranged relationships between experienced school teachers and the novice teachers that they support during their initial teacher training and/or subsequent induction into the profession (Stanulis et al., 2018). Although the research literature on mentoring has defined mentoring as a construct in various ways (Haggard, Dougherty, Turban, & Willbanks, 2011), definitions from conceptual reviews of the literature (see Box 1.1) indicate that a mentoring relationship is generally viewed as a developmental relationship and process, embedded in a professional context, in which both parties may learn, but in which the emphasis is on the development of the novice.

Box 1.1. Definitions of mentoring in conceptual reviews of the mentoring literature.

Source	**Definition**
Roberts (2000)	"A formalised process whereby a more knowledgeable and experienced person actuates a supportive role of overseeing and encouraging reflection and learning within a less experienced and knowledgeable person, so as to facilitate that person's career and personal development" (p. 162)
Ambrosetti and Dekkers (2010)	"Mentoring is a non-hierarchical, reciprocal relationship between mentors and mentees who work towards specific professional and personal outcomes for the mentee. The relationship usually follows a developmental pattern within a specified timeframe and roles are defined, expectations are outlined and a purpose is (ideally) clearly delineated" (p. 162)
Haggard, Dougherty, Turban, & Willbanks (2011)	"We propose three core attributes of workplace mentoring (…) that distinguish mentoring from other kinds of work-related relationships. These core attributes are *reciprocity*, *developmental benefits*, and *regular/consistent interaction* over some period of time" (p. 292)
Allen, Eby, Chao, & Bauer (2017)	"…hierarchical one-on-one developmental relationships between a less experienced individual (the protégé) and more experienced individual (the mentor) " (p. 329)

In this study, we will consistently use the terms *mentor (teacher)* and *novice/mentee (teacher)* to refer to, respectively, school teachers and the recipients of their support in the context of teacher education and/or induction. There currently exists a plethora of terms to refer to school teachers in this position, such as *cooperating teacher, associate teacher, school-based teacher educator, clinical supervisor*, including various varieties in Dutch, such as *school practicum docent, coach, docent-coach, vak-coach, begeleider op school, praktijk-docent, werkplekbegeleider*. We acknowledge that in specific programs and studies, the position of mentor teacher may be purposely referred to with specific terms to delineate specific roles or positions within that program or study.

On the other hand, the terms mentoring and mentor/mentee teacher have gained fairly widespread acceptance in studies of this field (Ambrosetti & Dekkers, 2010; Stanulis et al., 2018). For our purposes, the term mentor teacher best covers the position of the participants in our study. The mentor teachers in this study were contacted through programs for initial teacher education. Program goals for the initial and induction phases of teacher education may be quite distinct (Feiman-Nemser, 2001a). However, the actual practice of mentoring in schools tends not to be neatly divided according to type of program/partnership or clientele (initial, induction, or otherwise). For practical purposes, we therefore refer to the recipients of the mentor teachers' support as novice teachers or mentee teachers. The term novice teacher encompasses beginning teachers both in initial teacher training and in the phase of early entry and induction into the profession. Though not all mentors provided support in the induction phase, several did, and some even supported experienced teachers. It is therefore impossible to make an a priori separation in the knowledge that the mentor teachers have built up through experience with these different levels of learning to teach, and we suggest that it will often be intrinsic to the role of a mentor teacher that a variety of mentees will be mentored. The term mentee teacher is therefore also used as a more general term, to indicate any recipient of mentor teacher support within a mentoring relationship. Fundamental is that the mentors in our study (1) were also employed as school teachers, and that they reported on mentees (2) with whom they had been engaged in a mentoring relationship, and (3) who, at the time of the mentoring relationship, were in some form entering the profession, and hence novice teachers.

In this study, we have also opted to consistently refer to the object of mentor teachers' adaptive response as novice/mentee teachers' *learning*. Language does make a difference here. Being adaptive to individual differences between novice *teachers*, has a different ring to it than being adaptive to individual differences in novice teachers' *learning.* The former runs the risk of 'reification', that is, of attributing characteristics of the learning process in a specific context to stable internal traits of the learner. Attributes such as for instance being open to feedback or taking initiative are likely to be at least in part an emergent characteristic of the learning situation, and not only a-priori attributes that a mentee brings to the situation. When mentors adapt their response, this may be accommodate to what they see as stable internal

characteristics of mentee teachers, but also to what they see as more fleeting and temporary characteristics, resulting from interactions between circumstance, person, and momentary levels of competence and confidence in the process of learning to teach. Knowledge of novice teacher learning may thus be grounded in attributions towards the person of the learner, but it is not necessarily so, and we think that it is important to reflect that in our use of language.

1.3.2 Mentor teachers' practical knowledge of adaptive mentoring

Following Verloop, Van Driel en Meijer (2001) mentor teachers' practical knowledge is understood in this thesis as "the whole of the knowledge and insights" (p.446) that underlie mentor teachers actions in practice, in which "components of knowledge, beliefs, conceptions, and intuitions are inextricably intertwined" (p. 446). The study of mentor teachers' practical knowledge in this thesis is focused on those components of practical knowledge assumed relevant for mentor teachers' capacity for adaptive mentoring. The literature on mentoring, teaching and teacher education distinguishes four components that play a role in mentor teachers' capacity to adaptively respond to their mentee teachers' learning. These are: (1) a disposition of collaboration and inquiry, (2) knowledge of a repertoire of mentoring activities, (3) knowledge of novice teachers' learning, and (4) heuristics that connect knowledge of mentoring activities and of mentee teachers' learning as actionable knowledge. These four components therefore guide the overall design of our study. We discuss each component separately.

1.3.2.1 A disposition of collaboration and inquiry

Studies of novice teacher learning in situations where support is mismatched (Patrick, 2013) or lacking (Long, Hall, Conway & Murphy, 2012), and studies of induction programs (Kessels, 2010) stress the importance of a surrounding culture of collaboration and inquiry. Such a culture is necessary for novice teachers to be open to discuss learning to teach as a process that includes vulnerabilities and difficulties. Mentor teachers are seen as being at the forefront of creating such an atmosphere, through conversations that allow novices and

mentors to uncover and share meanings (Ben-Peretz & Rumney, 1991). Mentors should construct the mentoring process as one of 'co-thinking' (Feiman-Nemser, 2001b), creating a zone of 'pedagogical construction' that allows novice teachers to reconstruct their teaching experiences and to situate these experiences within their personal theories of teaching (Graham, 2006). Good mentors do so from a professional stance of collaborative inquiry into practice (Feiman-Nemser, 2012; Orland-Barak & Hasin, 2010), in which the mentor is willing to engage in mutual learning about teaching with novices during the mentoring process, thereby fostering norms of collaboration and shared inquiry (Wang & Odell, 2002). Such an image of educative mentoring thus expects mentors to be 'co-thinkers' as well as 'co-learners' with their novices (Feiman-Nemser, 2012). This disposition of collaboration and inquiry has been linked to the mentoring conceptions that mentor teachers hold, as well as to their willingness to engage in professional learning themselves (Burn, 2007; Long, Hall, et al., 2012).

1.3.2.2 Knowledge of mentoring activities

Studies that have found individual mentors to be overly prescriptive, directive, informative, or non-directive (Ben-Peretz & Rumney, 1991; Strong & Baron, 2004; Williams et al., 1998) have been critical of mentor teachers' versatility: their capacity to vary the type of mentoring support they provide according to mentee teacher development over time and to individual differences in novice teacher learning. Because of this perceived lack of versatility in style, programs and methods have been developed to train mentors to be more versatile. More versatile mentors are able to use directive as well as non-directive skills in mentoring conversations, and to be reactive to novice input as well as to actively initiate topics in the conversation (Crasborn, Hennissen, Brouwer, Korthagen, & Bergen, 2008; Timperley, 2001). The main assumption in this line of studies is thus that mentor teachers need, but often lack, sufficient (and sufficiently functional) knowledge of a repertoire of mentoring activities, to be capable of versatile and adaptive response to their mentee teachers (Crasborn & Hennissen, 2010). Mentoring research shows how mentor teachers perform a broad variety of roles and functions for novice teachers in the course of the mentoring relationship (Clarke, Triggs & Nielsen, 2014; Wildman, Magliaro, Niles & Niles, 1992), in a variety of activity settings (Schwille, 2008), involving a variety of

mentoring activities (Ambrosetti & Dekkers, 2010) and strategies (Hudson, 2013). As a result, the mentor role affords numerous ways of being adaptive to novice teacher differences, but so far there has been little study of the mentoring activities that mentor teachers themselves view as adaptive to novice teachers' learning.

1.3.2.3 Knowledge of novice teachers' learning

High diagnostic ability is considered a distinctive feature of successful mentoring (Schwille, 2008), requiring professional knowledge of mentee teachers as adult learners. Mentor teachers' knowledge of novice teachers as adult learners is therefore seen as a prominent component of the knowledge base of mentoring (Achinstein & Athanases, 2005; Jones & Straker, 2006), and knowledge of novice teachers' needs is seen as one of the major marks of effective mentoring practice (Crutcher & Naseem, 2016). In being adaptive, mentors are expected to accommodate a vast array of individual differences in their support of novice teachers' learning, such as learning styles, concerns, needs, stages of development, images and beliefs about teaching, and goals and expectations concerning the mentoring relationship (Hobson et al., 2009; Rajuan et al., 2010). Empirical research on mentors' knowledge of their mentee teachers is scarce, however, and focused on ideal traits of novices (Reid & Jones, 1997), or on competence frameworks for evaluating readiness for teaching (Haigh & Ell, 2014), rather than on the actual attributes that mentors recognize in their mentee teachers' learning.

1.3.2.4 Heuristics for adaptive response to novice teacher learning

Mentor teachers' knowledge, like teachers' knowledge, has been defined above all as practical knowledge, a key characteristic of which is "to guide their actions when they encounter the critical question, 'what should I do in this particular situation?'" (Gholami & Husu, 2010, p. 1520). Knowledge of a repertoire of activities and of mentee teachers' learning is not enough for mentor teachers to be capable of adaptive response; they need to be able to connect this knowledge

in the ongoing process of mentoring itself. Research on adaptive teaching therefore emphasizes the role of personal, actionable heuristics in micro-adaptation (Corno, 2008; Lin, Schwartz, & Hatano, 2005; Randi & Corno, 2005), and we assume that the main insights from this work also transfer to the situation of teacher mentoring. Micro-adaptation refers to "continually assessing and learning as one teaches - thought and action intertwined" (Corno, 2008, p. 163). It refers to teacher's ability to simultaneously assess and respond to individual learner differences, performed in the ongoing course of instruction itself. As a result of their day-to-day micro-adaptive responses, teachers develop personal and actionable heuristics that connect knowledge of salient differences between pupils to courses of action (Randi & Corno, 2005). With increased experience, teachers develop heuristic categories of pupil behaviour and classroom situations to aid their informal assessments and decision-making on the fly. Such heuristics are seen as a form of conditional knowledge: of knowing why certain knowledge is or is not appropriate in a specific situation, including a pro-active pursuit of multiple perspectives and possibilities (Fairbanks et al., 2010). Similarly, we expect that mentors with experience of different novice teachers will develop connections between knowledge of particular attributes of novice teachers' learning and of the mentoring activities that provide an appropriate response that is adaptive to those attributes. We refer to these connections as heuristics for adaptive response. Whether such heuristics are to be seen as a separate category of mentor teacher knowledge in and of itself, or as a process of judgement or 'strategic knowing' (Shulman, 1986) that draws upon mentor teacher knowledge of learners and activities, remains an open question at this moment. Nevertheless, we assume that it is possible to have mentors recall this strategic knowledge or knowing, at least in part, and in such a way that it can be described and represented in some form.

1.4 Design of the study

The study is designed to incorporate each of the four components identified in Section 1.3. Each of the five studies focuses on one of the four components. In each study, specific research questions with respect to that component are formulated.

With the exception of the first large-scale questionnaire study, the nature of the studies in this thesis is small-scale, exploratory and descriptive, combining qualitative content analyses with quantitative analyses to discern trends and patterns. All studies focus on the viewpoint of mentor teachers and their practical knowledge. Table 1.1 provides an overview of central focus, methods and sample sizes of the five studies. Mentor teachers' knowledge in this study was investigated through questionnaires, task-based interviews and repertory-grid interviews. In order to maximize the chance of finding a variety of (1) practical knowledge about mentoring activities, (2) practical knowledge about novice teachers' learning, and (3) heuristics for adaptive response in the small-scale studies, a purposive sampling was used (Palys, 2008). The goal was to maximize variation, by selecting mentors with different patterns of mentoring conceptions. Study 1 developed the means for this purposive sampling, in the form of a questionnaire measuring different mentoring conceptions. Participants for the interview studies were therefore selected from the mentor teachers in study 1 that indicated a willingness to participate in a follow-up study.

Verloop et al (2001) argued that for practitioner knowledge to contribute to the professional knowledge base, it is desirable to focus on practical knowledge that is shared by practitioners. The final three studies therefore explore the common elements in mentor teachers' practical knowledge: the attributes of their mentee teachers' learning that mentors focus on most, the dominant mentoring activities in their descriptions, and their shared heuristics for adaptive response to their mentee teachers' learning (see Table 1.1).

Table 1.1. Component, method, sample size and research questions for the five studies.

Chapter	**Component**	**Method**	***N***	**Central research questions**
Ch 2	Disposition of collaboration and inquiry	Questionnaires	726	*What is the relationship between mentor teachers' mentoring motives and their mentoring conceptions?*
Ch 3	Practical knowledge of mentoring activities	Task-based interviews	18	*What adaptive mentoring activities to mentor teachers describe?* *What are the distinctive features of adaptive mentor teachers?*
Ch 4	Practical knowledge of mentee teachers' learning	Repertory-grid interviews	11	*What attributes of novice teachers' learning do mentor teachers focus on most in describing similarities and differences between their mentee teachers?*
Ch 5	Practical knowledge of mentoring activities	Repertory-grid interviews	11	*What are dominant mentoring activities in mentor teachers' descriptions of their response to similarities and differences between their mentee teachers?*
Ch 6	Heuristics for adaptive response	Repertory-grid interviews	11	*What are mentor teachers' shared heuristics for adaptive response to their mentee teachers' learning?*

1.5 Outline of the dissertation

Each of the chapters 2 to 6 in the dissertation focuses on one of the five studies. **Chapter 2** focuses on mentor teachers' disposition of collaboration and inquiry, and explores the relationships between different mentoring conceptions and mentoring motivations of mentor teachers. The chapter reports on the relation between mentor teachers' orientation toward co-thinking and co-learning, as expressions of an underlying disposition towards collaboration and inquiry. In doing so, the content of the questionnaire that provided the criterion for selection of participants for the subsequent studies is described in more detail.

Chapter 3 focuses on adaptive mentoring activities and individual differences between mentors. The content analysis of these interviews focuses on the mentoring activities that the mentor teachers describe in the task-based interviews. This chapter further explores the subset of mentoring activities that the mentor teachers describe as adaptive to novice teachers' learning, as well as individual differences between mentor teachers. It contrasts the overall patterns of mentoring activities that highly adaptive mentor teachers describe (who mention many adaptive mentoring activities) with those of non-adaptive mentor teachers (who do not mention any adaptive mentoring activities).

Chapters 4, 5 and 6 report on the results of the repertory-grid interviews. **Chapter 4** focuses on mentor teachers' personal practical knowledge of their mentee teachers' learning. The content analysis focuses on the constructs that mentor teachers describe, defined as bipolar oppositions that mentor teachers use to discriminate between different attributes of their mentee teachers' learning. Two perspectives inform the analysis of these constructs. First, based on recent views that a core element of novice teacher development is the reconciliation of the personal and professional domains of becoming a teacher, these two domains are used as a starting point for organizing the constructs that the mentor teachers describe. Second, based on research into the two core dimensions of warmth and competence, or social desirability and social utility that people tend to use in their social judgements of others, these dimensions are used for a second-order analysis of the data.

Chapter 5 extends the exploration of adaptive mentoring activities from chapter 3 to an exploration of the central activities in mentor teachers' views of adaptive response. The exploration starts out from the mentoring activities that

are central in mentor teachers' descriptions. The analysis focuses on how mentor teachers describe their enactment of these activities to adaptively respond to their novice teachers' learning.

Chapter 6 draws together the findings from the previous two studies. It reports on the associations that mentor teachers describe in the repertory-grid interviews between (1) the attributes of their mentee teachers' learning and (2) the mentoring activities to respond to these attributes. The analysis of these associations forms the basis for the identification of common heuristics for adaptive response in mentor teachers' descriptions; heuristics that connect the two knowledge domains of mentee teachers' learning and of mentoring activities, as actionable knowledge for adaptive response to novice teachers' learning.

Finally, **Chapter 7** provides and overview of the main findings of each of the five studies, indicates limitations, discusses how these findings contribute to the knowledge base of mentoring, and provides suggestions for professional preparation of mentors.

2

WHY MENTOR? LINKING MENTOR TEACHERS' MOTIVATIONS TO THEIR MENTORING CONCEPTIONS[1]

Abstract

Current mentoring models for teacher preparation and induction emphasize the need to engage novice teachers' learning through collaborative professional learning communities. Mentors in such communities are expected to engage in joint knowledge construction with novices, and to be 'co-thinkers' who enact a developmental view of mentoring, as well as 'co-learners' who are willing to engage in mutual learning with their novices. These two aspects are assumed to be associated in mentor thinking. The aim of this questionnaire study was therefore to explore the relationship between mentors' mentoring conceptions and their mentoring motives. Participants were 726 secondary education mentor teachers, associated with 13 institutes for teacher preparation in the Netherlands. Results showed that a motivation to mentor for personal learning was stronger associated with a developmental conception of mentored learning to teach than with an instrumental mentoring conception. The same was found for a motivation to mentor for contributing to the profession, but less pronounced. These findings suggest potential strategies for the selection

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and preparation of mentor teachers for programs that intend to foster collaborative inquiry approaches for novice teacher support.

2.1 Introduction

Mentoring has become the mainstay of novice teacher support in programs for teacher preparation and induction since the 1980s. Mentor teachers, or school-based teacher educators, are recognized as playing a vital role in novice teacher learning (Hobson, Ashby, Malderez, & Tomlinson, 2009). Providing educative mentoring for novice teacher learning is defined as 'individualized professional development' that blends showing and telling, asking and listening (Norman & Feiman-Nemser, 2005). It involves helping novices to survive their initial experience and define their teaching lives, and establishing and building professional relationships based on dialogue and reflection (Fairbanks, Freedman, & Kahn, 2000). Such a mentoring process involves conversations that allow mentees and mentors to uncover and share meanings (Ben-Peretz & Rumney, 1991). It requires mentors to avoid the pitfalls of imposing their own style or being too laissez-fair. Mentors should instead construct the mentoring process as one of 'co-thinking' (Feiman-Nemser, 2001b), creating a zone of 'pedagogical construction' that allows novice teachers to reconstruct their teaching experiences and to situate these experiences within their personal theories of teaching (Graham, 2006). Good mentors do so from a professional stance of collaborative inquiry into practice (Feiman-Nemser, 2012; Orland-Barak, 2010), in which the mentor is willing to engage in mutual learning about teaching with novices during the mentoring process. Ideally, mentors are more than local guides and educational companions, but also agents of change that foster norms of collaboration and shared inquiry (Wang & Odell, 2002). The current image of educative mentoring thus expects mentors to be 'co-thinkers' as well as 'co-learners' with their novices (Feiman-Nemser, 2012).

Co-thinking in terms of supervisory skill includes the ability of the mentor to use indirect conversation techniques such as probing, summarizing and responding to novice teacher input and concerns (Crasborn, Hennissen, Brouwer, Korthagen, & Bergen, 2008). Skilful mentors find productive openings for

constructing and reframing problems of practice (Bradbury, 2010; Feiman-Nemser, 2001b), they engage novice teachers' personal theories of learning (Graham, 2006; Timperley, 2001) and are able to "articulate principles of teaching as they arise in practical contexts for the student teachers (...) in ways that facilitate student teacher learning about their own practice and how to improve it" (Timperley, 2001, p. 112). Enacting such a co-thinking/co-learning approach is seen as more than a supervisory skill, however; skilful mentors do so on the basis of a conception of professional learning as a process of knowledge construction through joint inquiry into practice (Feiman-Nemser, 1998; Feiman-Nemser, 2001b; Franke & Dahlgren, 1996; Hall & Davis, 1995). Not as an end in itself, but because of the recognition that learning to teach is a process of integrating different forms of knowledge into a personal, practical, professional knowledge base for teaching; a process that requires reflection and dialogue for the (inter-)active (re)construction of knowledge about teaching and learning over an extended period of time (Hudson, 2013; Wang & Odell, 2002). Teacher preparation and induction therefore need to welcome novices into a collaborative professional learning community (Feiman-Nemser, 2012; Hargreaves 2000). For novices, the primary relationship in such communities is often with their mentors (Malderez, Hobson, Tracey, & Kerr, 2007; Staton & Hunt, 1992; Su, 1992) and therefore especially mentors should engage in collaborative and reciprocal learning with novices (Hall & Davis, 1995; Wang & Odell, 2002).

It has been an implicit assumption in studies of teacher mentoring so far that the two aspects of 1) mentors conceiving of mentoring as co-thinking with novice teachers, and of 2) mentors co-learning with novices and using mentoring as a site for professional learning for themselves, constitute intertwined aspects of enacting a collaborative inquiry approach in mentoring. If this is so, one would expected mentor teachers who adhere to a co-thinking view of mentored learning to teach, to exhibit a motivation for mentoring that recognizes the potential benefits of the mentoring process for mentor learning. So far, the link between mentor teachers' motivation for mentoring and their views of mentored learning to teach has not been studied extensively. The central aim of this study is to examine the relationships between mentor teachers' mentoring motives and their mentoring conceptions. Insight into these relationships may inform efforts at cultivating collaborative professional learning communities for novice teacher support within partnership programs for teacher preparation and induction, by

suggesting additional strategies for the preparation and selection of mentor teachers.

2.1.1 Mentoring motives: generative outcome and personal learning

Mentoring motives in this study are defined as the reasons mentor teachers give for engaging in the mentor role; why they consider it important to become a mentor for novice teachers. Mentor teachers generally volunteer for the role and work with limited training, formal knowledge of supervision, support and facilitation for their task (Hobson et al., 2009). While at the level of the school or the school-institute partnership level it can be mandated to provide placements and support for novice teachers, being a mentor is generally not mandated as an integral part of the job of being a teacher. Although being a mentor is more and more recognized as a separate professional role and position within school in itself (Achinstein & Athanases, 2005), it remains mostly a voluntary activity that goes above and beyond teachers' formal job requirements; a role chosen by some, not by others.

It is because of this voluntary nature of novice teacher mentoring, that personal motives are likely to have a high influence on the decision to become a mentor. The concept of motives implies the assumption of goal-directed forces within the individual (Batson & Shaw, 1991). Choosing to become and remain a mentor teacher can thus be seen as a form of goal-directed behaviour: as behaviour that is driven by some internal representation of a desired outcome or state (Austin & Vancouver, 1996). This view constitutes a functional analysis of mentoring as volunteerism; one in which serving as a mentor is explained by the personal goals - or functions - it fulfils for the individual (Clary et al., 1998).

Empirical studies of mentor's motives are rare, but suggest that mentors hold two dominant motives: other-oriented motives and motives oriented at self-development. Allen, Poteet and Burroughs (1997), for example, classified motives to mentor reported by experienced mentors as other-focused and self-focused. Other-focused motives included a desire to help and pass along information to others and to build a competent workforce. Self-focused motives included a desire to increase learning and to feel gratification. Earlier, Stout (1982) identified motives teachers reported for accepting novice teachers. She

found that the dominant motive was professional obligation to contribute to the profession, and opportunity to learn and re-examine personal practice was second. More recently, Lopez-Real and Kwan (2005) showed that mentors identified learning through self-reflection as the most important source of professional development in being a mentor and Sinclair, Dowson and Thistleton-Martin (2006) reported that dominant motives were wanting to share knowledge of teaching, helping novice teachers learn about the real world of teaching, and ensuring adequate quality of entrants into the profession. Secondary motives were for personal development as a teacher and a supervisor.

These empirical studies that point to the existence and significance of other-focused and self-focused motives, align with current conceptualizations of becoming a mentor. Becoming a mentor is generally conceptualized in mentoring theory as a form of fulfilling the need for 'generativity', or 'generative concern' which is a concern for and an interest in guiding the next generation (Merriam, 1983). Generative actions include keeping traditions alive and passing along what one has created (Hofer, Busch, Chasiotis, Kartner, & Campos, 2008) and generative concern refers to a desire for 'generative outcome', or "to invest one's substance in forms of life and work that will outlive the self", which includes succeeding in transmitting cultural values to the next generation (Kotre, 1995, p. 35). Becoming a mentor has however also been conceptualized as entering into a reciprocal relationship with a protégée or mentee, in which the potential for mentor development is not only a serendipitous by-product, but an integral constituent of the mutuality of the relationship (Healy & Welchert, 1990). In sum, current empirical evidence of mentor teachers' motives, as well as conceptual work on becoming a mentor, provides support for the existence of two dominant mentoring motives: generative outcome motives, and personal learning motives.

Returning to our initial argument that mentoring motives and mentor teachers' mentoring views are likely to be linked, we will now discuss mentor teachers' conceptions of mentored learning to teach, or mentoring conceptions for short.

2.1.2 Mentoring conceptions: developmental and instrumental

A mentoring conception is defined in this study as an internally coherent set of beliefs about the goals, sources and nature of mentored learning to teach. Much

like the way novice teachers form conceptions of teaching during their own schooling as pupils, cooperating teachers form their conceptions of mentoring during their own student teaching, through their experiences as teachers with supervision, pupils and colleagues (Richardson-Koehler, 1988; Rikard & Veal, 1996; Koerner, O'Connor-Rust & Baumgartner, 1992; Hall & Davis, 1995), and also as an extension of their personal conceptions of teaching (Martin, 1997).

Research on novice teacher mentoring identifies two main distinct mentoring conceptions; an instrumental conception and a developmental conception (Franke & Dahlgren, 1996, Orland-Barak & Klein, 2005), similar to the distinction between teacher-centred/content-oriented and student-centred/learning-oriented conceptions of teaching (Donche & van Petegem, 2011). Such mentoring conceptions are not either/or constructs; instead, mentors draw on different conceptions simultaneously (Franke & Dahlgren, 1996), but tend to work from one or two dominant conceptions mainly (Clarke & Jarvis-Selinger, 2005). Our conceptualization of mentoring conceptions is based on the research on teachers' conceptions of teaching, which shows that teachers do not draw on one monolithic or coherent belief system, but on different - and sometimes competing - sets of beliefs (Kane, Sandretto & Heath, 2002; Pratt, 2002). A mentoring conception is not the same as a mentoring approach or a mentoring style. Styles or approaches refer to the typical forms of behavior, acting or typical strategies that mentors employ. Conceptions, on the other hand, refer to the mental models and beliefs about mentoring and learning that mentors draw upon in thinking about practice (Aguirre & Speer, 1999; Donche & Van Petegem, 2011; Evans & Kozhevnikova, 2011; Fang, 1996).

Mentors holding an instrumental mentoring conception, orient themselves mainly to concerns for effective teaching practice (Orland-Barak & Klein, 2005). They consider it important that in the 'game' of student teaching, novice teachers come to be perceived by pupils as real teachers with control over classrooms (Rikard & Veal, 1996). They see it as an important goal for novices to learn to control and manage pupil behaviour as soon as possible. In order to get novices 'up and running', mentors focus on securing quick proficiency in the mechanics of teaching, so that novices can quickly 'go it alone' without mentor support (Graham, 2006; Norman & Feiman-Nemser, 2005: Young, Bullough, Draper, Smith, & Erickson, 2005). They try to discuss observed lessons from start to end, focused on their evaluations of observed individual teaching behaviours,

and on novice teachers' feelings about their teaching (Franke & Dahlgren, 1996). The mentoring relationship is seen as asymmetrical (Hall & Davis, 1995), and mentors in this conception see themselves mainly as 'maestros' (Graham, 2006); as a model, corrective master teacher and assistant teacher (Franke & Dahlgren, 1996), and they view observation of other teachers as functional for copying effective practices (Graham, 2006). Novice teacher learning is seen mainly in terms of performance improvement, and on providing novices with 'ready-made' tools and routines for effective and efficient teaching (Orland-Barak & Klein, 2005). Teaching in this conception is assumed to be ultimately a solitary act (Young et al., 2005). This emphasis on quick mastery of the 'mechanics' of a subject and on a need for control, has been linked to implicit views of learning as determined by innate ability, or an 'entity theory' of ability (Dweck, 1999; Stipek, Givvin, Salmon, & MacGyvers, 2001), and to the belief that such ability is expressed by quick learning (Schommer, 1990).

Mentors holding a developmental mentoring conception, orient themselves mainly to concerns about mentee learning and professional development (Orland-Barak & Klein, 2005). They try to get novice teachers to take pupils' perspectives, thinking and sense-making into consideration (Feiman-Nemser, 2001b). Mentors in this conception focus on discussing underlying and integrating principles of teaching and ideal forms of classroom communication. They try to address novice teachers' reasons behind their teaching performance, and see it as an important goal for novice teachers to promote pupil autonomy in learning (Franke & Dahlgren, 1996). They attempt to provide novices with different perspectives on teaching (Graham, 2006). In this conception, mentors see themselves as creative partners in dialogue and cooperation about teaching (Franke & Dahlgren, 1996; Graham, 2006). They view the mentoring relationship as collaborative (Orland-Barak & Klein, 2005), and symmetrical and reciprocal (Hall & Davis, 1995). Novice teacher learning is seen mainly in terms of developing understanding and awareness about interrelations between teaching and learning (Feiman-Nemser, 2001b; Graham, 2006), and in terms of constructing personal theories of teaching (Graham, 2006). This emphasis on constructing personal understanding of a subject has been linked to implicit views of incremental learning, or an 'incremental theory' of ability (Dweck, 1999; Stipek et al., 2001).

2.1.3 Research questions and assumptions

If a mentor holds a strong personal learning motive for mentoring, this would suggest that he or she sees mentoring as a process that enables such personal learning. A mentor holding a developmental mentoring conception sees learning to teach as a process of continuous and ongoing development, and the mentoring relationship as a reciprocal exchange. This would enable them to see mentoring and the mentee as sources of learning about teaching, and hence, mentors holding a developmental conception may be more readily motivated by the desire to realize that potential for personal learning through mentoring. On the other hand, mentors holding an instrumental mentoring conception see themselves more as 'maestros'. It would therefore seem less likely for them to view mentoring and the mentee as a source of learning about teaching. Hence, mentors holding an instrumental conception may be less readily motivated to mentor by the possibility for personal learning. On the other hand, a mentor may be motivated to accept mentees by a desire to contribute to the profession, regardless of how he or she conceives of the way this contribution is to be made: as a 'maestro' or as a 'co-thinker'. There appears therefore little reason for mentors with a strong generative outcome motive for mentoring, to prefer either an instrumental or a developmental mentoring conception. Whether or not these assumed relations hold true is the focus of our empirical investigation. This study was focused on the following two research questions:

(1) *To what extent do mentor teachers report generative outcome motives, personal learning motives, and instrumental and developmental mentoring conceptions?*
(2) *What is the relationship between mentor teachers' mentoring motives and their mentoring conceptions?*

With regard to the first question, our assumption is that mentors will on average be more strongly motivated to mentor by a generative outcome motive than by a personal learning motive. This expectation is based on our previous discussion of mentoring as an inherently 'generative' act, and the discussed empirical evidence that mentors indeed tend to rank generative outcome motives highest. We also assume that mentors will on average report a stronger belief in an instrumental than a developmental mentoring conception. This is based on

previous empirical studies that have found a prevalence of instrumental conceptions among mentor teachers (Wang & Odell, 2002), and on the findings that Dutch mentors tend to hold instrumental views (Kroeze, 2014) and tend to perform mentoring roles that express instrumental views of mentoring (Crasborn et al., 2008). With respect to the second question, regarding the relations between motives and conceptions, we assume that a personal learning motive will relate differentially to a developmental and an instrumental mentoring conception. As indicated above, it seems more likely for mentors holding a strong developmental conception to view the mentoring process as a source for learning, and hence to be motivated by the potential for personal development, than for mentors holding a strong instrumental conception. We also assume that a generative outcome motive will not relate differentially to these mentoring conceptions, in line with our earlier argument that a desire to contribute to the profession does not inherently suggest a specific view of how such a contribution should be made. In order to test our assumptions, we conducted a survey with questionnaires, which included scales measuring both mentoring motives and mentoring conceptions. We have compared and correlated mentor teachers' scores on these scales to answer both research questions.

Answering these questions is relevant for the design of programs for teacher preparation and induction that wish to create collaborative professional communities across partnership organizations schools to support novice teacher learning (Feiman-Nemser, 2012). If mentoring motives and mentoring conceptions are indeed linked in mentor thinking, this may suggest additional avenues and strategies for the selection and preparation of mentor teachers in such programs.

2.2 Method

2.2.1 Research context

In the Netherlands, most programs for secondary and vocational initial teacher education feature substantial amounts of teacher preparation in schools: generally up to half of the total curriculum time. Mentoring relationships in these programs are generally non-matched, formal and assigned; mentors and mentees generally do not choose each other and are not matched according to personal profiles. In

the last decade, the Dutch Association for Teacher Educators has developed a professional standard for teacher educators which includes mentor teachers as school-based teacher educators. Government funding in the last decade has stimulated the establishment of partnerships between schools and institutes for teacher preparation. Such funding is currently stimulating the further development of such programs to include the induction phases of teaching, and to address current complexities facing teaching such as teaching diverse populations of students and parent engagement with schools. In this sense, the professional landscape of teacher education in the Netherlands exhibits an awareness of the complexities of the 'postmodern' age of teacher professionalism described by Hargreaves (2000), and of the challenges this poses for programs for preparation and induction of novice teachers.

2.2.2 Participants and procedure

Questionnaires were distributed in a paper-and-pencil format to mentor teachers associated with 13 Dutch teacher education institutes, both vocational (8 institutes) as well as university level (5 institutes). For 2296 distributed questionnaires, 726 respondents returned the filled out questionnaire (response rate = 32%). There were 296 females in the sample (40.8%), average age was 45.4 years (*SD*=9.09), the median level of education obtained was a four-year college degree and the median level of teacher license was an academic level license. Average organizational tenure was 13.9 years (*SD*=9.14) and average teaching experience was 19.5 years (*SD*=9.34). The majority of respondents, 67.4 percent (*N*= 489) was associated with a vocational level teacher education program, the rest with an academic level program. Average mentoring experience in years was 7.6 years (*SD*=6.67). Average mentoring experience in number of mentees mentored was 10.8 mentees (*SD*=12.50), and was thus heavily skewed. Experience ranged from none to 99 mentees; half of the mentors had mentored up to six mentees, ninety percent had mentored up to twenty five mentees, and only three percent had mentored 50 or more mentees. These highly experienced mentors are likely to have reported their experiences with many short-term student placements at the start of the four-year vocational teacher education programs.

2.2.3 Measures

2.2.3.1 Mentoring motives

Because no existing instrument was available to assess mentoring motives, items on mentoring motives were developed through a pilot study, by asking mentors to reply to the open-ended question 'why it is important to me to mentor novice teachers' (Van Ginkel, Vermunt, Verloop, & Beijaard, 2005). These items were presented to mentors, as answers to the question 'why do I mentor novice teachers?'. Examples of response items that indicate a generative outcome motive are *'to give beginners a chance to prove themselves'; 'to transfer my enthusiasm for the profession'; 'to prevent attrition of newcomers'; 'to pass on my knowledge and experience'; 'because I want my subject to be taught by well-trained, competent teachers'*. Examples of response items that indicate a personal learning outcome motive are*; 'because it deepens my understanding of my work as a teacher'; 'because I find it a challenging task'; 'because I enjoy working with novice teachers'* and *'to stay informed of current developments in teaching'*. Mentors could rate their agreement with these items on a 7 point Likert-scale (*strongly disagree, disagree, disagree more than agree, disagree as much as agree, agree more than disagree, agree, strongly agree*), thus higher scores indicate the motive to be a more important reason for mentoring novice teachers.

As expected, two dimensions could be distinguished, based on Eigenvalues larger than 1, scree plot analysis, interpretability of component solutions and reliability analysis: a personal learning motive and a generative outcome motive. The scale for personal learning motive contained eight items, referring to personal learning and enjoyment. Internal consistency as assessed by coefficient alpha was .86. The scale for generative outcome motive contained eleven items referring to a desire to successfully induct newcomers into the profession, and to pass on personal knowledge and experience. Alpha reliability was .83.

2.2.3.2 Mentoring conceptions

Because no existing instrument was available to assess mentoring conceptions, we developed items through literature review and a pilot study (Van Ginkel et al.,

2005). Respondents were presented with 48 statements, which assessed 1) mentoring goals and intentions, 2) beliefs about sources of learning to teach, and 3) beliefs about the nature and process of teacher knowledge and learning. For the instrumental conception scale, mentoring goal items referred to transmission of teacher-centred teaching routines, items on beliefs about sources of learning to teach referred to belief in learning from expert models, and items on teacher knowledge and learning referred to belief in a quickly assessable, fixed and routine teaching ability. For the developmental conception scale, mentoring goal items referred to principled understanding of pupil-centred teaching, items on beliefs about sources of learning to teach referred to belief in learning from peers and coping models, and items on beliefs about teacher knowledge and learning referred to belief in incremental understanding and awareness of teaching and learning. Examples of mentoring goal items referring to an instrumental mentoring conception are '*I try to teach novices basic rules for structuring a lesson'; ' I try to teach novices to maintain tight control over the course of a lesson'*, reflecting a focus on training skills for classroom management and control. Examples of mentoring goal items referring to an developmental mentoring conception are *'In mentoring conversations I try to let novice teachers discover the principles behind a good lesson for themselves'* and *'I try to let novice teachers continuously reflect on their development'*, reflecting the intention to stimulate mentee teacher talk, thinking and reflection in mentoring dialogues. Examples of items on beliefs about sources of learning to teach referring to an instrumental mentoring conception are '*In order to be a good mentor I think you should be a good teacher first and foremost'* and *'I think novice teachers require help from experienced teachers to be able to interpret their teaching experiences'*, reflecting a view of mentors as 'maestros' from which mentee teachers should learn. Examples of items on beliefs about sources of learning to teach referring to an developmental mentoring conception are *'I think novice teachers can support each other well'; ' I think novice teachers learn to interpret teaching experiences better by analysing them amongst each other'* and *'I think it is very instructive for novice teachers to see each other making mistakes'*, reflecting a more collaborative view of participants in the learning process of mentee teachers. Examples of items on beliefs about teacher knowledge and learning referring to an instrumental mentoring conception are '*I think some people have a talent for teaching, and some just don't'; 'Novices with*

talent will teach well quickly' and *'I think learning to teach is learning to apply all kinds of routines automatically'*, reflecting an entity theory of teaching ability, a belief in quick learning and a belief in learning to teach as learning skilful performance of routines. Examples of items on beliefs about teacher knowledge and learning referring to an developmental mentoring conception are *'I think learning to teach is becoming more and more aware of what you want to accomplish with pupils'* and *'I think learning to teach is learning to integrate better and better the different kinds of knowledge you need for teaching'*, reflecting an incremental view of learning, and a belief in learning to teach as increasing awareness and understanding. Respondents could indicate their agreement with statements through a 7 point Likert-scale (*strongly disagree, disagree, disagree more than agree, disagree as much as agree, agree more than disagree, agree, strongly agree*). The meaning of scale points was reproduced at the top of each page.

As expected, two overarching dimensions could be distinguished, based on first and second-order component analysis, interpretability of component solutions and reliability analysis: an instrumental mentoring conception and a developmental mentoring conception. Both scales consisted of twenty-four items each: nine items on mentoring goals, seven items on beliefs about sources of learning to teach, and eight items on beliefs about teacher knowledge and learning. Alpha reliability was .82 for the instrumental conception scale, and .85 for the developmental conception scale.

2.2.3.3 Analysis

In order to answer our first research question, we used descriptive statistics and paired-samples *t*-tests to test differences between mean scale scores for mentoring motives and mentoring conceptions, respectively. To answer our second research question, we conducted Pearson correlation analyses among all scales.

2.3 Results

2.3.1 Relative strength of mentoring motives and conceptions

We assumed that mentors would agree with a generative outcome motive more than with a personal learning motive. Descriptive statistics (Table 2.1) disconfirmed our assumption. A paired-samples *t*-test showed that on average, mentors reported significantly stronger agreement with a generative outcome motive (M=5.53, SD = 0.71) than with a personal learning motive (M=5.45, SD=0.89, $t(716)=2.39$, $p < .05$, $r = .09$), but with a small effect size.

We also assumed that mentors would agree more with an instrumental than a developmental mentoring conception. Descriptive statistics (see Table 1) disconfirmed this expectation. A paired-samples *t*-test showed that on average, mentors reported significantly stronger agreement with a developmental conception (M=5.48, SD = 0.53) than with an instrumental conception (M=5.12, SD=0.55), $t(714)=15.68$, $p < .001$, $r = .51$), with a large effect size (Cohen, 1992).

Table 2.1. Descriptive statistics for mentoring motive and mentoring conception variables.

	Variable	Minimum	Maximum	Mean	SD
1	Generative outcome motive (G)	2.73	7.00	5.53	0.71
2	Personal learning motive (P)	1.13	7.00	5.45	0.89
3	Instrumental conception (I)	2.83	6.54	5.12	0.55
4	Developmental conception (D)	3.13	7.00	5.49	0.53

N's range from 715 to 724

2.3.2 Relations between motives and conceptions

We assumed that a personal learning motive for mentoring would relate differentially to holding a developmental and an instrumental mentoring conception. Correlations among variables (Table 2.2) confirmed this expectation.

Meng's z-test for differences between two correlation coefficients within the same sample (Meng, Rosenthal, & Rubin, 1992) showed that the correlation between a personal learning motive and a developmental mentoring conception (r=.50, p <.01) was statistically significantly stronger than the correlation between a personal learning motive and an instrumental mentoring conception (r=.11, p <.01, z=10.22, p <.001). We also assumed that a generative outcome motive for mentoring would not relate differentially to holding a developmental or an instrumental mentoring conception. Correlations among variables (Table 2.2) disconfirmed this expectation. The correlation between a generative outcome motive and a developmental mentoring conception (r=.49, p <.01) was statistically significantly stronger than the correlation between a generative outcome motive and an instrumental mentoring conception (r=.38, p < .01, z =3.12, p < .01).

Table 2.2. Bivariate correlations for mentoring motive and mentoring conception variables.

	Variable	G	P	I	D
1	Generative outcome motive (G)	-			
2	Personal learning motive (P)	.42**	-		
3	Instrumental conception (I)	.38**	.11**	-	
4	Developmental conception (D)	.49**	.50**	.32**	-

N's range from 707 to 717
** p < .01.

On average, mentors reporting agreement with one motive, were also more likely to report agreement with the other motive, as the correlation between both mentoring motives (Table 2) was statistically significant (r=.42, p < .01). Similarly, mentors reporting agreement with one conception were also more likely to report agreement with the other conception; the correlation between both mentoring conceptions (Table 2.2) was statistically significant (r=.34, p < .01). This suggests that while these two motive factors are distinct, mentor teachers

also tend to report overall stronger or weaker levels of motivation across both motives.

2.3 Discussion

The aim of this study was to empirically relate mentor teachers' mentoring motives with their conceptions of mentored learning to teach. A key finding is that mentors with a personal learning motive for being a mentor teacher also tend to hold a developmental conception of mentored learning to teach, more than an instrumental conception. The same was found for mentors with a generative outcome motive, but to a lesser degree. This supports the idea that mentors who hold a developmental view of learning to teach, tend to apply this view to themselves as teacher-learners as well. It supports the assumption that being a ‘co-thinker’ and being a 'co-learner' with novice teachers, tend to be associated in mentor thinking. In a theoretical sense, we propose that this contributes to our understanding of who mentors are as teachers of novices. It shows a specific connection between what Kelchtermans (2009) termed the domain of professional self-understanding – which includes motives – and the domain of subjective educational theory in teachers’ professionalism. Where Kelchtermans (2009) paraphrased the importance of the person of the teacher in teaching as ‘how I teach is the message’, the paraphrase for mentoring might be, at least in part, ‘how I study teaching is the message’. Further research should focus on the relationship of motives with mentor teachers' practices and the effects of such practices on novice teachers. Recent research shows that 1) mentor beliefs and 2) the mentor-novice match are the two dominant factors that shape the process and outcomes of mentoring relationships (Kroeze, 2014). Given the relationships between mentoring motives and mentoring conceptions in mentor thinking, it therefore seems likely that mentoring motives will also be associated with mentoring practice. Mentoring practices are often seen to be haphazard (Hudson, 2013) and idiosyncratic (Hawkey, 1997). We would conjecture that mentors may choose to engage in those mentoring activities that fulfil their motives for mentoring best, which may provide part of the explanation for this seemingly haphazard nature of mentoring relationships. Such research would be informative for mentor professional development efforts to go beyond skill training, and also

address mentor teachers' professional identity at 'deeper' levels (Korthagen, 2004). It would also help to start addressing the need for mentoring practices that are more responsive and adaptive to individual differences in novice teacher learning (Van Ginkel, Oolbekkink, Meijer & Verloop, 2016).

A second key finding in our study is the preference of Dutch mentor teachers for a developmental over an instrumental mentoring conception. This is in contrast to previous studies in Anglo-Saxon countries, in which mentors were often found to hold predominantly instrumental mentoring conceptions (Wang & Odell, 2002). At this point we can only speculate as to the cause of this difference. One explanation may be the influence that models of realistic teacher education as developed in the Netherlands (Korthagen, 2004) may have had on Dutch programs for teacher education, and the acceptance that several related practitioner-oriented publications on mentoring and supervision in teacher education have gained in Dutch schools. These models and publications tend to be oriented toward more person-centred and reflective mentoring approaches that bear resemblance to the developmental conception identified in this study. A limitation here is the absence of a shared standard to assess mentor teachers' mentoring conceptions. Previous studies have used different methods, samples, instruments and terminology to distinguish different mentoring views of mentor teachers. Although the strength of our study lies in the inclusion of a large sample, rather than a small opportunity sample as employed in most studies, the trade-off is that our study relies only on self-report data of espoused beliefs through closed statements. Inclusion of more open-ended data as well as observational data to infer beliefs from, may have led to a different conclusion, as previous studies have shown mentors do not always enact espoused beliefs (Sinclair et al., 2006; Orland-Barak, 2001). Nevertheless, we propose that the empirical and conceptual research base that the survey content was developed from, the face-validity of the mentoring conception scales developed through the exploratory analyses, and the acceptable reliability indices, provide grounds for valid conclusions. Further research should explore differences in mentoring conceptions across different cultural and policy contexts.

A third key finding is the on average equal agreement of Dutch mentor teachers with personal learning and generative outcome motives. Previous studies have tended to report generative outcome motives as much more dominant. A possible explanation may be derived from our previous two findings that Dutch

mentors report a preference for a developmental conception, and that such a conception is linked to a personal learning motive. This may predispose Dutch mentors to perceive potential benefits for personal learning from being a mentor, and they may thereby be more motivated to be mentors by the desire to realize that potential. A difference between our study and previous studies of mentor teachers' motives, however, is that the latter required mentors to rank the relative importance of motives, whereas mentors in our study were free to report motives as equally important. Mentors in our study may have given socially desirable responses, or forced rankings in other studies may have led mentors to underreport the importance of personal learning motives. With the limited research on mentoring motives in school-based teacher education, further research should develop deeper insight into the different motives and their relative importance for mentor teachers. With the continued importance of a well-trained workforce of school-based teacher educators, further research should also address the influence of mentor teachers' motives on mentor retention and attrition, similar to motivational research on beginning teachers. Different school and partnership contexts my provide different affordances for meeting mentoring motives, indirectly influencing school teacher's decisions to become or remain mentors. In the Netherlands, for instance, there is currently a surge of mentor professional development activities due to increased government funding for partnership programs. These activities may engender new motives for mentoring that have previously been underserved, such as contributing to the local partnership or expanding a personal professional network. Such research may uncover additional motive factors that play a role in mentor teachers' decisions to become, remain, or stop being a mentor, as well as motive factors that play a role in school teachers' decisions to refrain from becoming mentors. In a time where funds are limited and mentoring is seen more and more as a professional role of being a school-based teacher educator, one that requires considerable time and effort to master, it will become more and more relevant to retain mentor teachers as well as attract new teachers to mentoring. Further research should therefore focus on 1) discovering the full range of motives that influence teacher decision making with regard to becoming or remaining a mentor, 2) insight into the interplay of motives, mentor practice and context. The first may be accomplished in part through interview studies and instrument development such as the recent work by Clarke et al. (2012) on a mentoring profile inventory of mentors'

motivators and challenges. This work sees motives as part of a larger set of factors that may inhibit or assist teachers to become and remain mentors. The second may be accomplished through longitudinal case studies and teacher-educator self-study. Such insights may inform policy and practice of ways in which partnership settings may help mentor teachers to build strong professional identities as school-based teacher educators (Bullough, 2005).

Finally, our findings point to practical implications for the selection and preparation of mentor teachers in programs for teacher preparation and induction. The main implication of our findings is that programs should take account of the motives that drive mentors in their decision to become mentors, and of ways in which they might provide working conditions for mentors that may match their motives. We suggest that programs do so as part of a broader awareness of the need to develop mentor teachers with strong professional identities as school-based teacher educators. Especially for those programs that intend to develop collaborative professional learning communities among partnership staff, to support novice teacher learning through an inquiry approach, we identify two key strategies. Based on our findings, these key strategies would be 1) to enlist mentor teachers that are motivated by a willingness to learn from mentoring, and 2) to further develop such a willingness in mentors, by discussing with mentor teachers ways in which the mentoring process could become more relevant for their own learning about teaching, or for instance by constructing activities for novices and mentors that include relevant opportunities for mentor teachers to experience personal learning. An example of such an activity is for instance the recent suggestion for mentors and novices to engage not only in retrospective reflection on lessons, but to also engage in prospective reflection through joint responsibility for lesson planning (Staub, 2013). Such an activity may trigger awareness in mentors of the potential for personal learning from the mentoring process, and thereby stimulate the adoption of a more developmental view of mentored learning to teach. It has already been shown to deepen mentoring conversations between mentors and mentees, and to stimulate mentors to adopt unfamiliar practices (Van Velzen, Volman, Brekelmans, & White, 2012). In light of growing research interest in becoming a mentor, such activities would also provide opportunities for further research into the dynamics of how mentor teachers might come to change their views and develop their professional identities.

3

ADAPTING MENTORING TO INDIVIDUAL DIFFERENCES IN NOVICE TEACHER LEARNING; THE MENTOR'S VIEWPOINT[2]

Abstract

Being adaptive to the individual novice teacher is considered a condition for effective teacher mentoring. The aims of this study are therefore to explore 1) mentoring activities through which mentors intend to adapt to the individual novice teacher, and 2) characteristics of adaptive mentors. Information was collected through on-site, post-mentoring conversation interviews with 18 mentors holding different mentoring conceptions, from different programs for Initial Teacher Education in the Netherlands. Four adaptive mentoring activities were identified: 1) aligning mutual expectations about the mentoring process, 2) attuning to the novice's emotional state, 3) adapting the mentoring conversation to match the reflective capacity of the novice teacher, and 4) building tasks from simple to complex relative to the novices' competence-level. Adaptive mentors were 1) more likely to mention activities intended to support construction of personal practical knowledge and 2) less likely to mention activities intended to create a favourable context for novice teacher learning.

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Suggestions for using findings to enhance mentor adaptiveness are discussed.

3.1 Introduction

The match between mentors and novices has come into focus as a vital ingredient for the establishment of successful mentoring relationships in teacher preparation and induction (Bullough, 2012; Hale, 2000). Mentoring relationships are now broadly accepted as a significant factor in helping novice teachers to survive their initial teaching experiences, develop their teaching competencies, and define their teaching lives (Fairbanks, Freedman, & Kahn, 2000; Marable & Raimondi, 2007). Novice teachers in successful mentoring relationships tend to develop more positive outlooks on teaching and tend to stay in teaching longer (Long, McKenzie-Robblee, et al., 2012). However, current research is also becoming more and more attentive to the potential negative effects of mentoring relationships gone wrong (Ehrich, Bransford, & Tennent, 2004; Long, Hall, et al., 2012). It is within this context that the match between mentor and mentee is seen as a vital element in making mentoring work (Bullough, 2012; Hobson, Ashby, Malderez, & Tomlinson, 2009).

Matching in this sense refers to match-making (how mentors and mentees are matched), as well as to adaptation (how mentors adapt their mentoring to match individual differences in novice teachers' learning). Match-making in programs for teacher preparation is typically a formal affair; mentor-mentee dyads are formed by the teacher preparation program, as opposed to informal matching in which mentor and mentee choose each other based on mutual affiliation. This formal match-making tends to be limited to appointing novices to the teacher that is available as a mentor in school (Bullough, 2012). As far as any further matching goes, this may be based on matching by subject area (Waterman & He, 2011) and proximity in work location (Carter & Francis, 2001), but generally does not extend to matching based on learning styles, teaching beliefs or specific levels of development (Bullough, Young, Hall, Draper, & Smith, 2008). As a result, much of the responsibility for any further matching defaults to the mentor teacher, and therefore to his/her ability and disposition for adaptation to the individual novice (Rajuan, Beijaard, & Verloop, 2010). In doing so, mentors are expected to accommodate a vast array of individual differences

in their support of novice teacher learning, such as learning styles, concerns, needs, stages of development, images and beliefs about teaching, and goals and expectations concerning the mentoring relationship (Hobson et al., 2009). Similarly, models of mentoring and supervision (Fritz & Miller, 2003; Maynard & Furlong, 1994; Ralph & Walker, 2013b) as well as studies of novice teacher learning (Kagan, 1992; Oosterheert, 2001) also tend to place the responsibility for matching primarily on the mentor, providing prescriptions and suggestions of how mentors should accommodate and adapt to such differences between novice teachers. There is however limited insight into how mentor teachers' themselves understand the meaning of 'adaptation to novice teacher learning', and how that understanding may differ between mentors who are highly adaptive, and those that are less adaptive to individual differences in novice teacher learning.

The aims of this study are therefore to 1) describe the mentoring activities through which mentors intend to adapt to the individual novice teacher that they articulate in talking about their mentoring practice and to 2) explore what distinguishes adaptive mentor teachers from non-adaptive mentors. Consequently, our research questions for this study are:

(1) What mentoring activities to support the learning process of novice teachers do mentor teachers articulate in talking about their mentoring practice?
(2) Which of these mentoring activities can be identified as adaptive mentoring activities?
(3) What are the distinctive features of adaptive mentor teachers?

In this study we define adaptive mentoring activities as those activities in connection to which mentors express an intention to adapt the mentoring process to the individual novice teacher and his/her learning process. Adaptive mentors in this study are mentor teachers that mention relatively many such adaptive mentoring activities in talking about their mentoring practice. In exploring distinctive features of adaptive mentors, we will focus on the overall pattern of mentoring activities that adaptive mentors articulate, in comparison to mentors who are non-adaptive in the abovementioned sense.

Insight into how mentor teachers understand adaptation of mentoring to individual differences in novice teacher learning may provide a step towards

bridging prescriptive mentoring models and realities in the field (Cain, 2009). It can provide a sense of what mentors view as possible within the practical limitations of mentoring in schools, and thereby inspire discussion among teacher educators, both school-based and institute-based, of how mentoring could become more adaptive to novice teacher learning. It might also contribute to understanding the knowledge base behind mentoring, in which knowledge of teachers as adult learners is a prominent component (Achinstein & Athanases, 2005; Jones & Straker, 2006).

The literature on novice teacher mentoring distinguishes three ways in which mentors can be adaptive to individual differences between novice teachers; matching expectations of mentoring, being versatile in mentoring style, and reframing teaching with novices.

3.1.1 Matching expectations of mentoring

When asked to report on the help that mentors provide, mentees tend to provide overall affective reactions to the relationship itself (Allen & Poteet, 2011). Mentoring is first and foremost a personal relationship in which the mentor performs a variety of helping functions or roles (Abell, Dillon, Hopkins, McInerney, & O'Brien 1995; Roberts, 2000). Rajuan, Beijaard, and Verloop (2007; 2008; 2010) analysed the match between mentors' and novices' expectations of the roles of the mentor teacher in twenty novice-mentor pairs. They found that novices in either highly matched or highly mismatched pairs reported limited quality of learning, because of an imbalance between the degree of challenge and support that the novice teacher experienced. Novices in mixed matched pairs (where novices and mentors held both similar and different expectations) reported experiencing more balanced amounts of support and challenge, and a higher quality of learning.

In order to match novices' expectation, supervisors in Stephens and Waters (2009) provided novices with a choice of supervisory approach at the start of supervision, ranging from more structured to less structured. They found that complicating factors were novice teachers' ability to understand different approaches to supervision, and novices' level of competence and confidence. The adaptive mentorship model (Ralph & Walker, 2013b) assumes a more moment-to-moment matching between the support that novices expect and which mentors

provide. In this model, novices indicate their levels of competence and confidence regarding a specific task, and mentors try to 'match' the degree of task-oriented direction and person-oriented support they provide in supporting the novice to master this task. There is a general expectation that good mentors invite mentees to articulate their preferences and expectations about mentoring, negotiate possibilities to meet these expectations, and revisit and revise mutual expectations regularly (Hobson et al., 2009). The above research evidence suggests that highly matched expectations may be problematic for the quality of learning experienced through mentoring, and that explicit negotiation sets high demands on mentee self-awareness and knowledge of possible mentoring approaches. Such explicit negotiation also assumes that mentors are versatile enough in their approach to accommodate the different choices that novices may make.

3.1.2 Being versatile in mentoring style

In a year-long study of 18 mentors, Young, Bullough, Draper, Smith, and Erickson (2005) found that one-third of the mentor teachers shifted their mentoring style to accommodate characteristics of their novice teachers, in the course of the one-year mentoring relationship. While the majority of the mentors remained either responsive, interactive or directive in style throughout the year, others shifted their style, sometimes using one style for one mentee, and another for a second mentee. Studies that have found mentors to be consistently overly prescriptive, directive, informative, or non-directive (Ben-Peretz & Rumney, 1991; Strong & Baron, 2004; Williams et al., 1998) have been critical of the ability of mentor teachers to accommodate to both individual differences in novice teacher learning, and to novice teacher development over time. It is because of this perceived lack of versatility in style that programs and methods have been developed to train mentors to be more versatile. More versatile mentors are able to use directive as well as non-directive skills in mentoring conversations, and to be reactive to novice input as well as to actively initiate topics in the conversation (Crasborn, Hennissen, Brouwer, Korthagen, & Bergen, 2008; Timperley, 2001).

3.1.3 Reframing teaching with novice teachers

Achinstein & Barrett (2004) used the term 'reframing' to indicate how mentor teachers helped novices to talk about teaching not only within a managerial frame, but also in a human relations and a political frame. They found that the mentors struggled to respect novice teachers' existing values while trying to connect them to ways of seeing teaching. While some mentors had different repertoires of framing that allowed them to use different frames with different novices, others used one dominant frame across different novices teachers they mentored. Mentors that are skilfully adaptive in this sense find productive openings for constructing and reframing problems of practice (Bradbury, 2010; Feiman-Nemser, 2001b), they engage novice teachers' personal theories of learning (Graham, 2006; Timperley, 2001) and are able to "articulate principles of teaching as they arise in practical contexts for the student teachers (..) in ways that facilitate student teacher learning about their own practice and how to improve it" (Timperley, 2001, p. 112). Reframing requires mentors to have an end-in-sight in working with novices, as well as an ability to 'read a mentoring situation' (Orland-Barak, 2001) to judge what is possible in guiding novices toward that goal. Being adaptive in this sense goes beyond matching the expectations of the novice, or adapting the mentoring style to the degree of direction the novice needs. It places novice teachers' learning in a larger view of what constitutes essential knowledge and values for novices to develop (Achinstein & Athanases, 2005).

Of these three ways of being adaptive to individual novice teachers and their learning, it is especially versatility and reframing that have been related to the mentoring conceptions that mentors hold and that inform their mentoring practice. This relationship is not the focus of this study. Rather, we draw on these findings to select mentor teachers that may be either more or less adaptive, and we therefore discuss this existing research work before moving on to our research method.

3.1.4 Mentoring conceptions related to being adaptive

Being able to reframe teaching with novices requires mentors to hold a 'bifocal' view of what constitutes good teaching for pupil learning, as well as good mentoring for novice teacher learning (Achinstein & Athanases, 2005; Athanases

& Achinstein, 2003; Feiman-Nemser, 2001b). Holding such a bifocal view has been associated with holding a developmental mentoring conception. Mentors holding such a mentoring conception orient themselves to mentee learning and professional development (Orland-Barak & Klein, 2005), but they also try to get novice teachers to take pupils' perspectives, thinking and sense-making into consideration (Feiman-Nemser, 2001b). They see novice teacher learning mainly in terms of developing understanding and awareness about interrelations between teaching and learning (Feiman-Nemser, 2001b; Graham, 2006), and in terms of constructing personal theories of teaching (Graham, 2006). They focus on discussing underlying and integrating principles of teaching and ideal forms of classroom communication. They try to address novice teachers' reasons behind their teaching performance, and attempt to provide novices with different perspectives on teaching (Franke & Dahlgren, 1996; Graham, 2006). Mentors holding this conception see themselves as creative partners in dialogue and cooperation about teaching (Franke & Dahlgren, 1996; Graham, 2006). They view the mentoring relationship as collaborative (Orland-Barak & Klein, 2005), and symmetrical and reciprocal (Hall & Davis, 1995).

However, many mentors operate from an 'instrumental' conception, in which such a bifocal view is underdeveloped. Mentors holding such an instrumental mentoring conception, orient themselves mainly to concerns for effective teaching practice (Orland-Barak & Klein, 2005). They see classroom management as a paramount goal for novices, and try to secure novice teacher proficiency in the mechanics and routines of teaching so they can 'go it alone' without mentor support as soon as possible (Graham, 2006; Norman & Feiman-Nemser, 2005: Young et al., 2005). They focus mentoring discussions on their evaluations of observed teaching behaviours, and on novice teachers' feelings about their teaching (Franke & Dahlgren, 1996). Mentors in this conception see themselves mainly as 'maestros' (Graham, 2006), and they see novice teacher learning mainly in terms of performance improvement (Orland-Barak & Klein, 2005). Holding such an instrumental conception has been associated with being non-adaptive both in the sense of being versatile (Williams et al., 1998) and of reframing teaching with novices (Achinstein & Barrett, 2004).

3.2 Method

3.2.1 Participants

Individual interviews were conducted with 18 mentor teachers in secondary and vocational education in the Netherlands, associated with eight different teacher education institutes. Because we wanted to maximize the chances of finding highly adaptive as well as non-adaptive mentors in a relatively small sample, we chose to select mentors holding strong as well as weak developmental mentoring conceptions, and mentors holding strong as well as weak instrumental mentoring conceptions. Based on our discussion above of being the relationship between adaptiveness and mentoring conceptions, we assumed that mentors holding a developmental mentoring conception would be more likely to articulate adaptive mentoring activities, and mentors holding an instrumental mentoring conception would be less likely to articulate adaptive mentoring activities. Mentors were therefore selected based on their responses to a survey questionnaire, which measured the degree to which they held an instrumental mentoring conception and a developmental mentoring conception (see section 2.2.3.2). Of the 726 respondents, 245 (34%) indicated a willingness to participate in a follow-up study. The 18 participants in this study were selected from these 254 mentor teachers. Mentors were divided according to the mean scores for all 726 respondents on both mentoring conception scales. This resulted in four groups: mentors scoring above-average on both scales, below average on both scales, and either a combination of above/below or below/above the average on the two mentoring conception scales. From all four groups, equal amounts of mentors were selected at random and invited to participate in a follow-up study. Due to uneven response to the invitation in each group, the final sample included 6 mentors scoring above average on both scales, 3 mentors scoring below average on both scales, 4 mentors scoring below average for developmental mentoring conception and above average for instrumental mentoring conception, and 5 mentors scoring the opposite.

The final sample thus consisted of 18 mentor teachers, 11 males and 7 females. Age in years ranged from 26 to 59 years (M= 47.8 years, SD= 9.7). Teaching experience ranged from 3 to 37 years (M= 23.5 years, SD= 9.5). Mentoring experience was highly varied, and ranged from 3 to 30 years (M= 11.3

years, *SD*= 9.0) and 6 to 60 mentees mentored (*M*= 18.0 mentees, *SD*= 13.3). 7 mentors (39%) reported not having had any training for their role as a mentor teacher, and 11 (61%) reported having had one training, or more. In the total questionnaire sample these percentages were 46% and 52% respectively, suggesting that the training level of the 18 mentors in the final sample was slightly higher than that of the average mentor.

3.2.2 Context

Mentor teachers in the Netherlands are considered to be school-based teacher educators. In the last decade in the Netherlands, mentoring has increasingly become part of broader professional development efforts centred on collaborative school-institute partnership schemes, which have been actively supported through government funding, and which have raised demands for training and professional development opportunities for school-based teacher educators. At the national level, teacher educators are organized in the 'Dutch Association for Teacher Educators VELON'. The association has developed competence standards and a knowledge base for teacher educators, and provides teacher educators the possibility of certification according to these standards (Snoek, 2013). Currently only a small fraction of teacher educators have completed certification (European Commission, 2013). Consequently, certification hardly plays a role in mentor teacher selection and training. Mentor teachers tend to be selected mainly according to availability and subject matter matching, and most mentors only complete one basic mentor training which lasts several days, up to a week. Such basic training generally involves skill training for observing and performing mentoring dialogues with novice teachers (Crasborn et al., 2008), an orientation on program standards and competence-based training and assessment, and a clarification of the concomitant expectations for the mentor role.

3.2.3 Interviews and interview guide

In order to elicit mentor thinking about practice close to their actions and intentions, interviews were conducted on-site, directly following a post-lesson conversation with one of the mentor teacher's 'own' mentee teachers, that the mentor teacher had just observed teaching a full lesson. The mentoring

conversation was audio-taped with a wireless microphone and mini-disc, with the interviewer following the conversation real-time in an adjacent room or hallway. This way, the interviewer was able to use specific probes in the subsequent interview, by referring to observed activities in the mentoring conversation, such as in the following interview fragment between the interviewer (I) and a respondent (R):

> (I): I noticed that the first twenty minutes of the conversation were spent on talking about what went well.
> (R): Yes.
> (I): Do you do that intentionally?
> (R): Yes.
> (I): Why do you do that?
> (R): I believe that everyone has a right to experience success. I try.....
> (transcript 10309, lines 147-159)

The interviews were semi-structured, and conducted according to a topic list, starting with questions about the observed mentoring conversations, and widening out to more general topics. This was done to address the 'here-and-now' as well as 'there-and- then' aspects of mentor teachers' professional practice (Baynham, 2011), and to provide mentors with a specific and concrete reference point, with which to compare their mentoring practice in general. The interview consisted of two parts; a task-based section, and a general section. Appendix 1 presents the topic list. Interviews lasted on average 67 minutes, ranging from 42 minutes to 132 minutes, and were transcribed verbatim from audio files.

3.2.4 Analysis

3.2.4.1 Analysis of interview fragments

Interview transcripts were analysed using Template Analysis (TA) (King, 2004; Brooks & King, 2012), within OpenCode 4.0 (ICT Services and System Development and Division of Epidemiology and Global Health, 2013), a software program that supports basic code-and-retrieve functionalities. A two-level hierarchical coding template was developed to describe mentor teachers'

mentoring activities. At the lowest level, twenty-nine activities were identified. At the highest level, these activities were organized into four overarching mentoring functions, derived from a synthesis of literature on mentoring. The coding template is presented in the results section in answer to the first research question.

3.2.4.2 Coding template development

Coding started with four cases scoring the most 'extreme' on the questionnaire scales. After coding these four interviews in parallel by two researchers, an initial coding template was developed. Seven additional interviews were coded by one researcher leading to refinement and adding of codes in the template, and selected coded interviews and interview fragments were checked by the second researcher. Where there was disagreement on coding, code meanings and coding of fragments were discussed until consensus was reached, and the coding template was revised; code descriptions were refined and clarified and coded mentoring activities in the coding template were grouped according to the intentions in the combination of intention and activity in each coded mentoring activity. This was repeated with the remaining seven interviews. Complete saturation occurred only when all interviews were analysed, with the last interview adding a single new activity code. The coding template was again revised until consensus was reached, and previously coded interviews were re-coded based on the final coding template.

In the final coding template, each code was denoted by a verb to indicate the core of the mentoring activity, and accompanied by a lengthier description indicating the activity and the intention involved in the activity. Although for reasons of briefness the code label only expresses the activity, the code was assigned to the combination of activity and intention mentioned in the full code description. The concept of a mentoring activity was thus made operational as the articulation of a combination of activity and intent; an articulation by the mentor of a specific activity that the mentor performs, and of what the mentor intends to achieve with regard to the learning process of the novice teacher through this activity. Codes were therefore assigned to interview fragments only if the activity and accompanying intentionality were explicitly articulated in the transcript. Codes were not assigned in case 1) a mentor articulated an intention without

clarifying an action with which to realise that intention, or 2) articulated an action without clarifying an intention behind that action.

3.2.4.3 Final scoring of interviews

After coding of interview fragments, each participant was given a score for each mentoring activity, based on their articulation of this activity in the interview transcript as a whole. Mentors were scored either a 1 (articulated in interview transcript) or a 0 (not articulated in interview transcript) for each mentoring activity in the final coding template. Based on these scores for individual activities, each participant was given a combined score for each group of activities, based on the sum of scores of the activities in this group.

3.2.4.4 Identification of adaptive mentoring activities

Mentoring activities were identified as adaptive where the code description of the mentoring activity included an intention to match or adapt an aspect of the mentoring process to characteristics of the individual novice teacher and how he or she learns, or to differences between novice teachers and how they learn in general. This was done during the final coding phase of recoding based on the final coding template.

3.2.4.5 Scoring of mentor adaptiveness

Mentors were assigned a score for adaptiveness based on the sum of scores on the identified adaptive activities. Mentors with an adaptiveness score of 0 (mentioning no adaptive activities) were defined as non-adaptive, and mentors with an adaptiveness score of 3-4, (mentioning 3-4 adaptive activities, 4 being the maximum score), were defined as highly adaptive.

3.2.4.6 Analysis of distinctive features of adaptive mentors

To explore distinctive features of adaptive mentors, correlation coefficients were calculated between participants' adaptiveness score and both their combined

scores for groups of activities (excluding the adaptive activities), and their scores for individual mentoring activities. We used Kendall's tau-b; this is a non-parametric measure, suitable for ordinal data and small data samples with a large number of tied ranks, which was the case in our sample.

In addition, patterns of mentoring activities articulated by highly adaptive mentors were contrasted with patterns of mentoring activities articulated by non-adaptive mentors. In doing so we looked at contrasts where at least 25% of the mentors had a different score on a mentoring activity. These contrasts are presented in answer to the third research question.

3.3 Results

3.3.1 Mentoring activities articulated by mentors

Mentor teachers articulated twenty-nine different mentoring activities. Based on the intentions involved in these activity-intention combinations, we distinguished four groups of activities, namely mentoring activities oriented at A) providing emotional and psycho-social support for learning, B) supporting construction of personal practical knowledge of teaching, C) creating a favourable context for novice teacher learning, and D) changing novice teacher behaviour (Box 3.1).

Individual mentors articulated 6 to 14 mentoring activities (M = 10.6, SD= 2.2). Corresponding to the numbers in Box 3.1, mentoring activities articulated most frequently were (B.14) initiating and (A.1) affirming, closely followed by (B.13) encouraging, (C.19) facilitating and (D.26) imposing. Mentoring activities articulated least frequently were (B.9) providing novice teachers access to mentor thinking and (B.11) addressing novice teachers' motivation (Figure 3.1).

Box 3.1. Mentoring activities articulated by mentors in this study.

A. Providing emotional and psycho-social support

1. **Affirm:** indicating specifically what a novice teacher did or does well, to make him/her aware of strengths and capabilities
2. **Attune:** attuning the mentoring approach to what a novice can handle emotionally, to prevent anxiety, nervousness or withdrawal due to emotional over-taxing
3. **Be there**: being there and actively available for the novice teacher, to lower the threshold for help-seeking and involvement in mentoring
4. **Buffer feedback :** sequencing positive feedback and discrepancy feedback to buffer the effect of the latter and communicate positive intent
5. **Indicate growth:** comparing current and previous performance of the novice, to ensure novice awareness of progress and prevent over-dwelling on weaknesses
6. **Orchestrate success:** creating a setting that evokes for the novice an experience of success as a teacher, to confirm their sense of competence and self-confidence
7. **Reassure:** reassuring the novice and putting experiences in perspective, to take away anxiety and doubts about their level of competence
8. **Share:** sharing personal experiences, to make the novice feel personally connected with the mentor and prevent feelings of isolation and alienation

B. Supporting construction of personal, practical knowledge about teaching

9. **Access thinking:** stimulating the novice to discuss the mentor's teaching with him/her after observation, to provide access to mentor thinking about teaching
10. **Adapt:** adapting the form of mentoring conversation to match the novice teacher's capacity for reflecting about teaching
11. **Address**: addressing the novice's motivations and drives for teaching, to rekindle enthusiasm and help them make a conscious and engaged choice for teaching

Box 3.1. (continued)

12. **Build:** building tasks from simple to complex in relation to novice teacher capacity level, to prevent mental overload of mentees
13. **Encourage**: encouraging novices, through questioning, to think through topics they bring in, to attend to their concerns and promote ownership of solutions
14. **Initiate:** stimulating novices, through questioning, to think through topics initiated by the mentor, to check/stimulate awareness and promote ownership of solutions
15. **Link:** linking back/forward to a previous/next conversation, to ensure a sense of continuity and prevent one-shot sessions
16. **Structure:** structuring the mentoring conversation according to a sequence of steps, to ensure completion of a specific process of reflection

C. Creating a favorable context for novice teacher learning

17. **Align:** informing about or responding to the novice teacher's expectations, to align the mentoring process with the novices teacher's expectations and needs
18. **Bound:** keeping mentoring interactions bounded to specific moments, to maintain informal and collegial interactions with mentees, alongside the mentoring relationship
19. **Facilitate:** organizing access to learning experiences for the novice teacher, to broaden the learning experience beyond the mentor-mentee relationship
20. **Give status**: stepping back, staying away, not observing or not intervening in order to give the novice the status of 'real teacher' vis-a-vis the pupils
21. **Induct:** introducing the novice teacher as a participant in non-teaching professional activities, to induct him/her into working as a teacher beyond the classroom
22. **Intervene:** intervening directly in the relationship between the novice teacher and pupils on behalf of the novice, to prevent escalation of potentially volatile situations

Box 3.1. (continued)

23. **Make responsible**: making the novice teacher responsible for an authentic product or task, to let them learn through risk-taking, doing or making in a real setting
24. **Protect:** intervening in the organization of the novice teachers' placement, to eliminate potential obstacles for optimal novice teacher development.

D. Changing novice teacher behavior

25. **Advise:** giving advice, tips or suggestions on topics novices bring in, to attend to novice concerns and to provide them with solutions to adopt or choose from
26. **Impose:** telling novices what was good or problematic, and imposing solutions for problems, to ensure subsequent desired thinking and behavior
27. **Model:** modeling/showing novices ways of doing or being, to provide them with alternative courses of action and images of how to teach or be a teacher
28. **Monitor:** monitoring novice teacher progress on realizing intentions developed in mentoring conversations, to ensure attempts are made to realize learning goals.
29. **Orchestrate challenge:** creating a task or setting that forces the novice to stretch beyond current dispositions, to help develop professionally more appropriate ones

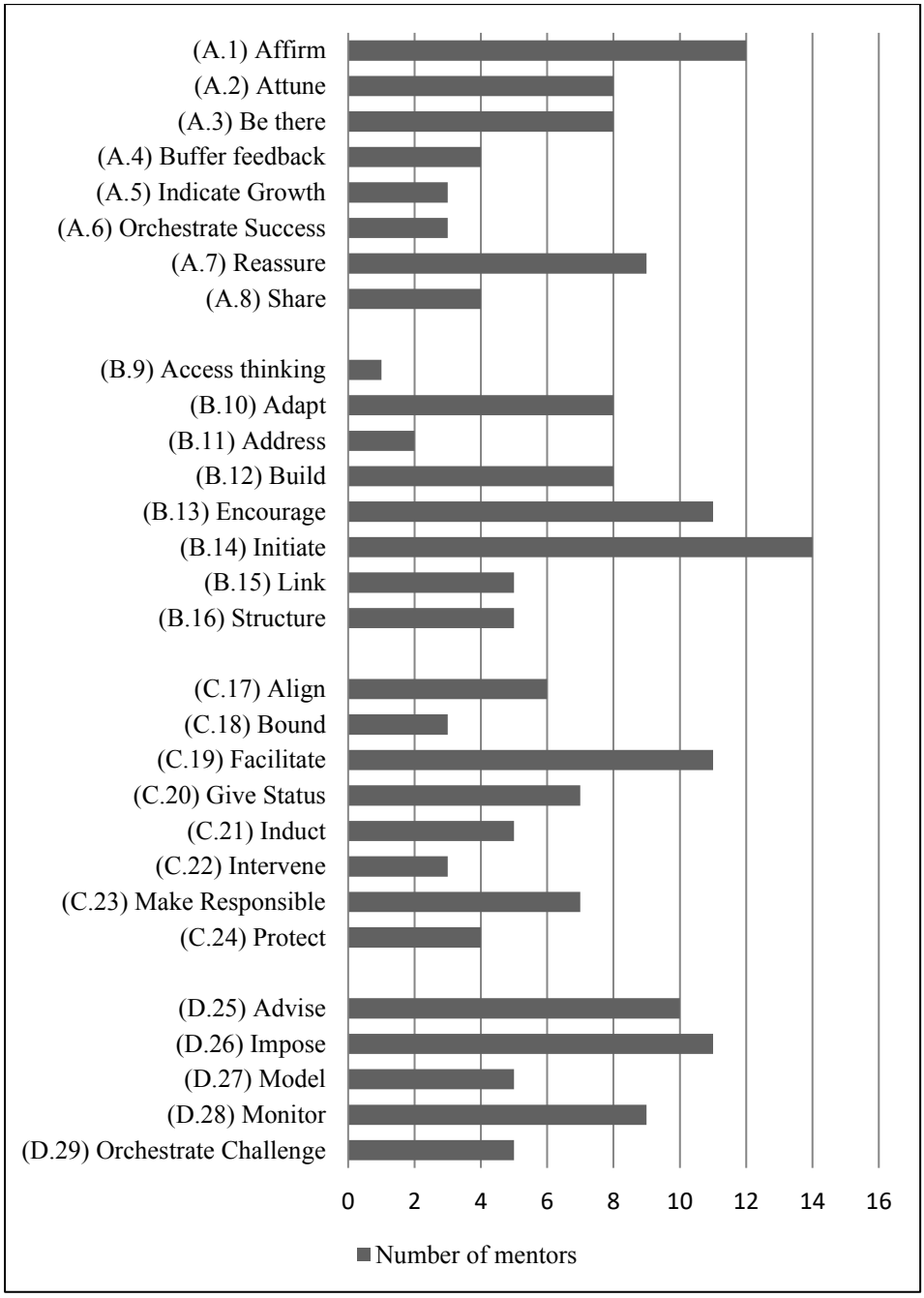

Figure 3.1. Mentoring activities by frequency of articulation.

3.3.2 Adaptive mentoring activities

Mentors articulated four activities that involved an intention to adapt mentoring to how novice teachers learn. Corresponding to the numbers in Box 3.1, these were: (A.2) attuning to the emotional state of the mentee and what the mentee can handle emotionally, (B.10) adapting to the novice teacher's' capacity for reflection, (B.12) building tasks from simple to complex to match novice teacher's competence level and (C.17) aligning mentoring to mentees' expectations. These adaptive mentoring activities were spread across three of the four groups of mentoring activities: no adaptive activities were oriented at changing novice teacher behaviour, and two were oriented toward supporting novice teacher construction of personal practical knowledge (Table 3.1). Attuning, adapting and building were articulated by eight mentors, and aligning was articulated by six mentors (Figure 3.1).

Table 3.1. Adaptive mentoring activities by group of mentoring activity.

Mentoring activity group	Adaptive mentoring activities in this group
A. Providing emotional and psycho-social support	**2.Attune:** attuning the mentoring approach to what a mentee can handle emotionally, to prevent anxiety, nervousness or withdrawal due to emotional over-taxing
B. Supporting construction of personal, practical knowledge about teaching	**10. Adapt:** adapting the form of mentoring conversation to match the mentee's capacity for reflecting about teaching **12. Build:** building tasks from simple to complex in relation to mentee capacity level, to prevent mental overload of mentees
C. Creating a favorable context for novice teacher learning	**17. Align:** informing about or responding to the mentee's expectations, to align the mentoring process with the mentee teacher's expectations and needs
D. Changing novice teacher behavior	(none articulated)

Note: Numbers in parentheses correspond to numbers in Box 3.1.

Attuning to what mentees can handle emotionally was articulated in connection to mentor teachers' views of novices being anxious, lacking confidence, being highly sensitive in receiving comments, being tired and drained from teaching, crying and being confused, being reluctant to talk about a difficult personal background, and unpredictable moments of emotion where a deeper kind of 'breakthrough' occurred. This led to attuning by being more careful in providing comments, postponing observations to give the novice room to adjust, engaging mentees in talk about their inner workings, and setting aside more time to talk with mentees, or indicating that the occurring emotional problems were beyond the scope of mentoring.

Adapting the mentoring conversation to mentee's level of reflective capacity was articulated in connection to mentors' views of novices being either easy talkers or unaccustomed or unwilling to talk about themselves, being either independent in thinking or complacent and unconcerned, being able or unable to come up with solutions for problems, being at a beginning or advanced level of thinking about teaching, and being unaware or highly aware of their behaviours or weaknesses. This led to starting with open talk to find openings in novices' personal backgrounds to connect to teaching, talking more loosely or more actively monitoring the mentee's talk in the conversation, trying to get mentees to come up with solutions for problems or providing them with solutions, and confronting novices by providing problematic observations or by making them watch and analyse videotapes of themselves teaching.

Building tasks from simple to complex was articulated in connection to mentor teachers' views of how novices develop as teachers. It involved incrementally working on learning goals in small steps one at a time, starting to teach part lessons in working towards teaching whole lessons, and working on group management before moving on to advanced work such as independent design of teaching units, attention for individual pupils or experimentation with more complex teaching strategies.

Aligning with novices' expectations was articulated in connection to starting the mentoring relationship with discussions of novices' willingness to be mentored, views of teaching, desired frequency of mentoring, desired mentoring style, and mutual timetables and obligations, and to responding to novices that ask for more frequent mentoring sessions during the mentoring process.

3.3.3 Distinctive features of adaptive mentors

Individual mentors articulated up to three adaptive mentoring activities (*M*= 1.7, *SD*= 1.2). Six mentors articulated a total of three adaptive activities each (Figure 3.2). In line with our previous definition of highly adaptive mentors as mentors that articulate many adaptive mentoring activities, we will refer to these six mentors as highly adaptive mentors. The correlation between the overall number of mentoring activities that mentor teachers articulated, and the number of adaptive activities they articulated was not statistically significant ($\tau = .24$, (one-tailed) n.s.), which suggests that the number of adaptive activities that mentors articulated was not an artefact of mentors' tendency to verbalize mentoring activities.

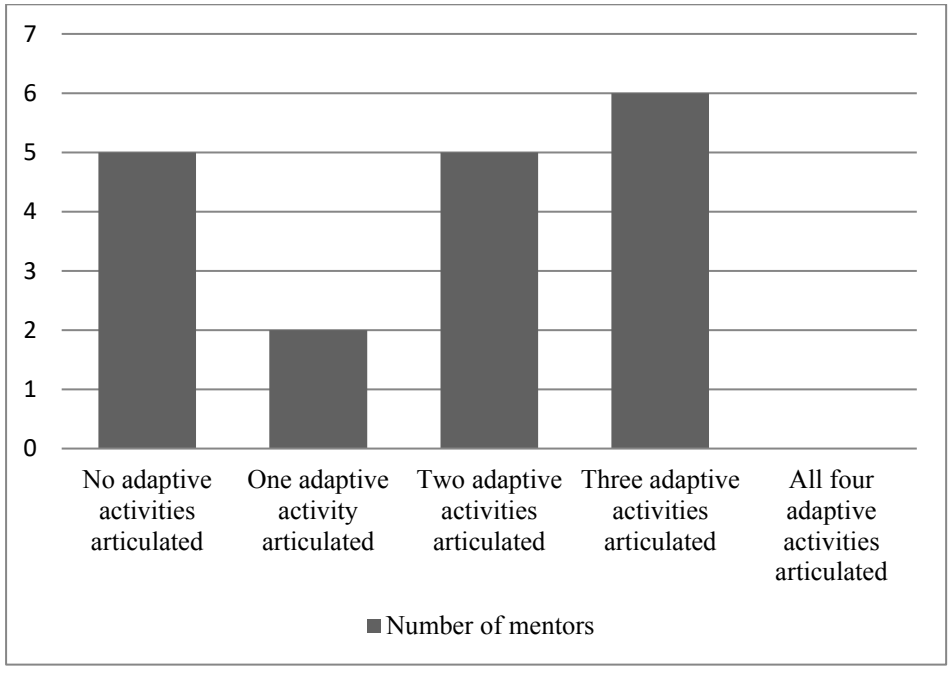

Figure 3.2. Number of mentors by number of adaptive activities articulated.

Correlations showed two major distinctive features of adaptive mentors: 1) that they articulated relatively more activities oriented at construction of personal practical knowledge by novice teachers (activities 13 through 16, Table 3.2) , and 2) that they articulated relatively fewer activities oriented at creating a favourable context for novice teacher learning (activities 18 through 24, Table 3.2). The correlations between mentors' adaptiveness score and their combined score for these two groups of activities were statistically significant. On average, the more adaptive mentoring activities mentors articulated, the more likely they were to articulate mentoring activities oriented at supporting construction of personal practical knowledge (τ = .42, p <.05), and the less likely they were to articulate mentoring activities oriented at creating a favourable context for novice teacher learning (τ = -.63, p <.01).

A third distinctive feature of adaptive mentors was their articulation of the mentoring activities (B.13) encourage, (C.20) give status, (C.22) intervene and (D.28) monitor: the correlation between mentors' scores on these activities and their adaptiveness score was statistically significant. So on average, the more adaptive mentoring activities mentors articulated, the more likely they were to articulate the activities of (B.13) encouraging novices to think through topics they bring in (τ = .59, p <.01) and of (28) monitoring progress on learning goals (τ = .63, p <.01). Also, the less likely they were to articulate the activities of (C.20) stepping back in order to give novices the status of 'real' teacher vis-a-vis pupils (τ = -.74, p <.01), and of (C.22) intervening directly in the novice teacher-pupil relationship to prevent problematic situations (τ = -.54, p <.05). Inspection of the patterns of articulated mentoring activities of the six highly adaptive versus the five non-adaptive mentors showed a similar pattern. Corresponding to the numbers in Table 3.2, all of the highly adaptive mentors articulated the mentoring activities (B.13) encouraging and (D.28) monitoring, and none of them articulated the activities (C.20) giving status and (C.22) intervening.

A fourth distinctive feature of adaptive mentors was their articulation of the mentoring activities (A.3) be there, (B.16) structure and (D.29) orchestrate challenge. This was based on the patterns of articulated mentoring activities of the six highly adaptive versus the five non-adaptive mentors (Table 3.2). With a difference of at least 1 in 4 (25%), highly adaptive mentors articulated more (A.3) being there and available for novice teachers, more (B.16) structuring of mentoring conversations to complete a specific process of reflection, and less

(D.29) orchestrating challenge to force novices to stretch beyond current dispositions. The correlations between mentors' adaptivity scores and their scores on these activities were not statistically significant, however.

Finally, within the highly adaptive mentors, more 'cognitively adaptive' and more 'emotionally adaptive' mentors could be distinguished, based on the comparison of patterns of articulated mentoring activities between these two groups. With a difference of at least 1 in 3 (33%), these two groups differed in their articulation of the mentoring activities (A.2) attuning to what mentees can handle emotionally, (B.10) adapting to novice teachers' reflective capacity, (A.5) indicating growth, (B.15) linking mentoring conversations, and (C.18) keeping mentoring bounded to specific moments. The more cognitively adaptive mentors (mentors A1-A3 in Table 3.2) articulated more (B.10) adapting to novice teachers' reflective capacity, (A.5) indicating growth and (B.15) linking mentoring conversation. The more emotionally adaptive mentors (mentors A4-A6 in Table 3.2) articulated more (A.2) attuning to what mentees can handle emotionally and (C.18) keeping mentoring bounded to specific moments. The two subgroups were also different according to gender. The more adapting, 'cognitively adaptive' mentors (mentors A1-A3; Table 3.2) were all male; the more attuning, 'emotionally adaptive' mentors (mentors A4-A6; Table 3.2) were all female.

Table 3.2. Patterns of articulated mentoring activities for highly adaptive and non-adaptive mentors.

	Highly adaptive mentors						**Non-adaptive mentors**				
Mentor	A1	A2	A3	A4	A5	A6	N1	N2	N3	N4	N5
Mentor gender	F	F	F	M	M	M	M	M	M	F	F
Adaptive mentoring activities											
2. Attune				x	x	x					
10. Adapt	x	x	x	x							
12. Build	x	x	x	x	x	x					
17. Align	x	x	x		x	x					
A. Providing emotional and psycho-social support											
1. Affirm	x	x	x	x	x		x	x	x		
3. Be there	x	x	x	x		x			x	x	
4. Buffer feedback			x				x	x			
5. Indicate Growth	x	x							x		
6. Orchestrate Success								x			
7. Reassure	x					x		x		x	
8. Share										x	x
B. Supporting construction of personal, practical knowledge about teaching (*)											
9. Access thinking											x
11. Address											x
13. Encourage (*)	x	x	x	x	x	x				x	
14. Initiate	x	x	x	x	x				x	x	x
15. Link	x	x	x						x		
16. Structure	x			x	x						
C. Creating a favorable context for novice teacher learning (*)											
18. Bound				x		x			x		
19. Facilitate	x		x		x			x	x	x	x
20. Give Status (*)							x	x	x	x	x
21. Induct			x				x		x		x
22. Intervene (*)							x	x	x		
23. Make Responsible							x	x			
24. Protect			x					x		x	x
D. Changing novice teacher behavior											
25. Advise		x	x		x	x			x	x	
26. Impose	x	x		x	x		x	x	x	x	
27. Model						x	x	x			
28. Monitor (*)	x	x	x	x	x	x					x
29. Orchestrate challenge							x	x	x		

Note: Numbers for mentoring activities correspond to numbers in Table 1.

(*) indicates single activities or groups of activities that correlated statistically significant with mentor adaptiveness scores.

Contrasts between highly adaptive and non-adaptive mentors. Contrasts between 'cognitively adaptive' and 'emotionally adaptive' mentors.

3.4 Discussion

The aims of this study were to describe the adaptive mentoring activities that mentor teachers articulate in describing their practice, and to explore characteristics of adaptive mentors.

Mentor teachers articulated four adaptive activities: 1) aligning mutual expectations of mentoring, 2) attuning to mentees' emotional states, 3) adapting to mentees' capacities for reflecting, and 4) building tasks to match mentees' levels of development. These ways of being adaptive to individual differences in novice teacher learning reflect current notions in research work on novice teacher mentoring of what it means to be adaptive: matching mutual expectations (Rajuan et al., 2010), shifting style (Crasborn et al., 2008) and helping novices to reframe teaching (Bradbury, 2010).

Adaptive mentors were more likely to mention activities oriented at supporting construction of personal practical knowledge, such as encouraging novice teachers to think through problems they bring in, and structuring mentoring conversations to complete a process of reflection. These characteristics are relevant for stimulating novice teachers to adopt a meaning-oriented learning orientation, similar to what expert teacher educators in Bronkhorst, Meijer, Koster, and Vermunt (2011, p.1127) define as "learning to teach by developing an informed, personal theory of practice." When novices adopt an open-meaning orientation to learning to teach, they try to improve their practice as well as develop their frames of reference for understanding teaching, and use a variety of internal and external sources to regulate their learning (Oosterheert, 2001). However, recent findings suggest that many novice teachers may regress towards less favourable learning orientations in their initial years (Vermunt & Endedijk, 2011). Further research should therefore focus on how adaptive mentors might not only match the mentoring process to novice teachers' ways of learning, but also help novice teachers to grow as learners. Such research should be longitudinal, to see how novice teachers' ways of learning might change over time, and how mentor teachers might play a role in their shifts towards more developed ways of learning.

Adaptive mentors were either more oriented toward the emotional aspects of novice teacher learning or more to the cognitive aspects. The more cognitively oriented adaptive mentors mentioned more adapting to reflective

capacity, linking of mentoring conversations and indicating growth. These are mentoring activities that may function to enhance novice teachers' sense of continuity and growth in learning to teach. The more emotionally oriented adaptive mentors mentioned relatively more attuning to emotional capacities, and bounding; keeping mentoring interactions bounded to specific moments, to maintain informal collegial interactions alongside the mentor-mentee relationship. The latter activity may function to make mentoring interactions safer for novices, by creating a specific place and time to discuss more emotionally laden matters, while simultaneously protecting mentors from being over-taxed in providing emotional support. These findings are in contrast to previous findings that a focus on feelings may lead mentors to create a community of compassion, rather than one of inquiry with novices (Young et al., 2005). There is no indication that the emotionally adaptive mentors in our study provide such emotional support simply as a buffer while trying to get novices to 'go solo' in teaching as quickly as possible. They do not mention a focus on giving novices the status of 'real' teacher vis-à-vis pupils, intervening directly in novices' relationships with pupils or setting tasks to force novice teachers to change their dispositions. Rather, these emotionally adaptive mentors combine their focus on emotional aspects of novice teacher learning with attention for encouraging novice teacher reflective thought, and for progressively developing novice teacher competence. We suggest that in light of recent concerns about the level of emotional intelligence of novice teachers (Corcoran & Tormey, 2012) future research should pay special attention to how such emotionally adaptive mentors might help novice teachers with the development of emotional skill in teaching and learning to teach. We also suggest that such future research should attend to mentor gender, as we found that the emotionally adaptive mentors were all female, whereas the cognitively adaptive mentors were all male. This is consistent with research on gender in mentoring, which has found that female mentors tend to engage more in psychosocial support, whereas male mentors tend to engage more in career development support (O'Brien, Biga, Kessler & Allen, 2010).

A limitation of this study is that mentors' accounts of practice were collected at one point in time. Mentors' capacity for talking about their practice and explicating their activities is necessarily limited. Their articulation of activities may also have been influenced by the context of the specific mentee

and the mentoring issues connected to this novice/mentee teacher. Collecting multiple records over time would have made it possible to collect a larger sample of articulated activities across mentors' practice. To some degree, this was compensated for by asking for comparison of the conversation with other conversations with this and other novice teachers, and for examples of how these were comparable or different. The transcripts showed many mentors engaging in significant storytelling about other cases and their own approach in those cases, shifting into performed direct speech (directly performing speech as a mentor, novice or pupil), and co-constructing the narrative with the interviewer, similar to teachers in interviews analysed by Baynham (2011). That study used a similar interview protocol addressing 'here-and-now' as well as 'there-and- then' aspects of professional practice, and connected the aforementioned features to solidarity features between interviewer and interviewee. The narrative quality of much of the interview data therefore suggests to us that within the limitations of a single interview, significant information on mentors' activities is likely to have surfaced.

A second limitation is of course the limitation to mentor teachers' point of view. For instance, from the mentors' point of view, being available for novice teachers was not linked to specific differences in novice teachers. However, from the point of view of the novice teacher, being available when needed may be seen as being adaptive to their needs. Novice teachers in Carter and Francis (2001) evaluated the effectiveness of their mentoring relationships mainly in terms of proximity and availability of the mentor, regardless of differences in age and experiences. Mundane as this may seem, structured timetables and busy school environments may pose serious threats to being sufficiently available just when a mentee is in need of support (Brooks, 2000). We therefore suggest that for a fuller understanding of the concept of adaptiveness, further research work should include and contrast the perspectives of mentors as well as novice teachers.

Mentoring, as school-based teacher education, requires the development of 'second-order competences', concerning knowledge about how teachers learn and become competent teachers, as about teachers as adult learners and associated pedagogy (European Commission, 2013). This includes knowledge of individual differences in novice teacher learning and ways to accommodate to such differences in mentoring. The findings of this study could be used to help mentor teachers develop such knowledge, in learning communities of teacher educators

or in seminars and training for mentor teachers (Hobson et al., 2009). We suggest two ways in which the results of this study may be used to help mentors develop knowledge about adaptive mentoring, as well as a more adaptive disposition towards novice teachers.

First, simply presenting mentors with the list of activities developed in this study may help them to see alternative courses of action they had not envisioned, but ones that they recognize as providing additional repertoire to be more flexible in their response to novice teachers. Mentor teachers often work in isolation and with limited opportunities to observe and learn from the mentoring practices of their peers. As a substitute, the list of mentoring activities provides mentors access to the practical knowledge and practices of their peers, in a condensed form. After presenting mentors with this list, they can be asked to identify which activities would be most suitable for what kind of situations. In the interviews, mentor teachers identified how certain activities were appropriate for some situations and not for others. Conversely, mentors may also be asked to first identify differences between novice teachers from previous experience, and subsequently be presented with the list of activities in order to identify which activities would most productively be used for which novice teacher. Such activities may help mentors to make connections between differences in novice teacher learning and appropriate activities in mentoring. The interviews showed most mentors to be able to recall differences between mentees and one or more mentees they found difficult to mentor. Most mentors discussed such cases as examples of where and how they would draw or had drawn a line in accepting sub-par performance or dispositions of novice teachers. The adaptive mentors also discussed such cases as examples of how the mentor had adapted the mentoring process to match the learning process of the mentee. We therefore suggest more specifically that a fruitful opening might be to start by having mentors identify those characteristics they find acceptable and unacceptable in novice teachers, in light of the goals of novice teacher preparation. This may help to 'stretch' mentor thinking into how mentoring might even be adaptive in cases where they might previously have drawn the line, but also to collectively discuss the boundaries of being adaptive, and of when and where it might also be appropriate to terminate mentoring relationships.

Second, specific activities on the list may be discussed with mentors to stimulate them to take a more adaptive perspective toward mentoring. One set of

activities to focus on would be the contrast between a) attuning to novice teachers' emotional states and making mentoring conversations a 'safe haven' separate from other collegial interactions, and b) adapting to the capacity of the novice to reflect on their teaching and stimulating novice teacher awareness of personal growth and continuity in learning. The interviews showed that the highly adaptive mentors differed especially with respect to these adaptive activities. Highlighting this contrast may allow mentor teachers to also address their own individual style and preference in how they want to be adaptive. A second activity to focus on would be to discuss the feasibility of and reasons for making time to discuss mutual expectations of mentoring with novice teachers. This is a fairly distinct adaptive activity, but one that very clearly communicates a willingness to be adaptive on the part of the mentor. This may directly challenge mentors to consider the preferences novice teachers might have, and how they may need to shift their style of mentoring to accommodate to such preferences. A third set of activities to focus on would be to help mentors to think through ways to encourage novice teacher input and thinking in mentoring conversations, and to monitor novice teacher progress on learning goals developed through mentoring conversations, as well as to help them think through the reasons behind such activities. In our study, such activities were emphasised by the more adaptive mentors, and discussing such activities may help mentors to adopt a more overall adaptive stance to mentoring. Discussing such specific activities that may help make mentoring more adaptive should also address how mentors might feasibly incorporate such activities into their mentoring practices, what might hinder them to do so and how they might overcome these hindrances. Doing so may lower the threshold for mentors to actually engage in such activities and make their mentoring practices more adaptive to individual differences in novice teacher learning.

4

MENTOR TEACHERS' VIEWS OF THEIR MENTEE TEACHERS' LEARNING[3]

Abstract

Successful mentoring relationships are essential for novice teachers entering the teaching profession. The success of the mentoring process depends in large part on the diagnostic abilities of the mentor, but there is little research on how mentor teachers view their mentees. In this small-scale study, we explored how 11 mentor teachers describe similarities and differences between their mentee teachers. We found that mentor teachers' descriptions predominantly relate to differences in personal engagement with pupils, identifying as a teacher, perfectionism and self-confidence. Mentors tended to describe these differences in terms of traits and dispositions. We provide suggestions for addressing this issue in mentor preparation and for using findings in mentor training, and we provide a conceptual framework for future studies of mentor teachers' views of their mentees.

[3] This chapter was published in adapted from as:

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4.1 Introduction

High diagnostic ability is a distinctive feature of both successful teaching and mentoring (Schwille, 2008, Wittwer & Renkl, 2008). In teacher mentoring, it requires professional knowledge of mentee teachers as adult learners (Remain & Thies-Sprinthall, 1998). Successful mentoring relationships are considered essential for novice teachers to survive their initial teaching experiences, develop their teaching competencies, and define their teaching lives (Fairbanks, Freedman, & Kahn, 2000; Long et al., 2012; Marable & Raimondi, 2007). Precondition for such successful mentoring relationships is a good match between mentor and mentee. Therefore, mentor teachers are expected to attend to the different and individual needs of their mentee teachers (Bullough, 2012). These different needs may derive from mentee's different learning preferences, teaching concerns, stages of development, readiness levels regarding various teaching competencies, tensions in professional identity formation, images and beliefs about teaching, and goals and expectations concerning the mentoring relationship (Hobson, Ashby, Malderez, & Tomlinson, 2009; Rajuan, Beijaard, & Verloop, 2010; Van Ginkel, Oolbekkink, Meijer, & Verloop, 2016). Such knowledge of novice teachers as adult learners is considered a prominent, but still underdeveloped component of the knowledge base of mentoring (Jones & Straker, 2006). In this study, we aim to contribute to the development of this professional knowledge base of mentoring, by focussing on mentor teachers' own, practical knowledge of their mentee teachers' learning. We do so by exploring what mentor teachers focus on most in talking about similarities and differences between their mentee teachers. Our central research question is therefore: *What attributes of novice teachers' learning do mentor teachers focus on most in describing similarities and differences between their mentee teachers?* Mentor teachers are typically in a position to have elaborate and accurate information regarding their mentees: acquaintance over a longer period, in various settings, and within the context of a close interpersonal relationship (Funder, 1995). For such practitioner knowledge to become professional knowledge, it "…must be public, it must be represented in a form that enables it to be accumulated and shared with other members of the profession, and it must be continually verified and improved." (Hiebert, Gallimore, & Stigler, 2002. p. 4). In our study, we assumed that by explicating mentor teachers' practical

knowledge of their mentee teachers' learning we could inform efforts to support mentors in developing mentoring practices more adaptive and responsive to the needs of their mentee teachers. Three conceptual starting points inform the design of our study. First, the notion that mentor teachers' practical knowledge is connected to the mentoring conceptions that they hold. This informs our selection of respondents. Second, the conceptualisation of becoming a teacher as a process that spans across the personal and the professional domains of mentee teachers' functioning. This informs the initial themes for our data-analysis. Third, the two dimensions of social judgement along which people tend to view and judge other people. This informs the second-order analysis of our data.

4.1.1 Mentor teachers' practical knowledge

Mentor teachers' knowledge of mentoring and learning to teach is above all practical knowledge. It is practice-oriented (Aspfors & Fransson, 2015), intimately tied up with and embedded in their teaching practice and their professional identities as teachers and mentors within their school culture (Kwan & Lopez-Real, 2010), and it derives from personal experiences with their mentees, colleagues, teaching, learning to teach, and personal life experiences in general (Clarke, Killeavy & Moloney, 2013). At the same time, however, mentoring in Initial Teacher Education is increasingly seen as a professional practice that requires mentors to "…draw from their strategic knowledge of teaching and learning to teach and their knowledge of their novice as a learner to create appropriate learning opportunities." (Schwille, 2008, p. 155). Such professional mentoring requires mentors to be pro-actively adaptive to novice teacher learning, while working towards a vision of good practice (Stanulis, Brondyk, Wibbens, & Little, 2014). This involves a bifocal vision: attending to immediate issues of improving teaching performance as well as to long-term goals for novice teachers' learning and development. This bifocal vision has been connected to the mentoring conceptions that mentor teachers' hold (Graham, 2006; Norman & Feiman-Nemser, 2005; Van Ginkel, Verloop, & Denessen, 2016; Young, Bullough, Draper, Smith, & Erickson, 2005). Mentor teachers holding an *instrumental* mentoring conception tend to emphasize immediate issues of teaching performance and classroom control, to be more directive in mentoring interactions, and to view their own teaching as a model of good

practice. Mentor teachers holding a *developmental* conception tend to emphasize pupil autonomy in learning of content, and novice teachers' understanding of the interplay between teaching and learning. They tend to be less directive in mentoring interactions, and to view good teaching as associated with the ability to see teaching and learning from different perspectives, including that of pupils. Given these differences between mentors, we chose to select mentor teachers with varied outlooks on mentoring. We assume that this will allow us to maximize the variation in mentor teachers' understandings of similarities and differences within a small-scale exploratory study, and to provide a better ground for capturing common understandings across different mentoring conceptions.

4.1.2 Domains of functioning in becoming a teacher

A core element of novice teachers' development is the reconciliation of the personal and professional domains of becoming a teacher (Pillen, Beijaard, & Den Brok, 2013). For novice teachers this often results in tensions between on the one hand their personal images of themselves as beginning teachers, and on the other hand the expectations in the teacher education programme and norms of professional practice in their placement school. Mentor teachers, as the prime socializing agents of novice teachers (Staton & Hunt, 1992), are deeply involved in these tensions of their mentee teachers' between the personal and the professional domains of becoming a teacher. Mentor teachers have been shown to distinguish between these two domains of novice teacher development. Previous studies of mentors' views of their mentees found mentors to emphasize mostly personal attributes, such as patience, honesty, initiative, a willingness to learn, being knowledgeable and creative, and having a positive influence on the school (Allen, Poteet, & Burroughs, 1997; Reid & Jones 1997). However, with mentor teachers more and more involved in school-based teacher education and acting as 'gate keepers' (Smith, 2001) to the profession, notions of professional practice are playing an increased role in how they view and judge their mentees. More recently, for instance, mentors in Haigh, Ell and Mackisack (2013) reported judging teaching candidates not only according personal attributes such as actively relating to pupils and staff and being committed to the personal process of becoming a teacher, but also according to their professional practices such as planning, assessment and classroom management. Given these findings, we

expect that mentor teachers' views of their mentee teachers will relate to two broad domains: a *personal* domain, regarding the personal attributes and qualities that mentees bring to the process of mentored learning to teach, and a *professional* domain, regarding the professional practices and norms of professional conduct expected of novices. These two domains function as the initial broad themes for developing our analysis of the data.

4.1.3 Dimensions of social judgement

The third perspective that informed our study is the conceptualization of the 'big two' dimensions of social judgement. This body of research refers to the two core dimensions that people tend to use in their social judgements of others. These are "agentic content, which refers to goal-achievement and task functioning (competence, assertiveness, decisiveness), and communal content, which refers to the maintenance of relationships and social functioning (helpfulness, benevolence, trustworthiness)." (Abele & Wojciszke, 2014, p.197). These two core dimensions have been termed agency and communion, competence and warmth, or social utility and social desirability (Beauvois & Dubois, 2009), which is how we will refer to them here. Judgments of social utility refer to reputations of being capable to occupy social positions, whereas judgments of social desirability refer to reputations of arousing positive affects in others and of acting in concurrence with other people's motivations (Dubois & Beauvois, 2012). When people judge other people by social utility traits, they use properties such as being ambitious, efficient, skilful, strong, assertive, dynamic, and intelligent. Dubois and Beauvois (2012) found the social utility dimension to comprise of three components: 1) effort/persevering, being conscientious and hardworking, 2) competence/capability, possessing abilities, techniques and problem solving capacities, and 3) ease, being ambitious and at ease with the competition. When people judge other people by social desirability traits, they use properties such as being friendly/engaging/kind, and being honest/responsible/sincere. These properties comprise the two components of sociability, and morality (Brambilla & Leach, 2014; Dubois & Beauvois, 2012). Given the prevalence of these two dimensions and their sub dimensions in social judgements of others, we expect mentor teachers' views of their mentees will also reflect these dimensions. We therefore use these dimensions as a second-order conceptual lens for our data

analysis, to explore the kinds of judgements that mentor teachers tend make about their mentees.

4.2 Method

4.2.1 Participants

Participants were 11 mentor teachers, 6 males and 5 females. Age in years ranged from 26 to 59 years. Teaching experience ranged from 3 to 35 years, and mentoring experience ranged from 3 to 26 years, and from 6 to 60 mentee teachers mentored. We selected participants using purposive sampling (Palys, 2008) to maximize the chances of finding a variety of constructs in a relatively small sample, by selecting mentors with different patterns of mentoring conceptions. We did so by selecting mentors based on their responses to a questionnaire which measured the degree to which they held a developmental mentoring conception versus an instrumental mentoring conception (see section 3.2.1 in Chapter 3). The final sample included five mentors scoring above average on both scales, two mentors scoring below average on both scales, two mentors scoring above average on the developmental scale and below average on the instrumental scale, and two mentors scoring the opposite combination.

4.2.2 Repertory grid interview to elicit constructs

We conducted repertory-grid interviews (Tan & Hunter, 2002) with mentor teachers to elicit their constructs regarding differences and similarities between their mentee teachers. In this study, we define constructs as bipolar oppositions that mentor teachers use to discriminate between different attributes of their mentee teachers' learning. First, we asked mentors to recall the names of six of their mentee teachers of whom they still had a vivid recollection. Second, we gave them three of these names, on cards. We asked them to identify how two mentees had been similar to each other in some way, and dissimilar to the third mentee. For instance: “then the keywords are, for them I think insecure, and for her fairly self-confident*”*. Finally, we asked them to name the terms that best described the difference, and to provide examples of how this had manifested itself in the mentoring process. This was repeated a total of eight times, each time with a

different set of names, and in such a way that each name was included in four different sets. We allowed mentors to sort the same set of cards multiple times in case they could identify more than one meaningful difference. If they could not find a meaningful difference, we allowed mentors to 'skip' the set or to contrast the set of three cards with the rest of the six cards to identify a meaningful difference. As a result, some respondents made more than eight card sorts. Interviews took a half hour to one hour. We transcribed all interviews verbatim from audio files.

4.2.3 Analysis

Interview transcripts were analysed using content analysis (Kurasaki, 2000) in four subsequent steps by two researchers.

4.2.3.1. Step 1: developing the coding themes and categories.

First, to develop the main coding themes, we checked if we could meaningfully cover the data with the two domains of personal attributes and professional practices assumed beforehand. Both coders each read half of the interviews, and developed in vivo codes: descriptions of the data in the wording of the respondents, to stay close to the data in the initial phase of exploring the data (King, 2008). These were printed and jointly sorted into piles representing different themes. We identified two additional domains as a result, because (a) many differences referred to the process of learning to teach and becoming a teacher, and (b) a small number of differences referred to the mentoring and school context of the mentee teacher. Next, we reduced the data to a limited set of categories (Popping, 1992). Both coders read and annotated all interview fragments describing similarities and differences. They compared and discussed annotations and drafted an initial set of codes. In three rounds, they refined and adapted this set of codes. In each round, both coders separately coded a selection of interviews. Where there was disagreement on coding, they discussed code meanings and coding of constructs until they reached consensus, and revised and refined the coding scheme accordingly (Kurasaki, 2000). As a result, we further divided two of the four themes with a large number of constructs into subthemes, and described the common denominator of the constructs in each subtheme.

Finally, we assigned numeric codes to each code in the coding scheme. In applying the final coding scheme to the interviews, the basic unit of analysis was an interview fragment representing one card sort. We labelled all units with numerical codes for the constructs described in that card sort, allowing multiple codes to be attached to one unit of analysis. The coding scheme is presented in Table 4.1, describing 33 distinct constructs. For each construct, a bipolar opposite indicates the core of the construct, and a more detailed description denotes the two polar opposites involved in the construct.

Table 4.1. Constructs expressed by mentor teachers in this study.

Domain of mentee teacher functioning	**Construct**	**Content of the construct**
A. Teaching: mentee teacher teaching behaviour		
A1. Interactions with pupils and classroom management	1. Selfless – self-centred	being selfless, considering the needs of others - as opposed to being self-centred; preoccupied with oneself, one's own status, needs, feelings.
	2. Personal – impersonal	engaging in personal contact with and being close to pupils, having a friendly relationship with pupils and caring for their personal well-being - as opposed to remaining distant and impersonal, showing little care for pupil's personal well-being, not engaging in personal contact with pupils.
	3. Pupil influence – teacher control	providing for pupil autonomy, influence, self-expression, collaboration, interaction - as opposed to being controlling/strict, offering little room for pupil autonomy, influence, self-expression, collaboration, interaction.
	4. Assertive – unsure	having an assertive and authoritative presence in class with few problems in maintaining discipline - as opposed to having an unsure, nervous presence in class with more problems in maintaining discipline.
	5. Consistent – inconsistent	being clear and consistent towards pupils about expectations, rules and consequences, providing structure - as opposed to being inconsistent, chaotic, unclear, disorganized and not providing structure.

Table 4.1. (continued).

Domain of mentee teacher functioning	**Construct**	**Content of the construct**
A2. Knowledge, beliefs & approaches towards learning, instruction & content	6. Serious – relaxed	being serious and perfectionist about teaching, setting high standards for oneself - as opposed to being relaxed, playful, quickly satisfied.
	7. Flexible – inflexible	being flexible in executing lesson plans, deviating from lesson plans to adapt lessons to emerging circumstances - as opposed to being inflexible and sticking to the lesson plan regardless of circumstances.
	8. Knowledgeable – uneducated	being knowledgeable about content, having a deep/broad understanding/knowledge of content - as opposed to being uneducated, having a superficial/narrow understanding/knowledge of content.
	9. Excellent – inferior teaching/ learning	teaching with excellence, achieving deep learning in pupils - as opposed to mediocre/inferior teaching, achieving only superficial learning in pupils.
	10. Planned – ad hoc teaching	planning for learning outcomes and various teaching strategies to achieve these outcomes - as opposed to teaching ad hoc without much planning for learning outcomes and appropriate teaching strategies.
	11. Educational values (various)	differences in personal values, mission and beliefs regarding the purpose of teaching, schooling and the role of the teacher.

Table 4.1. (continued).

Domain of mentee teacher functioning	Construct	Content of the construct
B. Learning to teach: mentee teacher learning to teach and development as a teacher.		
B1. Generic attributes of mentee teacher learning to teach	12. Quick proficiency – hard learning	quickly being proficient at teaching, already having or quickly developing critical skills/qualities - as opposed to having to work hard to develop such skills/qualities, having little/few of them to start with.
	13. Good – poor outcomes	finishing teacher training with good outcomes, well up to standards - as opposed to achieving poor outcomes, not or barely up to standards.
	14. Easy – difficult to mentor	being easy to mentor, requiring little mentor effort to achieve desired interactions and outcomes - as opposed to being difficult to mentor, requiring much mentor effort to achieve desired interactions and outcomes.
B2. Mentee teacher professional commitment and identity	15. Identification – non-identification	identifying with the tasks, responsibilities and role boundaries of being a teacher, knowing and performing these - as opposed to not identifying or having much difficulty doing so, not knowing or performing these.
	16. Enterprising – passive	being enterprising, taking initiative, risk, exploring teaching and widening one's experience - as opposed to being passive, avoiding risk, not exploring teaching, restricting one's experience.
	17. Staying – leaving	staying on as a teacher and pursuing a teaching career - as opposed to leaving the profession.
	18. Classroom – school	focusing on classroom work - as opposed to also pro-actively participating in and being a member of the school organization.

Table 4.1. (continued).

Domain of mentee teacher functioning	Construct	Content of the construct
B3. Mentee teacher dealing with emotions in the learning process	19. Persevering – giving up	persevering, maintaining effort to learn and improve despite adversity - as opposed to lowering effort, giving up, walking out, and acting helpless.
	20. Self-confident – doubting	being confident, assured and secure about one's own capabilities, having a high expectation of success - as opposed to doubting and being unsure, insecure about one's own capabilities, having a low expectation of success.
	21. Rational – emotional	reacting rationally to teaching experiences, focused on the teaching/learning process - as opposed to reacting more emotionally, focused on feelings about teaching, taking experiences very personally.
B4. Mentee teacher role in guided problem solving	22. Open – closed	being open/willing to be mentored and to consider feedback/advice - as opposed to being closed/unwilling to be mentored and to consider feedback/advice.
	23. Aware/ accepting – unaware/ denying	being aware of and accepting responsibility for one's influence on pupils and lessons, attributing internally - as opposed to being unaware of and denying responsibility for one's influence, attributing externally.
	24. Trying out – not trying	trying out devised solutions and changing one's teaching - as opposed to not trying them out and not realizing changes in teaching.
	25. Independent – dependent	showing independent thought to find and solve problems in teaching - as opposed to depending on the mentor to find and solve problems.

Table 4.1. (continued).

Domain of mentee teacher functioning	Construct	Content of the construct
C. Person: personal attributes of mentee teachers		
	26. Female – male	being female or male.
	27. Younger – older	being younger or older.
	28. Regular – alternative route	regular teacher training - as opposed to following an alternative route to teacher certification.
	29. Original – common	having a unique, remarkable, individual personality - as opposed to a common personality.
	30. Agreeable – disagreeable	having a positive, agreeable, sociable disposition - as opposed to having a negative, disagreeable, unsociable disposition.
	31. Mature – immature	being mature, having a well-formed sense of self, personal purpose and society, being capable of independent choice in personal life and accepting consequences of personal choices - as opposed to being immature, having limited knowledge of society, seeking a sense of self and purpose, being incapable of independent choice and/or accepting consequences of choices.
D. Context: the mentoring or school context of mentee teachers		
	32. Match – mismatch	a good match between the mentee teacher and the school system, local school or educational culture/profession - as opposed to a mismatch.
	33. Mentor (various)	differences in mentor knowledge and experience affecting the mentoring relationship with the mentee teacher.

4.2.3.2. Step 2: calibrating coding consistency and scoring all interview fragments.

We calibrated consistency of coding (Kurasaki, 2000) between both coders in three rounds. In each round, both coders separately coded a set of fifteen units of analysis, and discussed and resolved sources of disagreement before coding a subsequent round. We measured inter-coder reliability using proportional agreement[4] and Mezzich's proportional overlap κ statistic, which is tailored to situations where coders may assign multiple but unequal numbers of codes to units, as in our case (Eccleston, Werneke, Armon, Stepehenson, & MacFaul, 2000; Mezzich, Kreamer, Worthington, & Coffman, 1981). During the three calibration rounds, proportional agreement improved from 69% to 92%, and Mezzich's κ statistic improved from .51 to .85; a reliability level that is generally considered very good (Wongpakaran, Wongpakaran, Wedding & Gwet, 2013). One researcher therefore scored the remaining units of analysis alone.

4.2.3.3. Step 3: re-coding along dimensions of social judgement.

From the literature on social judgement, we developed definitions of the two dimensions and their sub dimensions (see Table 4.2). Next, both coders independently coded each construct according to dimension and sub dimension of social judgement, or as not belonging to any dimension. Of all constructs, 91% were coded with the same dimension, and 82% with the same sub dimension. For both agreements and disagreements, both coders discussed meaning of constructs and definitions of dimensions and sub dimensions until they reached consensus on classification of constructs according to sub dimensions (Kurasaki, 2000).

[4] For example, if coder A assigns codes 1, 2 and 3 to a unit, and coder B assigns codes 2, 3 and 4 then the proportional agreement is 0.50 because two actual agreements (2, 3) were made out of four possible agreements (1,2,3,4).

Table 4.2. Definitions of dimensions and sub dimensions of social judgement used in this study.

Dimension and sub dimension of social judgement	**Constructs that reflect judgements of a mentee's reputation for...**
Social desirability	…arousing positive affects in others and for going along with other people's motivations and intentions;
Morality	…being moral, sincere, honest, respectful, loyal, trustworthy, fair.
Sociability	…being friendly, kind, helpful, attentive, patient, warm, sympathetic, gentle, open.
Social Utility	…being capable of occupying different positions in social organizations, positions ranging from the least high to the highest, without attributes that might impede this; being capable of using necessary competencies with ease;
Effort	…being persevering, hardworking, conscientious, diligent.
Competence	…being capable, proficient, qualified, skilful, effective.
Ease	…being competitive, ambitious, calculating, at ease with competition

4.2.3.4. Step 4: selecting and representing mentor talk about dominant constructs.

To identify dominant constructs, we tallied for each construct how many mentors used it and in how many card sorts. In addition, we tallied how many times mentors combined each combination of two constructs in their descriptions, by constructing a co-occurrence matrix indicating the frequency of each

combination of two constructs. To select the attributes of their mentee teachers' learning that mentors focus on most, we selected constructs mentioned by approximately two-thirds of mentors (seven at least), and those constructs mentioned in combination by at least one third of mentors (four or more). We retrieved the corresponding interview fragments. For each fragment, we inspected how mentors talked about these constructs and how they connected constructs in their descriptions. We developed themes to summarize how mentors talk about the attributes of their mentee teachers' learning in these interview fragments.

4.3 Results

4.3.1 Dominant constructs

Mentors use 33 constructs to describe similarities and differences between their mentee teachers, related to four domains of mentee teacher functioning: (a) mentee teaching (*teaching*), (b) mentee development and learning to teach (*learning to teach*), (c) personal attributes of the mentee (*person*), or (d) the mentoring or school context of the mentee (*context*) (see Table 4.1). Approximately two-thirds of the constructs reflect social judgement (see Table 4.3). Most of these constructs reflect judgements of social utility, and especially judgements of competence.

The constructs mentioned most often (by at least seven mentors), are (02) personal - impersonal, (06) serious - relaxed, (15) identification - non-identification and (20) self-confident – doubting (see Table 4.3 and Figure 4.1). Mentors mention these constructs almost exclusively in combination with other constructs, and often across domains. These constructs therefore appear highly central to mentor teachers' views of their mentees. In terms of dimensions of social judgement, these four constructs reflect judgements of sociability, effort, morality, and ease (see Table 4.3). Figure 4.1 presents these four constructs according to domain, dimension of social judgement, and most commonly combined constructs (indicated by arrows). Together, these constructs reflect the two dominant domains of (a) teaching and (b) learning to teach and the two dimensions of social judgement.

Table 4.3. Constructs according to dimensions and sub dimensions of social judgement.

Construct	Social Desirability	Social Utility
A. Teaching		
A1. Interactions with pupils and classroom management		
1. Selfless - self-centered	Sociability	
2. Personal - impersonal *	Sociability	
3. Pupil influence - teacher control	-	-
4. Assertive - unsure		Competence
5. Consistent - inconsistent		Competence
A2. Knowledge, beliefs & approaches towards learning, instruction & content		
6. Serious - relaxed *		Effort
7. Flexible - inflexible		Competence
8. Knowledgeable - uneducated		Competence
9. Excellent - inferior teaching/learning		Ease
10. Planned - ad hoc teaching		Effort
11. Educational values (various)	-	-
B. Learning to teach		
B1. Generic attributes of novice teacher learning to teach		
12. Quick proficiency - hard learning		Ease
13. Good - poor outcomes		Competence
14. Easy - difficult to mentor		(generic)
B2. Novice teacher professional commitment and identity		
15. Identification - non-identification *	Morality	
16. Enterprising - passive		Ease
17. Staying - leaving	-	-
18. Classroom - school	-	-
B3. Novice teacher dealing with emotions in the learning process		
1. Persevering - giving up		Effort
2. Self-confident - doubting *		Ease
3. Rational - emotional		(generic)
B4. Novice teacher role in guided problem solving		
4. Open - closed	Sociability	
5. Aware/accepting - unaware/denying	Morality	
6. Trying out - not trying		Effort
7. Independent - dependent		Competence
C. Person		
8. Female - male	-	-
9. Younger - older	-	-
10. Regular - alternative route	-	-
11. Original - common	-	-
12. Agreeable - disagreeable	Sociability	
13. Mature - immature		(generic)
D. Context		
14. Match - mismatch	-	-
15. Mentor (various)	-	-

Note. * = dominant constructs. - = not classifiable as a dimension of social judgment. (generic) = classifiable as a social utility construct, but not as a sub dimension of social utility.

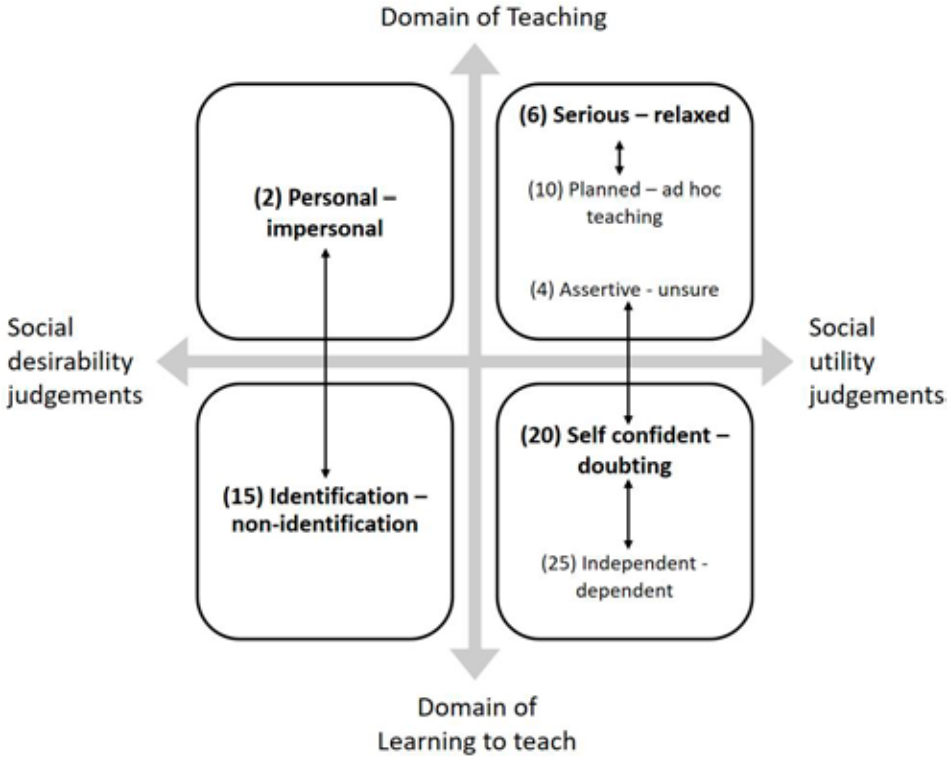

Figure 4.1. Dominant constructs (in bold) according to domain, dimension and dominant combinations with other constructs (see arrows).

4.3.2 Themes in mentor teachers' descriptions

As indicated by the direction of the arrows in Figure 4.1, mentor teachers often combine the dominant constructs across the two domains, but not across the two dimensions of social judgements. This suggests mentors' views of these differences in their mentee teachers' learning represent two separate dimensions of social judgement. Table 4.4 provides an overview of the themes and subthemes that emerged from the analysis of mentor teachers' talk involving these constructs. In the following sections, we illustrate these themes with examples from the interviews. In the interviews, the mentors often shifted into performance (Baynham, 2011, p.69) to re-enact what they and/or their mentee teacher had said.

In the interview examples, we indicate these instances of shifting into performance in bold italics (***mentor speech***) or italics (*mentee speech*).

Table 4.4. Themes identified in mentors' descriptions of dominant constructs.

Dimension of social judgement	**Theme and subthemes**	**Domain of mentee teacher functioning**
Social desirability	(1) care for pupils is a disposition	Teaching
	(2) properly identifying as a teacher requires a balance of care and professional distance	Teaching/Learning to teach
Social utility	(3) strong novices balance ambition and playfulness	
	a. perfectionism hampers flexible teaching	Teaching
	b. perfectionism hampers reflection	Learning to teach
	(4) planning for teaching is a disposition	Teaching
	(5) strong novices have inner strength	
	a. assertive presence comes from self-confidence	Teaching/Learning to teach
	b. independent problem-solving comes from self-confidence	Learning to teach

4.3.2.1 Care for pupils is a disposition

This theme identifies how mentors most frequently explain differences for the construct personal – impersonal by referring to internal traits and dispositions of mentee teachers, such as having a strong personal preference for a way of working with pupils, or (not) feeling care and concern for pupils. We provide examples in the next section, because mentors most frequently combine this theme with the second theme of properly identifying as a teacher.

4.3.2.2 Properly identifying as a teacher requires a balance of care and professional distance

This theme identifies how four mentors connect the two constructs personal – impersonal and identification – non-identification in their descriptions. The mentors express that a lack of care and concern for pupils, or a lack of professional distance towards pupils, signifies a lack of proper identification with the task, role and responsibility of being a teacher. The mentors most frequently also use the reasoning identified by the theme that care for pupils is a disposition, connecting a lack of properly identifying with the teacher role to the trait/disposition of having either too little, or too much concern for pupils. We provide two examples.

An example of how a lack of care for pupils signifies improper identification with teaching is how mentor Kay contrasts Ron and Stuart with Rick. Kay is critical of Rick's lack concern for pupils. He sees that as an indication that Rick is unfit for teaching since he does not properly identify with what is justly expected of teachers:

> They have concern for the welfare of the child, and he did not have that at all, because, well it was completely the wrong profession for him to start with. So they, from the get go, have something like, *I want to do something for that child* (...) child-centred, if you will. And he was like, whether I'm laying bricks or whether I'm sitting here with pupils in a classroom, that just makes no difference.

An example of how a lack of professional distance signifies improper identification with teaching is how mentor George contrasts Rose and Iris with Joan. George indicates how Joan had been too concerned with pupils, thereby transgressing the professional boundaries of the teacher role:

> What struck me with these two is that they were really focused on teaching in class, so that I did not see them doing much else. Whereas Joan was also really engaged in matters outside of class, made contact with pupils outside of class. (...) at a certain point she also interested herself on behalf of the social problems of pupils (...) of which we thought, ***you think you're helping this pupil, out of some kind of compassion, but the question is whether he's really being helped, or whether it wouldn't be best to leave this to professionals***. For instance, we had, in one of the classes where she taught a boy with a completely deranged biological rhythm, and he was unable to get up in the morning. (...) I remember that at a certain point she made a habit of, if she had to start at ten past eight she would go by his house and pick him up. Then I think, ***Joan, here you are going too far, you should not be doing this, this is***... *Yes, but I still want to*. (...) Here you could say (...) professional engagement, but no more than that. Like, you are in my class, and that is fine with me. Whereas here it is a personal involvement, she was really, with every one of those pupils she knew all about them, she talked to them, and during recess she would frequently not sit in the staffroom but in the area where pupils sit.

The examples of Kay and George illustrate both themes, as they connect a lack of properly identifying with the teacher role to the trait/disposition of having either too little, or too much concern for pupils. In contrast, Mentor Jack deviates from this dominant reasoning. Contrasting two younger mentees with an older mentee, Jack indicates that the two younger mentees had quickly taken their role as teachers by engaging with pupils. The older mentee, due to a complex personal history, had remained distant towards pupils at first, but after a lot of trouble had finally accepted personal responsibility for relating to pupils, leading to and evidenced by pupil acceptance of him as a teacher. In this case, rather than

pointing to a trait or disposition, mentor Jack points to a change that occurred over time.

4.3.2.3 Strong novices balance ambition and playfulness

This theme identifies how mentors indicate with regard to the construct serious – relaxed, that perfectionism tends to stand in the way of successful teaching or learning to teach. In some instances mentors positively value being serious, referring to putting in the required effort and making it a priority to do well in teaching practice, as opposed to prioritising other social activities. Mentors predominantly expressed ambiguity, however. Mentors express this ambiguity differently for the domains of teaching and of learning to teach, depending on the other constructs they combine in their descriptions. For the domain of teaching, the subtheme *perfectionism hampers flexible teaching* identifies how mentors indicate that too much perfectionism could prevent mentee teachers from being sociable or flexible in dealing with pupils. For the domain of learning to teach, the *subtheme perfectionism hampers reflection* identifies how mentors indicate that too much perfectionism could prevent the mentee from adequately reflecting on personal strengths and weaknesses. We provide an example of each subtheme.

An example of the first subtheme is how mentor John contrasts Dean with Erin and Marissa, indicating how Dean had been more spontaneous and playful with pupils, whereas Erin and Marissa had been perfectionist, but less spontaneous:

> Dean really jumps out (...) his spontaneity (...) the maturity, and the perfectionism of these two (...) they both had, they come across (...) really well. (...) Sometimes you'd want, ***you're both doing well, maybe sometimes a bit more spontaneous*** (...) You see the lesson (…) you think, ***actually nothing to criticize it for, but maybe just a bit too clean.***

An example of the second subtheme is how Mentor Sue contrasts Mary and Kate with Jane, indicating how Mary and Kate's perfectionism prevented them from having a realistic view of their competence despite being already

proficient at classroom management. Whereas Jane, while still needing to learn a lot, was not hampered by being so overly perfectionist:

> …both did many things well; both had presence in front of class, naturally. This is a very clever person but has problems with presence, a lady with a PhD, analyses like the best of them, and just has problems with being in charge in class, these could do that naturally. (...) That is something she did well, reflection (...) here too much self-criticism, so the balance is gone (...) perfectionism is a form of weak reflection (...) they have a lot going for them but they just don't see it.

4.3.2.4 Planning for teaching is a disposition

This theme identifies how all five mentors that combine the construct serious – relaxed with the construct planned - ad hoc teaching, refer to fixed traits of mentee teachers; to just being 'a certain type of person' or having a certain style of doing or thinking. An example is how mentor Sandy contrasts Nadine and Abby with Sergio, attributing Sergio's lack of preparation to an unchangeable disposition of wanting to be carefree:

> …they always did a lot on lesson preparation, and he almost not. (...) the result was therefore that with them, it was often a disappointment they had not achieved what they wanted to do in the lesson. And he doesn't have that disappointment, because he just works out what happens as he goes along. That is also that relaxed attitude, sometimes he does not even know which class he is teaching. *Oh, yes, 2h, what are we doing, we're doing a practicum*, he dives into the cupboard, *let's do a practicum*. (…) I don't believe he's ever going to get that, no, he's a really good teacher but that's just not his attitude, he just wants that freedom, and he wants to bring across his subject and he'll just see what he's into doing that day (...) so I didn't succeed in that mission, no.

Sandy's example also fits in with the theme of balancing seriousness and playfulness and expressing ambiguity with regard to 'seriousness': while she evaluates preparing for lessons as more desirable, she also notes that Nadine and Abby's more serious preparation has the downside of being often disappointed in not achieving their set plans.

4.3.2.5 Strong novices have inner strength

This theme identifies how mentors most commonly express the construct self-confidence – doubting as an internal trait; as having inner strength, or being (in)secure inside. Mentors express this theme of inner strength differently, depending on the combination with the construct assertive – unsure presence in class or the combination with the construct independence – dependence in problem solving (see Figure 1). For the first combination, the subtheme *assertive presence comes from self-confidence* identifies how mentors attribute outward assertive presence in class to being inwardly self-confident, and unsure presence to inner doubt. For the second combination, the subtheme *independent problem solving comes from self-confidence* identifies how mentors associate independence in guided problem solving to inner self-confidence, and dependence to inner doubt. In several instances, mentors combine these two subthemes. Although mentors predominantly value self-confidence as a desirable trait, several also mention negative aspects of self-confidence. We provide an example of each subtheme, an example of a combination of the two subthemes, and an example where the mentor mentions negative aspects of self-confidence.

An example of the first subtheme is how Mentor Kay contrasts the insecurity of Pete and Deke with Eve's relative security. Kay describes how Pete and Deke's unsure presence resulted from their inner insecurity, which in turn originated from their personal background that made them less mature than Eve. Whereas Eve was much worldlier, more secure and had a more assertive presence:

> ...then the keywords are, for them I think insecure, and for her fairly self-confident. He is, pupils also say that about him, he is insecure. He just emanates that; they can tell that by looking at him, he is just insecure in front of the class. If something happens in the first lesson

> then he will be completely confused and upset the following hours, then he keeps pondering. And with him that was very much the case as well, just really insecure. She just had, yes, she was doubtful in the sense of, *can I do this profession*. That was a struggle for her, she was insecure about that, but she just worked that out in the course of the year, *no, I am not cut out for this right now*. It was OK for that to be a bit of a struggle, but with them it is just, every lesson they radiate insecurity. (...) and I think the parents also play a role here, with these two, don't go into the evil world out there, nice in a reformed school (...) just staying in that protected little world, and then I can imagine that you'll become insecure because, those pupils will come with all sorts of things (...) Her father works at (...) a newspaper, (...). So a family like that will also have a different position, and they have been raised super protected, and they haven't ever experienced confrontation with the world, so to speak, and the world, or the pupils (...) [she] knows about the life world of the pupils, knows about the world, just, what the world has to offer (...) they, totally not.

Kay's example is similar to the overall pattern in that Kay describes Pete and Deke's unsure presence as being a result of their insecurity. Kay's example is different, however, in that he identifies the ultimate cause of their insecurity in their personal background.

An example of the second subtheme is how mentor Nancy contrasts Gerald and Mary with Janice:

> ...those are very insecure, they also came asking for little things every time, outside of mentoring sessions, like *how do I do this, and how do I do that*, and this one found his own way more.

An example of combining the two subthemes is how mentor Seth contrasts Jeff and Carla with Anna, indicating how Anna's worrying about her competence led to a focus on herself, an inability to engage with others/pupils, an unsure presence in class and dependence upon him for solving problems. Jerry and Carla, though both achieving a different classroom climate ('elastic' or

'tighter'), had both been internally strong, and as a result more focused on the pupils, independent and with an assertive presence in class.

> ...the difference is, that these two, (…) they were both strong inside, he more than her, but she totally not (...) she was not that self-assured (...). These two were busy with the pupils and their position in class, well *here I stand to help you, and you're my pupil,* but not her, (...). She was busy with herself, with her insecurity, with who is laughing and is he laughing at me (...) internally strong, less strong, busy with her inner world, busy with the pupils (...). He had almost no discipline problems with pupils, here (...) she had a few discipline problems but she can handle them herself, at least she tried to, but she was on hundred percent dependent on me (...) sometimes she left the classroom (...) *I can't Seth, look at what they're doing* (...) she just asked me to intervene in the class. (...) then it took a year, she got to work on it, graduated, finished, the last phase she taught independently.

Seth negatively evaluates Anna's initial insecurity and her resulting dependence and self-centeredness, but indicates this was a temporary issue for Anna, which she worked through successfully in the end.

The above three examples of Kay, Nancy and Seth show the mentors valuing self-confidence as a desirable trait. As indicated above, several mentors also identified negative aspects of self-confidence, but also in these cases, they described self-confidence as an inner trait. An example is how mentor George contrasts the over-assertive stance of Iris as opposed to Joan and Tonya, who had been more agreeable to work with:

> …the catchwords that separate them are self-confidence as opposed to insecurity. (...) Iris stood in front of class with an incredible surety, she exuberated that she did not put herself into question, so much that the pupils also did not do that anymore. Tonya and Joan, they really had to find themselves in their learning process by feeling around (...). She came all dressed in black (..) we hadn't even talked for five minutes *'I do assume that I can just go dressed in black here*

> *in school'* I said ***'yes, anyone can go dressed in black here'***. That kind of behaviour that was very uncongenial to me.

Fitting in with the dominant pattern, George uses the notion of confidence as a stable disposition of inner strength, to which he attributes Iris' extremely assertive presence in class, which he values positively, but also Iris' disagreeable disposition within the mentoring relationship, which he values negatively.

4.4 Discussion

4.4.1 Dispositional explanations

The findings of our study show a dominant pattern of mentors describing attributes of their mentee teachers' learning in terms of internal traits or dispositions. Gill and Andreychik (2014) distinguish three social explanatory styles: dispositionism, historicism and control. While dispositional explanations focus on internal, stable traits and attributes of the actor, control explanations focus on internal but malleable factors such as the effort and willpower of the actor. Historicist explanations focus on external and "formative influences that have caused an actor to become a particular kind of person" (Gill & Andreychik, 2014. p.3). Although mentors in our study also frequently refer to biography and historical circumstances (e.g. her father works at a newspaper, they have been raised super protected), and to willpower and control (e.g. Anna worked through it), they mostly use dispositional explanations for all four of the dominant constructs (e.g. that's just not his attitude, he just wants that freedom). Such social explanatory styles help to guide actions in relating to others, by answering the question of why an actor behaved a certain way or experienced a certain outcome. Gill and Andreychik (2009) show that dispositionism as a social explanatory style affects impression formation and approach/avoidance tendencies. In contrast, historicism tends to engender compassionate responding to others, a quality that would appear conducive for mentors to provide adaptive and responsive mentoring support. Mentors with a tendency towards dispositionism over historicism could therefore potentially be less attentive to historical and formative origins of mentee teachers' patterns of behaviours, beliefs and emotions, and potentially put less effort in helping mentees to develop patterns that are more

effective. As a caution, the tendency for dispositional explanations found in our study may in part be an artefact of the method used. Comparing different mentee teachers may operate at a higher level of abstractness or construal, which promotes inferring of traits (Moskowitz & Okten, 2016). However, mentors were stimulated to talk in concrete terms about their mentee teachers and did offer other explanations as well, as indicated above.

4.4.2 Implications for mentor preparation

In various ways, mentors' practical knowledge about their mentee teachers' learning made public in this study may inform mentor preparation, to support mentors in providing adaptive and responsive mentoring support for their mentees. First, given the dominant pattern of dispositionism found in our study, we suggest that mentor preparation attends to stimulating mentors to develop more historicist explanations. We suggest training attends to different ways to explain behaviour patterns of mentees, and especially to (models and theories for) historicist explanations of how formative influences may contribute to patterns of mentee behaviour. We also suggest that mentors are stimulated to incorporate a phase of exploring and understanding the mentees' context in the mentoring process, similar to the initial phases of the Developmental Relationship Model, i.e. 'contracting' and 'understanding the mentee' (Washington & Cox, 2016, p.323). A third suggestion would be to use guided reflection for the mentor during the mentoring process, focussing on diagnosis of the mentee and his/her learning needs. Such guided reflection on authentic role-taking experiences promotes higher levels of conceptual complexity, which is associated with higher tolerance of ambiguity and more adaptive behaviour in helping situations and (Reiman, 1999; Reiman & Thies-Sprinthall, 1998). Similarly, Gill and Andreychik (2009) indicate historicism can be promoted by ´thinking long and hard, particularly about human behaviour' (Gill & Andreychik, 2009, p.1049) which is associated with a lower need for cognitive closure.

Second, mentor preparation can make use of the method of our study. The sorting task used in this study provides a structured way for mentors to talk about individual differences and adequate responses. Mentors with experience of several mentoring relationships may perform this sorting task to become aware of the constructs they tend to use in looking at their mentee teachers, and how

they tend to respond to different mentees. Our experience in this study and in subsequent workshops indicates that it provokes much more specific and explicit talk about individual differences, connected to concrete experiences with a mentee teacher, than discussing general perceptions of differences between mentee teachers. It also tends to provoke more talk on how to respond differentially. Performing the sorting task in the presence of beginning mentors may provide them access to the practical knowledge of their more experienced colleagues. Again, we suggest such activities should also attend to how mentors explain differences and to potentially different ways of explaining.

Finally, mentor preparation can make use of the materials from our study. Both the list of constructs in Table 4.1 and the themes identified in mentors' descriptions can serve as a starting point to discuss how to respond to certain attributes of a mentee teacher, and what would be challenging to deal with. The list can help beginning mentors orient themselves toward what differences they may encounter. Discussing the themes and possible alternative explanations of mentee teachers' patterns of behaviours may help develop awareness of different social explanatory styles. The mentors in our study especially recollect mentees who experience tensions in relating to pupils (whether in terms of warm contact or assertive presence), and connect these tensions to their process of properly identifying as a teacher. Pillen et al. (2013) state that novice teachers require guidance to bring such professional identity tensions to the surface, make them visible and observable, and work them to give meaning to the negative feelings they may generate. It is likely that mentors most vividly recollect mentee teachers experiencing such tensions because they are challenging to mentor within the constraints of mentoring practice. These constructs would therefore especially provide a good starting point for discussion with beginning mentors; how these may surface in the mentoring relationship, what the mentor could do to actively probe where the mentee stands, and what the mentor could do to respond adequately. For training purposes, translating constructs into vignettes or cases of mentee teachers may provide more vivid examples to work with. The interview examples may help to construct such vignettes. Given our findings that mentors tend to combine constructs in talking about differences, such cases should also reflect construct combinations, such as depicted in Figure 1, and similar to the complex 'typical' novice teacher cases described in Stanulis et al. (2014). Given our findings that mentors tend to identify both positive and negative aspects of

constructs, discussion of such cases should include considerations of how ‘too little or too much’ could hamper mentee’s learning or teaching performance and what options mentors could have to respond.

4.4.3 Implications for further research

Previous studies have conceptualized mentor teachers' views of their mentees as reflecting only personal attributes of the mentee (Allen et al., 1997; Reid & Jones, 1997) or a combination of personal attributes and professional practices (Haigh et al., 2013). Our findings suggest that a conceptual model describing the components of mentor teachers' practical knowledge of novice teachers should include a third component regarding novice teacher learning to teach. Such a component or domain is one that 'bridges' the domain of personal attributes and professional practices: a personal-professional domain located in between these two domains. Figure 4.2 presents such a conceptual model based on our findings. We found the majority of mentor teachers’ descriptions to reflect the two domains of professional practice and the personal-professional domain, and the social utility and social desirability dimensions of social judgement. We therefore suggest that future studies into mentor teachers' views of their mentees should explore the possibility of capturing mentor teachers' views of differences between their mentees using this framework of two domains by two dimensions. This would provide the benefits of parsimony and comparability in studying how mentor teachers view mentee teachers.

A limitation of our study is the focus on dominant constructs, rather than on individual differences between mentors, and we suggest future research attend to this topic. There were indications that such differences are present. Some mentors for instance attributed differences in self-confidence and rationality to differences in gender, especially one less experienced mentor. Less experienced mentors may be more inclined to use social categories of assessment that require less cognitive effort. Using such categories may have negative effects on accurate perception and diagnosis of mentee teachers’ learning (Krolak-Schwerdt, Böhmer, & Gräsel, 2013). We also saw indications of differences in the use of dispositionism, historicism and control. Our data set is too small to explore individual differences in use of constructs, domains, dimensions or social explanatory style, in relation to mentoring experience or mentoring conception.

We suggest that future research explore these differences in studying mentors' diagnostic ability and its antecedents and consequences. Not only within the realm of teacher education, but also in other realms where professional mentoring is an important part of the preparation of future practitioners in the profession.

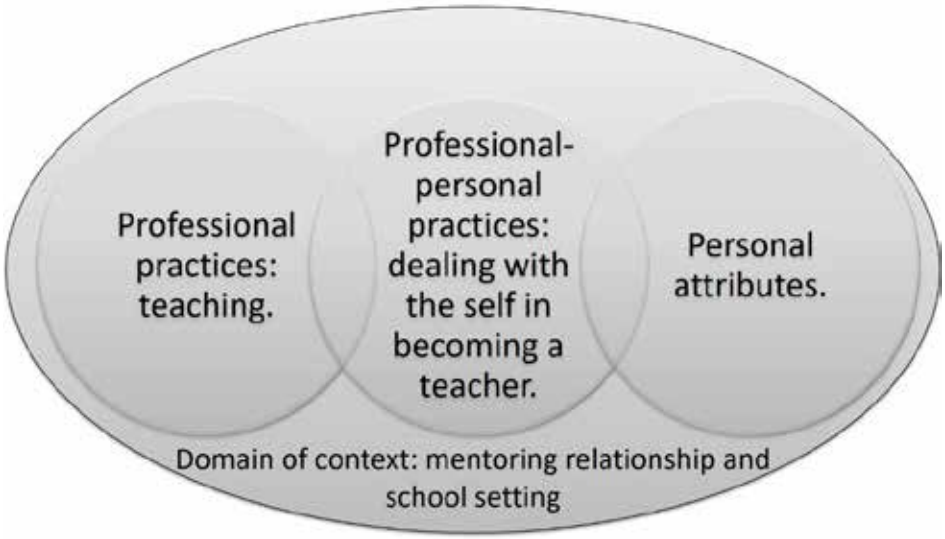

Figure 4.2. Conceptual model of the domains of mentor teachers' knowledge about their mentee teachers' learning.

4.5 Conclusion

Our aim in this study has been to contribute to the development of the professional knowledge base of mentoring, drawing on mentor teachers' practical knowledge of their mentee teachers' learning. Our study suggests that mentors consider a large variety of differences between their mentee teachers, and focus most on differences in personal engagement with pupils, identifying as a teacher,

perfectionism and self-confidence. Mentors explain these differences predominantly in terms of mentee dispositions. Such dispositional explanations may hamper mentor insight into how past formative experiences affect current performances of mentee teachers. This suggests a challenge for mentor professional preparation. Meeting novice teachers where they are in their development requires an understanding of novice teachers as adult learners, which includes consideration of the learning trajectories of novice teachers that have led them to where they are now.

5

‘WE NEED TO TALK’: CONFRONTING AS AN ADAPTIVE RESPONSE IN MENTORING[5]

Abstract

Mentoring as a professional practice is expected to be adaptive to mentee teacher learning. However, the knowledge base of activities for adaptive mentoring is underdeveloped. This descriptive study explores mentor teachers' practical knowledge of mentoring activities to adaptively respond to their mentee teachers' learning, through repertory-grid interviews. Mentors described 34 distinct mentoring activities for adaptive response to their mentee teachers’ learning, oriented toward emotional support, support for knowledge construction, creation of a learning context and changing mentee teacher behaviour. The mentoring activity that mentors mentioned most was confronting mentee teachers with problems, in order to generate mentee’s intention to change their behaviour. Mentors talk about enacting confronting as telling or developing the problem, depending on the underlying issue they try to address. Confronting can be considered a form of goal setting with mentees, which indicates that mentor teachers construct their practical knowledge of adaptive response in large part around goal setting with mentees.

[5] This chapter was submitted in adapted form as:
Van Ginkel, G., Van Drie, J.P., Oolbekkink-Marchand, H.W., & Verloop, N. ‘We need to talk’: confronting as an adaptive response in mentoring.

5.1 Introduction

This study explores mentor teachers' practical knowledge of mentoring activities for adaptively responding to their mentee teachers' learning. For novice teachers, mentoring relationships with more experienced teachers are crucial to help them survive their initial teaching experiences, develop their teaching competencies, and define their teaching lives (Fairbanks, Freedman, & Kahn, 2000; Marable & Raimondi, 2007). The match between mentor support and mentee teacher learning is vital for making this mentoring process work (Bullough, 2012; Hobson, Ashby, Malderez, & Tomlinson, 2009). Mentoring novice teachers is therefore increasingly seen as a professional practice in which mentors need to "…draw from their strategic knowledge of teaching and learning to teach and their knowledge of their novice as a learner to create appropriate learning opportunities" (Schwille, 2008, p.155). Such a professional practice involves diagnosing performance levels of mentee teachers, structuring learning settings through goals and tasks, and scaffolding mentee teacher learning toward successful unassisted performance (Stanulis. Brondyk, Little, & Wibbens, 2014). This requires mentors to develop practical knowledge of novices as adult learners, as well as knowledge of a wide repertoire of mentoring activities to cater to individual differences in mentee teacher learning. This knowledge is a critical, but still underdeveloped element in the knowledge base of mentoring (Achinstein & Athanases, 2005; Jones & Straker, 2006). Drawing on practitioner knowledge can help to inform and develop the knowledge base of professional mentoring (Hiebert, Gallimore, & Stigler, 2002; Verloop, Van Driel, & Meijer, 2001). In this study, we aim to contribute to the knowledge base of mentoring as a professional practice by focussing on mentor teachers' own, practical knowledge of mentoring activities for adaptively responding to their mentee teachers' learning. We do so by exploring what mentoring activities mentors mention most in talking about their response to similarities and differences between their mentee teachers. Our central research question is: *What are dominant mentoring activities in mentor teachers' descriptions of their response to similarities and differences between their mentee teachers?* We assume that focussing on dominant mentoring activities in mentor teachers' descriptions may provide insight into common practices and problems of mentors in adapting mentoring to mentee teachers' learning.

5.1.1 Mentor teachers' practical knowledge of mentoring activities for adaptive response

Mentor teachers' knowledge, like teachers' knowledge, has been defined above all as practical knowledge: knowledge that derives from personal experiences with colleagues, teaching, learning to teach, and personal life experiences in general (Clarke, Killeavy, & Moloney, 2013; Zanting, Verloop, Vermunt, & Van Driel, 1998). It is embedded in their teaching practice and intimately tied up with their professional identities as teachers and mentors within their school culture (Kwan & Lopez-Real, 2010; Martin, 1997; Rozelle & Wilson, 2012). A key characteristic of mentors' practical knowledge is its function, which is "to guide their actions when they encounter the critical question, 'what should I do in this particular situation?'" (Gholami & Husu, 2010, p.1520). Mentor teachers' practical knowledge of mentoring activities is connected to the goals these mentoring activities serve (Van Ginkel, Oolbekkink, Meijer, & Verloop, 2016). In the study described in Chapter 3 of this thesis, mentors described their mentoring activities as oriented toward four broad mentoring goals: A) providing emotional and psycho-social support, B) supporting construction of personal practical knowledge of teaching, C) creating a favourable context for mentee teacher learning, and D) changing mentee teacher behaviour (see section 3.3.1 in Chapter 3). In this study, these four goals therefore provide the starting point for our analysis of mentoring activities.

Like teachers, mentors construct their practical knowledge for responding to particular learning situations through their implicit aggregation of experiences with individual learners over time. It aggregates through their day-to-day micro-adaptations as they simultaneously assess and respond to individual learner differences, performed in the ongoing course of mentoring itself (Corno, 2008). Through such aggregation, mentors develop personal and actionable heuristics that connect knowledge of salient differences between learners and learning situations to courses of action, to aid their informal decision-making on the fly (Randi & Corno, 2005). Like teachers, mentors are likely to construct these personal heuristics from atypical situations, as they tend to be more reflective around situations they perceive as non-routine (Lin, Schwartz, & Hatano, 2005). These personal heuristics are thus likely to be connected to the mentee teachers that mentors are able to remember well. In this study, we therefore elicit

mentoring activities by starting out from mentor teachers' personal knowledge and experience of the mentee teachers of whom they had a vivid recollection.

5.2 Method

5.2.1 Participants

Participants were 11 mentor teachers, 6 males and 5 females. Participants were 26 to 59 years old and had 3 to 35 years of teaching experience. Their mentoring experience ranged from 3 to 26 years and from 6 to 60 mentee teachers mentored. Participants were selected using purposive sampling (Palys, 2008), to represent varied conceptions of mentoring. Previous studies have shown that the mentoring conceptions that mentors hold influence their mentoring approach and their focus for mentee teacher learning (Graham, 2006; Norman & Feiman-Nemser, 2005; Van Ginkel, Verloop, & Denessen, 2016; Young, Bullough, Draper, Smith, & Erickson, 2005). We therefore selected participants based on their responses to a questionnaire which measured the degree to which they held a developmental mentoring conception versus an instrumental mentoring conception (see section 3.2.1 in Chapter 3). The final sample included five mentors scoring above average on both scales, two mentors scoring below average on both scales, two mentors scoring above average on the developmental scale and below average on the instrumental scale, and two mentors scoring the opposite combination. The intent of this purposive sampling was to maximize the chances of finding a variety of activities in a relatively small sample. All of the names of mentors and mentees in this paper are pseudonyms.

5.2.2 Repertory grid interview

Retrospective interviews were conducted with all mentors. The interviews followed the classical repertory-grid interview format (Tan & Hunter, 2002), based on Kelly's theory of personal constructs (Kelly, 1955). In this format, the respondents themselves identify both the elements (the mentee teachers) and the constructs (how the mentee teachers differed, and their response to these differences). The constructs are elicited in a triadic form, by asking the respondent to distinguish how two elements (mentee teachers) are similar, and a

third is different from these two. First, mentors were asked to recall the names of six mentee teachers they had mentored. Second, they were given three of these names on cards, and were asked to identify how two mentees had been similar to each other in some way, and dissimilar to the third mentee. Finally, they were asked to describe how they had responded to these similarities and differences, and to provide examples of what they had done. This was repeated a total of eight times with different sets of names, so that each name was included in four different sets. To stimulate mentors to talk about what they perceived to be meaningful differences, they were allowed to 'skip' a card sorting, to contrast the set of three cards with the total card set, or to sort the same set of cards multiple times. As a result, some respondents made more than eight card sorts, resulting in a total of 97 card sorts for all eleven mentors. Interviews took between half an hour to one hour, and were transcribed verbatim from audio files.

5.2.3 Data analysis

Interview transcripts were analysed using content analysis (Kurasaki, 2000) in three subsequent steps by two researchers.

5.2.3.1 Step 1: developing the coding scheme.

To develop the coding scheme we first checked if we could meaningfully cover the data with the four categories of mentoring activities identified in the study described in Chapter 3 of this thesis. These were A) providing emotional and psycho-social support, B) supporting construction of personal practical knowledge of teaching, C) creating a favourable context for mentee learning, and D) changing mentee teacher behaviour (see section 3.3.1 in Chapter 3). Both coders each read half of the interviews, and developed in vivo codes: descriptions of the data in the wording of the respondents, to stay close to the data in the initial phase of exploring the data (King, 2008). These were printed and jointly sorted into piles representing different themes, and all in vivo codes could be meaningfully organized according to the four categories. From this sorting, one researcher then drafted a preliminary coding scheme. Next, this coding scheme was refined and adapted in three rounds, to obtain a limited set of codes (Popping, 1992). The unit of analysis was an interview fragment discussing one card sort.

In each round, both coders coded mentoring activities for fifteen units of analysis, and then compared and discussed their coding. For both agreements and disagreements on coding, they discussed code meanings and coding of activities until they reached consensus, and revised and refined the coding scheme accordingly (Kurasaki, 2000). The coding scheme is presented in Table 5.1, describing 34 distinct mentoring activities. For each mentoring activity, a verb indicates the core of the activity, and a more detailed description denotes the activity and its goal.

Table 5.1. Mentoring activities expressed as adaptive response by mentors in this study.

Mentoring activity	**Content of the mentoring activity**
A. Providing emotional and psycho-social support	
1. Affirm	affirming mentee teacher capability, being positive, indicating what he/she did or does well, to promote self-confidence and awareness of strengths/capabilities.
2. Attune	attuning the mentoring approach to what a mentee teacher can handle emotionally, to prevent withdrawal and enable the mentee teacher to open up.
3. Be there	being there and actively available for the mentee teacher, to lower the threshold for help seeking and involvement in mentoring.
4. Focus person	focussing existing mentoring time and talk on how the mentee teacher experiences learning to teach, to remove barriers to development as a teacher.
5. Focus emotions	as 4, but more specific on mentee teacher emotions in learning to teach, to prevent negative emotions from impeding learning.
6. Focus motives	as 4 but more specific on mentee teacher motives for and images of teaching as a career, to help make a conscious choice for teaching as a career.
7. Help cope	helping the mentee teacher to accept and actively cope with personal limitations, to avoid personal pitfalls and create room for manoeuvre.

Table 5.1. (continued).

Mentoring activity	Content of the mentoring activity
8. Incite	inciting mentee teachers to stretch beyond their comfort zone, to promote experimentation, risk-taking, initiative and perseverance.
9. Reassure	reassuring and consoling the mentee teacher, putting experiences in perspective, to take away anxiety and doubts about their capacity to succeed.
10. Solicit self-affirmation	asking the mentee teacher to name strengths, positive results and improvements, to promote awareness of strengths and capabilities.
B. Supporting construction of personal practical knowledge about teaching	
11. Explore self-questioning	exploring mentee teacher degree and kind of self-questioning, to gage capacity for self-directed learning and openings into learning.
12. Focus teaching	focussing mentoring time and talk on the teaching performance of the mentee teacher, to develop specific skills through reflection on practice.
13. Focus discipline	as 12, specific on classroom management and discipline.
14. Focus instruction	as 12, specific on learning and instruction of content.
15. Focus pupil contact	as 12, specific on making contact, connecting with pupils.
16. Use	using and building upon mentee teacher qualities and input, to acknowledge and develop these further, or to uses these to support the learning process.
17. Guide application	guiding application of new/existing knowledge, providing opportunities to practice skills and gradually and stepwise build new skills
18. Solicit	soliciting problem solving, by initiating topics, posing questions, waiting for/not giving answers, to promote reflection and ownership of solutions.

Table 5.1. (continued).

Mentoring activity	Content of the mentoring activity
C. Creating a favourable context for mentee teacher learning.	
19. Abbreviate	abbreviating mentoring and/or advancing independent teaching, to prevent provision of help where it is unnecessary, unproductive or unwanted.
20. Decrease	decreasing the frequency/intensity of mentoring, to prevent provision of help where it is unnecessary, unproductive or unwanted.
21. Defer	intentionally deferring attention for a specific topic, not focussing on it, to prevent provision of help where it is unnecessary, unproductive or unwanted.
22. Give status	giving mentee teachers 'teacher status' in the eyes of pupils.
23. Increase	increasing the frequency/intensity of mentoring to ensure sufficient progress on deficit competences.
24. Make responsible	making the mentee teacher responsible for an authentic product or task, to let them learn through risk-taking, doing or making in a real setting.
25. Shield	shielding the mentee teacher from negative effects of confrontations or conflicts with other actors in the partnership scheme (pupils, staff).
26. Prolong	prolonging the learning time under mentor guidance, to attend to mentee teacher needs or ensure a specific level of competence is achieved at a later moment.
27. Self-adjust	adjusting oneself to a mentoring relationship to prevent the emotions/ self-appraisals it evokes from impeding it's initiation and/or productive functioning.

Table 5.1. (continued).

Mentoring activity	**Content of the mentoring activity**
D. Changing mentee teacher behaviour.	
28. Confront	confronting mentee teachers with discrepancies between 1) current actions and their results, and 2) desired results and professional norms of conduct, to align their perception with reality, clarify expectations and professional norms, make them see the necessity of change and/or to develop the intention to change behaviour.
29. Curb behaviour	curbing mentee teacher behaviour, correcting/stopping specific habits or behaviours, to prevent negative consequences for the mentee teacher/pupils.
30. Dictate	dictating the mentee teacher to perform specific actions, to ensure skill acquisition and a sufficient level of task execution.
31. Model	modelling/showing ways of doing or being, or arranging access to models, to provide alternative courses of action and images of how to teach or be a teacher.
32. Monitor	monitoring mentee teacher progress on goals developed in mentoring, by observing/reading mentee teacher reflections, to ensure attempts at their realization.
33. Suggest	suggesting to the mentee teacher what to do and how to do it, to stimulate the mentee teacher to take a specific or different course of action.
34. Orchestrate crisis	orchestrating a moment of crisis for the mentee teacher, to create awareness of problems and a willingness to learn and change behaviour.

5.2.3.2 Step 2: calibrating coding consistency and scoring all interview fragments.

We calibrated consistency of coding between coders (Kurasaki, 2000) in three additional coding rounds. In each round, both coders separately coded a new set of fifteen units of analysis. Coders labelled units with numerical codes for the activities described in that card sort, allowing multiple codes to be attached to one unit of analysis. Coders discussed and resolved sources of disagreement before coding a subsequent round. We measured inter-coder reliability using proportional agreement[6] and Mezzich's proportional overlap κ statistic, which is tailored to situations where coders may assign multiple but unequal numbers of codes to units, as in our case (Eccleston, Werneke, Armon, Stepehenson, & MacFaul, 2000; Mezzich, Kreamer, Worthington, & Coffman, 1981). During the three calibration rounds, proportional agreement improved from 75% to 92%, and Mezzich's κ statistic improved from .60 to .85; a reliability level that is generally considered very good (Wongpakaran, Wongpakaran, Wedding, & Gwet, 2013). One researcher therefore scored the remaining units of analysis alone.

5.2.3.3 Step 3: selecting and representing mentor talk about dominant activities.

To identify dominant activities, we tallied for each mentoring activity how many mentors used it, and for how many mentees it was used across all card sorts. To select activities that mentors focus on most, we selected activities mentioned by approximately two thirds of mentors (seven at least) and for approximately one fourth of mentees (seventeen or more). To identify dominant activity patterns, we tallied how many times mentors combined each combination of two activities for the same mentee, by constructing a co-occurrence matrix indicating the frequency of each combination of two activities. To select activity combinations that mentors focus on most, we selected activity combinations mentioned by approximately half of mentors (six at least) and for one-tenth of mentees (seven or more). We retrieved all interview fragments referring to the mentees for which

[6] For example, if coder 1 assigns codes A, B and C to a unit, and coder 2 assigns codes B, C and D, then the proportional agreement is 0.50 because two actual agreements (B, C) were made out of four possible agreements (A,B,C,D).

mentors mentioned the dominant activities and activity combinations. We inspected and compared the overall pattern of mentoring activities that the mentor teachers mentioned for these mentee teachers, and developed themes to summarize how mentors talk about enacting the dominant activities and activity combinations for these mentee teachers.

5.3 Results

5.3.1 Dominant activities in mentor teachers' descriptions

The single most dominant mentoring activity is confronting (activity 28 in Table 5.1). Ten of the 11 mentors mention this activity, for 25 (38%) of all 66 mentee teachers (see Table 5.2). Confronting is oriented at changing mentee teacher behaviour. It involves confronting mentee teachers with discrepancies between current actions and results versus desired results and professional norms of conduct, or with problems for short. It is oriented toward aligning the mentee's perceptions with reality, clarifying expectations and professional norms, making mentees see the necessity of change and developing the intent to change behaviour.

The single most dominant activity combination in mentor teachers' descriptions is confronting with guiding application (activity 17). Six mentors mention this combination, for seven mentees. Guiding application refers to the mentor's activity of trying to build skill or knowledge in a gradual, incremental or stepwise manner by providing direct guidance in mentoring conversations or by providing opportunities to practice skills. Other activities often mentioned in combination with confronting are a) attuning to mentee teachers' emotions, b) using mentees' qualities and c) curbing mentee teacher behaviour (activities 2, 16, and 29).

Table 5.2. Mentoring activities according to number of mentors that mention them and number of mentees the activity is mentioned for.

Mentoring activity	Number of mentors that mention the activity	Number of mentees the activity is mentioned for
A. Providing emotional and psycho-social support		
1. Affirm	3	7
2. Attune	5	8
3. Be there	2	5
4. Focus person	3	5
5. Focus emotions	3	4
6. Focus motives	2	2
7. Help cope	2	4
8. Incite	6	12
9. Reassure	6	10
10. Solicit self-affirmation	2	4
B. Supporting construction of personal practical knowledge about teaching		
11. Explore self- questioning	1	2
12. Focus teaching	3	6
13. Focus discipline	4	6
14. Focus instruction	4	7
15. Focus pupil contact	5	7
16. Use	6	18
17. Guide application	8	12
18. Solicit	3	5
C. Creating a favourable context for mentee teacher learning.		
19. Abbreviate	1	1
20. Decrease	2	2
21. Defer	3	5
22. Give status	1	1
23. Increase	4	7
24. Make responsible	3	5
25. Shield	3	5
26. Prolong	1	1
27. Self-adjust	3	7
D. Changing mentee teacher behaviour.		
28. Confront	10	25
29. Curb behaviour	7	14
30. Dictate	3	4
31. Model	2	2
32. Monitor	3	5
33. Suggest	4	5
34. Orchestrate crisis	2	4

Note: Letters and numbers refer to letters and numbers in Table 5.1.

5.3.2 How mentors talk about enacting dominant activities

Three interrelated themes summarize how mentors describe that they enact the dominant activity of confronting, and the dominant activity combination of confronting with guiding application. The main theme, *telling the problem versus developing the problem,* represents a gradient of how mentors enact confronting. Telling the problem refers to mentors confronting by directly telling the mentee about the discrepancy between current and desired actions, to develop the intention of change. Developing the problem refers to mentors confronting by getting the mentee to see or experience a discrepancy and the importance of the related change in behaviour, without directly telling it to them. The remaining two themes relate to this main theme. The theme *telling or developing the problem depends on the issue* indicates that telling versus developing the problem tends to differ according to the nature of the underlying problem that the mentor tries to address through confronting the mentee. The theme *crafting the response* represents how mentors mentor combine confronting with guiding application in a manner that remains responsive to the mentee teachers' learning, through *taking the mentee perspective, timing confrontation, monitoring mentee reactions*, and *self-monitoring.* This theme also connects to the main theme, as these aspects of crafting the response tend to be present mostly when mentors confront by developing the problem.

In the following two sections, we illustrate *telling or developing the problem depends on the issue* and *crafting the response* with interview examples at different positions along the main gradient of telling versus developing the problem. In the interviews, the mentors often shifted into performance (Baynham, 2011) to re-enact what they and/or their mentee teacher had said, and to indicate their inner speech in thinking about how to respond to their mentee teachers. In the interview examples, we indicate these instances of shifting into performance in bold italics (***mentor speech***) or italics (*mentee speech*).

5.3.2.1 Telling or developing the problem depends on the issue

Telling or developing the problem tends to differ according to the nature of the underlying problem that the mentor tries to address. Mentors tend to describe telling the problem for more observable issues of mentee teaching, such as

conforming to professional standards of being organized, planning well for teaching, dressing appropriately and performing specific teaching activities. Mentors tend to describe developing the problem for less observable issues of mentee learning to teach, such as mentee teachers' openness to experience, self-confidence and issues with regard to reflecting on and thinking about teaching. The following two examples of mentor Nina illustrate how telling or developing the problem depends on the issue Nina tries to address. Nina's description of her response to Josie is an example of telling the problem. Nina tries to address the issue of Josie shirking a teachers' responsibility of addressing pupil truancy, an issue that is directly observable in Josie's teaching behaviour. Nina re-enacts how she directly tells Josie the problem:

> *Well if they don't want to do that, then that's their choice, if they skip school then that's their choice.* **Yes, that's not an option Josie, you have a responsibility there as well.** *Yes but I am not the educator, that's the parents.* (...) **Yes, that's not possible, A, it's not, because it's school policy that pupils must be present in class, and B, you are responsible for the learning process, and that also includes confronting them when they don't do it. So you can't escape from it.**

Nina's description of her response to Eve and Sophie is an example of developing the problem. Nina tries to address the issue of Eve and Sophie being too perfectionist and trying too hard, an issue that relates mostly to how they reflect on their teaching:

> These women had to let go, constantly let go, let go of the idea that you can control everything, that you can prevent everything, or that everything is your fault.

Nina describes her more indirect response, and shows how she times the creation of a moment of crisis for Eve and Sophie and takes their perspective:

> Well, they are perfectionist people, you first have to completely let them do their thing and especially praise them, until it really, until

> they fall into a really deep hole. Then you can start rebuilding (...). So I'll say ***fantastic what a great lesson, how well thought out***, (..) and ***well too bad that the class didn't really cooperate but I'm sure that they'll come around***. It is actually really mean, but I do enjoy that, waiting for the axe to fall, and then look at ***well how is this possible, and you're really trying so hard*** (...). You can't say to someone, you're trying too hard and you have to loosen up. No, you have to experience that.

Mentors also recognize that telling the problem is not appropriate for less observable issues of learning to teach. The following example of mentor Sandy illustrates how Sandy retrospectively identifies that she should have developed the problem for an issue of mentee learning to teach. For two mentee teachers, Sandy tries to address the issue that they attribute teaching problems to cultural differences in teaching, rather than to their own actions. Sandy shows how she retrospectively monitors mentee reactions and takes the mentee perspective:

> These both looked outside themselves. They both came from a different country; they had a completely different idea of how it should be in school than how it is in the Netherlands. As a result, if something went wrong, *'yes but it is the culture'*. (...) With them I am, oddly actually, much harder on them. I expect more from them, because of which I actually get less. Because it was not their fault to begin with, and when I told them that it actually was their fault, it was immediately like (…). I would do it differently now. I would not give my own judgements as much, and let them do the talking. ***OK, explain to me, how do you know*** (…) like ***well then show me that it actually is like that, show me what you tried in order to change it.*** Now it was more, ***you should have done this,*** or ***did you already do that***, and ***it is not like that,*** and you know, but it did not have any effect. (...) Their ideas were so ingrained; there is no way you can break through that. That is something they will have to discover for themselves, hoping that indeed eventually they will see that it is not just only that.

5.3.2.2 Crafting the response

In this section we present four examples of confronting with guiding application. These four examples function in conjunction to illustrate how the theme of crafting the response becomes more visibly present going along the gradient from telling to developing the problem, and as the issues that the mentor tries to address shift from mentee teaching behaviour to issues of mentee learning to teach. We first describe the four examples, after which we discuss the overall pattern across the four examples.

George and Rianne. Mentor George describes Rianne as agreeable, sociable and always ready to take over lessons. George tries to address the issue that her lessons are characterized by a sometimes appalling superficiality, and that Rianne fails to achieve adequate learning results with pupils. George re-enacts his initial response to overcome this discrepancy by guiding Rianne in planning lesson content, to prevent adverse effects for pupils:

> ***Remember, examine that well, make sure you're well aware that, for each of those terms*** (...) ***you have a good one-liner, so if a pupil asks 'yes but what's that', that you're able with one term to***... Those kind of pointers, and ***Make sure your board is a good reflection of how, what the reasoning is***, (...) ***make sure that it is on there in a way that they get what it is about at the end.*** So here, I have been really strongly guiding the content.

George describes how he subsequently focusses mentoring time on issues of instruction, and becomes more and more direct with Rianne. He first incites her to take on different instructional strategies, and finally suggests and dictates teaching behaviours, to ensure a minimal level of quality of instruction for pupils. George re-enacts his dictating:

> I've often been pushing Rianne on that, like ***Now I really want, we've already spent three lessons on this subject, and I feel like we've made zero progress. Now I really want you to make that next step in the next lesson, and now they really have to make the transition to the more abstract, so, the next lesson you need to train them in***

> ***abstracting*** (...) ***be much more aware of What do I want to achieve?, other than that they're busy.***

John and Mary. Mentor John tries to address the issue of Mary's insecurity and of how she is too quickly daunted by relatively small problems:

> …all of a sudden something happens in class, a trifle, and wham you get a note in your mailbox, saying (..) *'I'm so insecure; I really can't do it anymore'*. …it turns out that of the fifty minutes maybe forty minutes just went great, and ten minutes didn't go well. But then in her eyes the whole lesson is spoiled.

John describes his response, showing how he times the moment of a more direct confrontation and how he notices his own readiness to confront Mary and Mary's reactions to his actions:

> That is quite a process of finding the right angle to tackle that (...). But now that she has been around here longer I am starting to confront (…). In the beginning I wasn't up to that confrontation, but now I notice it's doing her good. It just had to be said.

Jack and Anne. Mentor Jack tries to address the issue of Anne's views of teaching and learning to teach. Jack describes how Anne views teaching history as telling stories, wants to copy his story-telling approach to teaching history, and is reluctant to accept the idea that she also needs to try out other approaches to teaching:

> She though it wonderful, she also had stories, so it had to be that way. I said ***well we're also going to try out different things this year***. Yes, no, but first she wanted to tell stories, because it was about the Renaissance, and that was her subject. (...)

Jack describes how he seizes a moment of crisis for Anne to time a confrontation. In this moment of crisis, Jack first shields Anne from a potential escalation of a lesson gone wrong:

> She had prepared and prepared herself, and she was full of stories, she said *one lesson won't be enough, I need three lessons*, and she was, after almost five minutes it was silent, it was over, it was finished. It was even so bad that I just sent the class away.

Jack describes how he subsequently confronts Anne directly with the fact that copying his story-telling approach will not work for her, which Anne accepts:

> I told her ***we need to talk.*** I just said, ***Anne, you're not going to make it if you go on like this***. She saw that herself too, and then she started to search.

Jack describes that he increases the intensity of mentoring and guides Anne's exploration of teaching approaches, with success, and shows how he monitors her reactions in the process and sees her insecurity in what to do:

> …then you get into a terrain where she initially doesn't feel at home, and then you have to talk a lot and also guide. Like what kind of tasks did you come up with this time, because she came to me every time asking *is this OK, is that OK*, and then you look at that. …once she had found that form of working with larger tasks, that pupils could work on for three, four, five lessons, you just saw her blossoming.

Jack describes how they subsequently focused mentoring conversations much more on Anne's teaching performance.

Kay and Deke. Kay describes Deke as a mentee with a highly unsure presence in class and not capable of connecting with pupils and their worldviews. Kay sees Deke as still too immature, unexperienced and busy finding himself, due to his growing up in a protected circle of a religious congregation. Kay describes how he tries to address Deke's inability to reflect on his unsure presence, and re-enacts how he asks questions to help Deke reflect on his behaviour. Kay shows how he monitors Deke's failure to respond, his own frustration at Deke's failure, and how he adapts his questioning to craft a more fitting response:

> You ask a question, ***How would you do that?*** I once looked at my watch, ten minutes of silence, pfff. And then you reach a certain point like, ***I'm not discussing the lesson the same day but I just give a few questions on paper, and you just think about them at home and then in three days we'll discuss the lesson***, because I would just go crazy.

Kay describes how he further adapts his questioning by adding video recordings of lessons to confront Deke with his body language and unsure presence. Kay shows how he monitors Deke's reactions as he re-enacts different ways of questioning Deke and tries to guide application for Deke through role-play:

> Body language, taped it on video so he can see it too. So I say ***find three situations that you think, how am I responding here?*** So that he would explore himself. (..) I say ***What is your body communicating here?*** *Yeah, nothing*. ***So the pupil doesn't stop.*** *Well what should I do then?* I said ***Well here in this room there's no pupil, I'm telling you right now you're a big asshole, just be mad, practice on me, and we'll put on the video so you can see straight away, play it back, watch it, and again, you know just practice three, four times. Now do the same at home for yourself, just give a roar, or just be mad (…) just practice.*** Then, in class, well, nothing, nope.

Kay describes how he further changes his approach by trying to address the underlying problem of Deke's inability to cope with the demands of teaching and learning to teach. Kay solicits self-affirmations from Deke to support his self-confidence and incites Deke to broaden his perspective by visiting colleagues and lessons in a different school, but again with little result. Finally, Kay focuses mentoring on Deke's personal experience of learning. Kay indicates how he tries to take Deke's perspective of how he experiences learning, again monitoring Deke's reaction and monitoring how this in turn affects Kay himself:

> …once in a mentoring conversation he said *Kay, I have never had a setback in my life, this is the first time I'm having adversity, and I*

> *just don't know how to cope with that.* That just hit me like, I thought, ***that's just not possible, (...) it doesn't matter how smart you are because you are just going to have a setback in your life.*** I did talk this through with him, but I could not really get through to it either.

The issues that the four mentors try to address in the above examples range from more observable issues in teaching at the one end (the superficial lessons of Rianne), to complex and problematic issues of learning to teach at the other (Deke's unsure presence, immaturity, inability to reflect and cope with setbacks). In between lie less observable but solvable issues of learning to teach (Mary's insecurity and Anne's limited views of teaching and learning to teach). Table 5.3 presents the activity patterns for these four examples. At the 'telling' end of the gradient, mentor George mentions relatively more activities oriented toward directly mentee Rianne's behaviour. Halfway the gradient, mentors John and Jack mention relatively more activities oriented at creating a favourable context for mentee learning for mentees Mary and Anne. At the 'developing' end of the gradient, mentor Kay mentions relatively more activities to provide emotional support and to soliciting answers from mentee Deke. All aspects of the theme of crafting the response are visible in Kay's example at the 'developing' end of the gradient: *taking the mentee perspective, timing confrontation, monitoring mentee reactions*, and *self-monitoring.* None of these aspects are visible in mentor George's example at the 'telling' end of the gradient. In between, several aspects of crafting the response are visible in the examples by John and Jack, but not as elaborate as in mentor Kay's response.

Table 5.3. Activity patterns for presented examples of confronting with guiding application.

	Activity pattern			
Mentor & Mentee	A. Providing emotional and psycho-social support	B. Supporting construction of personal practical knowledge about teaching	C. Creating a favourable context for mentee teacher learning	D. Changing mentee teacher behaviour
George & Rianne	8. Incite	14. Focus instruction 17. Guide application		28. Confront 30. Dictate 33. Suggest
John & Mary	9. Reassure	15. Focus pupil contact 17. Guide application	23. Increase 25. Shield	28. Confront 33. Suggest
Jack & Anne		14. Focus instruction 17. Guide application	23. Increase 25. Shield	28. Confront
Kay & Deke	1. Affirm 4. Focus person 8. Incite 10. Solicit self-affirmation	18. Solicit 17. Guide application		28. Confront

Note: Letters and numbers refer to letters and numbers in Table 5.1.

5.4 Discussion

The focus of this study was on dominant mentoring activities in mentor teachers' practical knowledge of adaptive response to their mentee teachers' learning. The dominant mentoring activity that mentors describe is confronting mentees with problems, which mentors predominantly combine with guiding application of new knowledge.

Mentors confront in different ways: they tell the problem or develop the problem. Mentors tend to directly tell the problem when they address observable issues of teaching. When they address less observable issues of learning to teach, they tend to develop the problem and craft their adaptive response through self-monitoring, timing confrontation, taking the perspective of the mentee and monitoring mentee reactions. These less observable issues included perfectionism, external attribution, mentee insecurity, limited views of teaching and learning to teach, reflective capacity and ability to deal with setbacks. Research on tensions in novice teachers' learning shows that such issues can be difficult to deal with, generate a sense of discontinuity in development as a teacher, and undermine commitment to being a teacher (Van Rijswijk, Bronkhorst, Akkerman, & Van Tartwijk, 2018). Hobson (2016) indicates that mentors can exacerbate this process when they fail to recognize novice teachers as vulnerable learners and engage in 'judgementoring' (Hobson, 2016, p.90). The examples presented in this study indicate how mentors confront adaptively to support mentees to engage with these issues. The example of Kay and Deke indicates that these issues may nevertheless remain unresolvable within the mentoring setting, even with considerable effort by the mentor to adapt the mentoring approach.

Mentors described confronting as creating a discrepancy for the mentee between current and desired behaviour or performance, and as creating the concomitant intention to resolve this discrepancy through changing behaviour. This notion of confronting is highly similar to the concept of goal setting in goal setting theory (Locke & Latham 2002). Goals initiate action, direct learners' attention, increase effort and persistence, and lead to arousal and development of task relevant knowledge and strategies (Locke & Latham 2002). When mentors combine confronting with guiding application, they support this latter aspect of developing task-relevant knowledge and strategies. For learners, goals function

as ‘regulatory agents’ that guide self-regulatory activity (Sitzman & Ely 2001). Through confronting, mentors assigns goals for mentees. For such assigned goals to function as regulatory agents and affect performance and learning, mentees need to identify and commit to assigned goals as personal goals that are important and achievable for them (Locke & Latham 2002). When mentor and mentee agree on the goal for learning, adaptive response may focus on mentee construction of practical knowledge and on management of emotions that may result in the process (Ralp & Walker 2013). The examples of developing the problem however, such as the examples of Sandy, John and especially Kay, show that getting mentees to accept a goal may be difficult to achieve and sometimes frustrating for mentors.

Conceptually, an interesting result is mentor’s descriptions of self-monitoring in trying to ensure that confronting remains adaptive to the mentee teacher. Mentors John and Kay describe their awareness of how their own thoughts and feelings influence their response. This supports Schunk and Mullen's (2013) suggestion that research efforts on mentoring should conceptually integrate with research on self-regulated learning. They propose a process model of mentoring interactions with attention for the self-regulatory cognitions and affects of both the mentor and the mentee, and how these shape the subsequent actions of each.

In line with Hudson & Hudson (2016), we propose that mentor preparation should include goal setting through confronting as a mentoring role, skill and practice. This involves how mentors can help mentee teachers to accept goals, especially when addressing less observable and complex issues of mentee learning to teach. This should also include attention for the possible emotions and frustrations that may arise for the mentor, and for how mentors may self-monitor to prevent impediments to adaptively responding to their mentee teachers' learning.

5.4.1 Limitations and applications

A limitation of this study is the reliance on a retrospective method. However, there were many instances of shifting into performed direct speech, by directly performing speech as a mentor, mentee teacher or pupil (Baynham, 2011). This suggests that rather than socially desirable answers, the mentors provided

information on their connected thinking and acting during their adaptive response to their mentee teachers' learning.

Practical applications of this study lie in using the results and methods for mentor professional development. The list of mentoring activities in Table 5.1 can serve as a bank of activities to assist mentors to expand their repertoire and consider a differentiated mentoring approach adapted to the individual needs of mentees (Hudson, 2013). The examples can help evoke connected thinking on the issues to address and on ways to do so. The sorting task used in this study can serve as a structured way for more experienced mentors to reflect on their response to differences in their mentee teacher learning.

5.5 Conclusion

This study explored dominant mentoring activities in mentor teachers' descriptions of adaptively responding to their mentee teachers' learning. The dominant activity that mentors mentioned is confronting mentees with problems, which is a form of goal setting with mentees. We therefore conclude that mentor teachers construct their practical knowledge of adaptive response in large part around goal setting with mentees.

6

MENTOR TEACHERS' HEURISTICS FOR ADAPTIVE RESPONSE TO THEIR MENTEE TEACHERS' LEARNING

Abstract

This descriptive study focuses on mentor teachers' shared practical knowledge of adaptive response to their mentee teachers' learning. To adapt mentoring to where their mentee teacher is as learner of teaching, mentors need to draw on their knowledge of mentee teacher learning and of mentoring activities. As a result of everyday micro-adaptions, mentors develop actionable heuristics that connect these two knowledge domains. This study explores mentor teachers' shared heuristics. In repertory-grid interviews, 11 mentors described characteristics of their mentee teachers' learning and their response to these characteristics. Based on shared associations of these characteristics and mentoring activities in mentor teachers' descriptions, seventeen shared heuristics were identified. These heuristics related to four domains: classroom management and interaction, knowledge and beliefs about learning and instruction, dealing with emotions in learning to teach and the role of the mentee teacher in guided problem solving. Heuristics were differentiated according to the specific explanations that mentors gave for characteristics of their mentee teachers' learning. We suggest ways in which the results may inform the knowledge base of mentoring and the development of practical knowledge for adaptive mentoring practices.

6.1 Introduction

Mentoring is currently the dominant support strategy to help novice teachers learn from the experience of teaching. Mentored learning to teach is however not always an educative experience. Feiman-Nemser (1998) introduced the notion of 'educative mentoring' (p. 66) to denote forms of mentoring in which mentors are more than local guides and educational companions, and go beyond providing moral support, practical advice and a place for practice (Stanulis et al., 2018). Educative mentoring rests on a vision of good teaching, and a view of teaching that can and needs to be learned through focused and assisted performance (Feiman-Nemser, 2001b; Wang & Paine, 2001). Educative mentoring fosters professional norms of collaboration and shared inquiry (Wang & Odell, 2002), and blends showing and telling, asking and listening. It occurs both inside the action of teaching through coaching, stepping in, co-teaching and demonstration, and outside the action of teaching through informal conversations, mentoring sessions, debriefing sessions and co- planning sessions, writing tasks and video analysis (Schwille, 2008). Educative mentoring conversations go beyond novice's subjective experience of teaching events and practical advice for teaching (Stanulis et al., 2018). Instead, the focus is on co-inquiry into teaching events through evidence of pupil learning, explicating views and rationales underlying choices in teaching, and connecting analysis to goals for deliberate practice (Timperley, 2001).

In such educative mentoring, a central challenge for mentor teachers is to "…improvise and adapt their practices to suit the situation and the novice's learning" (Schwille, 2008, p.155). Mentors need to 'read' a mentoring situation (Orland-Barak & Klein, 2005) in order to act adaptively. Doing so requires mentors to diagnose developmental and performance levels of mentee teachers, structure learning settings through goals and tasks, and scaffold mentee teacher learning toward successful unassisted performance (Stanulis, Brondyk, Little, & Wibbens, 2014). It involves sharing and shifting responsibility for teaching tasks in light of the novice's readiness and capability (Feiman-Nemser, 1998). Thoughtful mentors that do so effectively, "…draw upon their knowledge of teaching, learning to teach, and where their novice is as a learner of teaching to craft learning opportunities for their novices" *(*Schwille, 2008, p.164). Crafting such learning opportunities for their mentee teachers requires that mentors

develop and connect two knowledge domains; knowledge of their mentee teachers' learning, and knowledge of mentoring activities and strategies to support this learning.

The purpose of this qualitative study is to explore how mentor teachers connect these two knowledge domains, through a descriptive exploration of their personal practical knowledge of being adaptive to their mentee teachers' learning. The current knowledge base of mentoring in teacher education is still relatively underdeveloped (Jones & Straker, 2006; Brondyk & Searby, 2013). We therefore assume that making mentor teachers' practical knowledge for adaptive response to their mentee teachers learning explicit and public, can contribute to the development of such a knowledge base of mentoring (Hiebert, Gallimore, & Stigler, 2002; Verloop, Van Driel & Meijer, 2001), and to the further development of educative mentoring practices. Verloop et al. (2001) argued that for practitioner knowledge to contribute to the professional knowledge base, it is desirable to focus on common elements in practical knowledge, or elements that are shared by practitioners. The focus in this research is therefore on shared elements in mentor teachers' practical knowledge.

6.2 Theoretical considerations

The development of a knowledge base for mentoring necessarily builds on and borrows from the knowledge base of teaching (Hiebert & Morris, 2009). Our conceptualization of mentor teachers' adaptive response therefore partly draws upon current views of adaptive teaching that emphasise the role of personal, actionable heuristics in micro-adaptation (Corno, 2008; Lin, Schwartz, & Hatano, 2005; Randi & Corno, 2005), and their connection to teachers' beliefs and self-knowledge (Fairbanks, Duffy, Faircloth, He, Levin, Rohr, & Stein, 2010). We assume that the main insights from this work also transfer to the situation of teacher mentoring.

6.2.1 Micro-adaptation in mentoring

Teachers, by the very nature of their work with classes in which learner variation is present, develop micro-adaptive responses to differences in learners and learning (Corno, 2008). Micro-adaptation refers to "continually assessing and

learning as one teaches - thought and action intertwined" (Corno, 2008, p.163). It refers to teacher's ability to simultaneously assess and respond to individual learner differences, performed in the ongoing course of instruction itself. As a result of their day-to-day micro-adaptive responses, teachers develop personal and actionable heuristics that connect knowledge of salient differences between pupils, situations and pupil behaviour to courses of action (Randi & Corno, 2005). With increased experience, teachers develop heuristic categories of learning situations to aid their informal assessments and decision-making on the fly. Such heuristics are seen as a form of conditional knowledge: of knowing why certain knowledge is or is not appropriate in a specific situation, including a pro-active pursuit of multiple perspectives and possibilities (Fairbanks et al., 2010, p.167). Mentoring studies indicate that mentors develop similar heuristics that connect courses of action to heuristic categories of novice teacher learning. For instance, Stanulis et al. (2014) showed how a mentor differentiated her response for three 'regular kinds of novice teachers': (1) a novice expecting to do fine alone; (2) a novice overwhelmed with management issues and struggling to conform to the mandated curriculum, and (3) a novice eager to learn but unsure what to do. Similarly, Schwille (2008) showed how a mentor saw the need to provide different learning opportunities for a mentee teacher “barely holding on by her fingernails” (p.161) than for a mentee teacher teaching at a level as good as experienced colleagues.

6.2.2 The role of mentor teachers' mentoring conceptions

The conditional knowledge that teachers develop through their micro-adaptive responses, is grounded in their values and in choices that connect to broader issues of teachers' sense of personal agency and knowledge of themselves as teachers (Fairbanks et al., 2010). The same appears true for mentoring. For instance, Haigh and Ell (2014) showed mentor teachers’ judgments of novice teachers' aptitude for teaching to be highly variable. Important sources of disagreement were 1) different views of the most important dimensions of teaching, 2) a differential focus on current teaching performance or on potential for learning of novice teachers, 3) different beliefs about whether key aspects of teaching are 'learnable' or not, and 4) associations with their own practice as beginning teachers. So while the heuristics that mentor teachers develop and that

connect knowledge of novice teachers' learning and of adaptive responses may be immediately usable, they may also be fallible and biased (Randi & Corno, 2005).

The sources of difference indicated by Haigh and Ell (2014) have also been identified as differentiating factors between the mentoring conceptions that mentor teachers hold (Achinstein & Barrett, 2004; Franke & Dahlgren, 1996; Graham, 2006; Norman & Feiman-Nemser, 2005; Orland-Barak & Klein, 2005; Young, Bullough, Draper, Smith, & Erickson, 2005). Mentor teachers holding an instrumental mentoring conception tend to focus more on classroom management and teacher control, and current teaching performance of novice teachers. They see teaching ability as more fixed and associate successful teaching more strongly with how they themselves teach. Mentor teachers holding a developmental conception, however, tend to focus more on pupil learning of content and pupil autonomy, mentee teacher potential for learning and developing mentee teachers' knowledge and understanding of teaching and learning. They see teaching as more learnable and associate successful teaching more strongly with being able to see teaching and learning from different perspectives, including that of pupils.

Given these differences between mentors we chose to select mentor teachers with varied outlooks on mentoring. We assume that this will allow us to maximize the variation in expressed heuristics within a small scale exploratory study.

6.2.3 Research question

The aim of this study is to explore how mentors connect the two knowledge domains of mentee teachers' learning and of mentoring activities to shape their adaptive response to their mentee teachers. Based on our theoretical considerations, we assume that mentors with experience of different mentee teachers will have developed heuristics for mentoring situations that connect specific characteristics of novice teacher learning to the mentoring activities that they see as an appropriate response to these characteristics. We conceptualise these connections that mentors make as actionable heuristics, and our research question is therefore: *What are mentor teachers' shared heuristics for adaptive response to their mentee teachers' learning?*

In teaching, the development of these heuristics and the accompanying knowledge of situations and individual pupils is often constructed from atypical rather than typical situations and behaviour patterns, as teachers tend to be more reflective, or meta- cognitively adaptive around unexpected situations than around situations they perceive as routine (Lin et al., 2005). Similarly, we assume that mentor teachers' heuristics will be connected to the mentee teachers they are able to remember well, and we therefore focus our study on mentor teachers' practical knowledge connected to mentee teachers of whom they have a vivid recollection. We therefore assume that depending on the situational interpretations that mentor teachers have of these mentee teachers' learning, they will mention different mentoring activities they undertook to further support and create opportunities for their mentee teachers' learning.

This study draws upon the same set of repertory-grid interviews as the previous two studies reported in Chapters 4 and 5. In this study, the two coding schemes from the previous two studies are combined in the analysis of the repertory-grid interviews. This combined analysis is used to explore the associations that mentor teachers describe between (1) attributes of their mentee teachers' learning and (2) mentoring activities to respond to these attributes. We assume that these associations are indicative of how mentor teachers connect their practical knowledge of mentee teachers' learning and of mentoring activities, as actionable knowledge. The focus in this study is on those attribute-activity associations that are shared across the interviews, as an indication of shared knowledge of mentor teachers.

6.3 Method

6.3.1 Participants

A purposive sampling (Palys, 2008) was used to maximize the chances of finding a variety of heuristics in a relatively small sample, selecting mentors with different patterns of mentoring conceptions. Mentors were selected based on their responses to a survey questionnaire, which measured the degree to which they held a developmental mentoring conception versus an instrumental mentoring conception (see section 3.2.1 in Chapter 3). The final sample included 5 mentors scoring above average on both scales, 2 mentors scoring below average on both

scales, 2 mentors scoring above average on the developmental scale and below average on the instrumental scale, and 2 mentors scoring the opposite combination. The sample consisted of 11 mentor teachers, 6 males and 5 females. Age in years ranged from 26 to 59 years. Teaching experience ranged from 3 to 35 years, and mentoring experience ranged from 3 to 26 years and from 6 to 60 mentee teachers mentored.

6.3.2 Repertory grid interviews

In order to elicit the associations between the characteristics of mentee teachers' learning and mentoring activities in mentor teachers' thinking, repertory-grid interviews were conducted with all mentors. This allowed mentors to engage in talk close to their lived practice of mentoring and narrative ways of knowing mentoring practice (Shulman, 2002), while also directly capturing what mentoring activities they associated with characteristics of their mentee teachers' learning. The names of mentee teachers that the mentors had mentored in the past were used as stimuli for first eliciting mentor talk about similarities and differences between their mentees, and subsequently about mentoring activities they performed to adaptively respond to these similarities and differences.

The interviews followed the classical repertory-grid interview format (Tan & Hunter, 2002), based on Kelly's theory of personal constructs (Kelly, 1955). In this format, the respondents themselves identify both the elements (the mentee teachers) and the constructs (how the mentee teachers differed). The constructs are elicited in a triadic form, by asking the respondent to distinguish how two elements (mentee teachers) are similar, and a third is different from these two. In this study, we define constructs as bipolar oppositions that mentor teachers use to discriminate between different attributes of their mentee teachers' learning.

First, mentors were asked to recall the names of six mentee teachers they had mentored, of whom they still had a vivid recollection. Second, they were given three of these names, on cards. They were asked to identify how two mentees had in some way been similar to each other and dissimilar to the third mentee. They were asked to name the terms that best described the difference, and to provide examples of how this had manifested itself in the mentoring process. Finally, they were asked to describe how they had responded to these

similarities and differences, and to provide examples of what they had done. This was repeated a total of eight times with different sets of names, so that each name was included in four different sets. To stimulate mentors to talk about what they perceived to be meaningful differences, they were allowed to 'skip' a card sorting, to contrast the set of three cards with the total card set, or to sort the same set of cards multiple times. As a result, some respondents made more than eight card sorts, resulting in a total of 97 card sorts for all eleven mentors. Interviews took between half an hour to one hour, and were transcribed verbatim from audio files.

6.3.3 Analysis

Interview transcripts were analysed using content analysis (Kurasaki, 2000). Interviews were first separately coded for attributes of mentee teacher learning and for mentoring activities (see sections 4.2.3 and 5.2.4 in Chapters 4 and 5). Subsequently, associations between attributes and mentoring activities were explored through a pattern analysis. A more elaborate description of the coding process for attributes and mentoring activities is provided in sections 4.2.3 and 5.2.4 of Chapters 4 and 5. Here, we shortly summarize the overall coding process, and then we indicate how the interviews were scored using the two coding schemes, and how shared attribute-activity associations were identified.

6.3.3.1 Coding process for attributes and mentoring activities

The two coding schemes for attributes of mentee teachers' learning and for mentoring activities were each developed in several rounds (see sections 4.2.3 and 5.2.4). In each round, two separate coders annotated a segment of the data, and adapted the coding scheme based on comparison and discussion of their annotations (Popping, 1992), until the coding scheme was stable. Inter-coder reliability for both coding schemes was measured using proportional agreement and Mezzich's proportional overlap κ statistic (Eccleston, Werneke, Armon, Stepehenson, & MacFaul, 2000; Mezzich, Kreamer, Worthington, & Coffman, 1981). Proportional agreement was above 90% and chance corrected agreement was above .85 for both coding schemes, a level that is generally considered very good (Wongpakaran, Wongpakaran, Wedding, & Gwet, 2013).

For attributes of mentee teacher learning, a three-level coding scheme was developed (see section 4.2.3 in Chapter 4). At the highest level of the coding scheme, these constructs were organized into four overarching themes. At the lowest level of this coding scheme, thirty-three constructs were identified. Each construct described a polar opposite, for instance 'self-confident versus doubting' which reflects the difference between a) being self-confident and assured about one's own capabilities, and having a high expectation of success, versus b) doubting and being unsure, insecure about one's own capabilities and having a low expectation of success. The original coding scheme described 33 constructs (see Table 4.1 in Chapter 4). For this study, we used the individual polar opposites of these constructs as indicators of attributes of mentee teachers' learning. This version of the coding scheme is presented in Appendix 2, describing 64 attributes of mentee teacher learning. Two constructs are not bipolar in the original coding scheme (see attributes 11 and 33 in Appendix 2), and these are retained in the same form as in the original coding scheme.

For mentoring activities, a two-level coding scheme was developed (see section 5.2.4 in Chapter 5). At the highest level of the coding scheme, these adaptive mentoring activities were organized into four broad mentoring intentions. These were a) providing emotional and psycho-social support, b) supporting construction of personal practical knowledge of teaching, c) creating a favourable context for mentee learning, and c) changing mentee teacher behaviour. At the lowest level of this coding scheme, 34 individual mentoring activities were identified. The coding scheme is presented in Table 5.1 in Chapter 5, describing 34 distinct mentoring activities. For each mentoring activity, a verb indicates the core of the activity, and a more detailed description denotes the activity and its goal.

6.3.3.2 Scoring of interview fragments for attributes and mentoring activities.

In applying the two coding schemes to the interviews, the basic unit of analysis was an interview fragment in which one card sort was discussed. Each unit of analysis was indexed twice, for both attributes and mentoring activities: once for the two mentee teachers sorted together as similar, and once for the mentee teacher set aside as different. For example, the following interview fragment

shows a mentor (mentor 01 in card sort 03) contrasting mentees A and B versus mentee D:

177 r> OK, uh, [..] yeah self-reliant and not self-reliant,
178
179 i> all right, how did that express itself,
180
181 r> uhm, those two try to find things out for themselves,
182 sometimes come by to ask something but more with a
183 clear-cut question and then get to work again, and that
184 one came by for every little problem, asking, and, well
185 with everything. And every day, and these would also ask
186 other people and that one would ask me everything
187
188 i> OK, how did you respond, what did you do with that
189
190 r> well, with this one, again, trying to take away that
191 insecurity, with these, more content oriented, content
192 focussed mentoring.

This card sort was indexed twice, using the lists of attributes of mentee teacher learning and of mentoring activities, as presented in Appendix 2 and Table 5.1. First, for mentees A and B, this card sort was indexed as [0103-AB: (B3.20a) self-confident + (B4.25a) independent + (14)/focus instruction] to indicate the association of the mentee teacher attributes of self-confidence and independence with the mentoring activity of focusing mentoring on the instruction of content. Second, for mentee D, this card sort was indexed as [0103-D: (B3.20b) doubting + (B4.25b) dependent + (9) reassure], to indicate the association of the mentee teacher attributes of doubting and dependence with the mentoring activity of reassuring the mentee to take away feelings of insecurity. The numerical indexes 20a/20b and 25a/25b indicate attributes that are polar opposites (a versus b) of the same construct, such as self-confident versus doubting (see Table 4.1 in section 4.2.3). All units were indexed similarly by labelling the unit with numerical codes for mentee teacher attributes and mentoring activities. For both attributes and mentoring activities, multiple codes could be attached to each index

of one unit of analysis. The final data matrix thus contained 194 indexed units (97 card sorts, each indexed twice), by 64 mentee teacher attributes (related to the 33 bi-polar constructs; two constructs were not bipolar) and 34 mentoring activities.

6.3.3.3 Pattern analysis of attribute-activity associations

In the total dataset, there was a large variability of associations between attributes and activities. For some attributes, no activities were mentioned in combination. For other attributes, up to 16 different mentoring activities were mentioned in combination. To explore shared associations between attributes of mentee teachers' learning and mentoring activities in mentor teachers' descriptions, three indicators of associations between attributes and mentoring activities were used. The three indicators are explained here with a (fictitious) example of a scoring pattern for a particular attribute of mentee teachers' learning (see Table 6.1). The table shows that mentor 1 mentions activities A and B once in combination with this attribute of mentee teachers' learning. Mentor 4 mentions activity D once and activity F three times in combination with this attribute. Mentor 1 and mentor 2 both mention activity A for this attribute, and mentor 1 and mentor 3 both mention activity C for this attribute.

Table 6.1. Example of a scoring pattern for one particular attribute of mentee teachers' learning.

Mentoring activity	Mentor 1	Mentor 2	Mentor 3	Mentor 4
A	x	x		
B	x		x	
C			x	
D		xxxx		x
E		x		
F				xxx

Note: This example is fictitious, to explain the different workings of the three indicators of association.

The first indicator (I) is maximum agreement at the level of specific activities. This was calculated as the highest number of mentors that mention the same mentoring activity in connection to the particular attribute. In the example in Table 6.1, this number is two: activities A, B, and D are all mentioned by two mentors, but no activity is mentioned by more than two mentors. High scores on this indicator point to agreement across mentors that a specific mentoring activity is an appropriate response for an attribute. However, in the example the same score would be possible if all mentors 2, 3 and 4 had each only mentioned one activity for the attribute, and only mentors 1 and 2 had agreed on activity A. At the level of the overall pattern of associations, such a score would indicate less agreement between mentors than the pattern in table 6.1, even if agreement at the level of a specific activity is the same. Therefore, we used two additional indicators at pattern level.

The second indicator (II) is agreement at the level of the overall scoring pattern. This was calculated as the average proportional agreement (Eccleston et al., 2000). For each attribute, all pair wise agreements between each combination of two mentors was calculated, and these were then averaged across all pair wise combinations. In the example in Table 6.1, proportional agreement between mentor 1 and mentor 3 is 0.33. Together between them, they mention three activities (A, B and C), but they have made only one agreement (activity A) for these three activities. Their pairwise proportional agreement is therefore 1/3=0.33. Mentors 3 and 4 show no agreement, so their pairwise proportional agreement is 0. The average proportional agreement over all six pairwise combinations in this example is 0.14 (0.25 + 0.33 + 0.25 + 0 + 0 + 0 / 6). Higher scores indicate that mentors overall tend to connect the same activities to a particular attribute, indicating agreement at pattern level.

The third indicator (III) is discrimination at pattern level. It is calculated as the ratio of (1) the number of different mentoring activities to (2) the total number of associations with mentoring activities that the mentor teachers mention for an attribute, across the total dataset. In the example in Table 6.1, this ratio is 0.43 (six over 14); the mentors mention six different mentoring activities (activity A to F) in combination with the attribute, for a total of 14 times (including the repeated mentions by mentors 2 and 4). A lower ratio indicates that mentors more frequently mention a more narrow range of different mentoring activities with the particular attribute, indicating discrimination at pattern level. If mentors 2 and 4

had only mentioned all activities once, this ratio would have been 0.67 (six over nine), whereas proportional agreement (indicator I) would have remained the same. Overall, it is likely that as mentors mention attributes more often in association with mentoring activities, they will also mention a wider range of mentoring activities for these attributes. To check whether this was so, the correlation coefficient between (2) and (1) was calculated for the whole dataset. Kendall's tau-b was used, a non-parametric measure suitable for ordinal data in a small sample such as this one. There was a strong and statistically significant positive relationship between (2) the total number of associations with mentoring activities that mentors mention for an attribute and (1) the number of different mentoring activities they mention for the attribute ($\tau = .94$. p(one-tailed) $<.01$). Attributes with a relatively low ratio of (1) over (2) deviate from this general trend. For these attributes, mentors mention a relatively narrow range of mentoring activities. Low scores may also originate from a few mentors repeatedly associating an attribute with an activity, but this is compensated for by the other two indicators.

The three indicators were used in combination to compensate for the weaknesses of each. Attributes were selected that met at least two of the following three criteria for the three indicators; (I) at least three mentors that mention the same mentoring activity in combination with the attribute, (II) an average proportional agreement of 0.03 or higher, and (III) a ratio lower than 0.6. The attribute from the example in Table 6.1 would therefore have been selected even though maximum agreement at activity level (indicator III: 2) is below 3. Average proportional agreement (indicator I; 0.14) is above 0.03, suggesting some agreement at pattern level, and the ratio of activities over associations (indicator II; 0.43) is below 0.60, suggesting some discrimination at pattern level. The criteria were empirically established based on the scores in the total dataset. Appendix 3 presents all attributes of mentee teachers' learning, and scores for indicators of their association with mentoring activities.

For each selected attribute, we retrieved all relevant interview fragments and compared how mentors combined the selected attribute with other attributes and mentoring activities in their descriptions. Based on this comparison, we developed summaries that provided a condensed account of these patterns of combinations. The summaries are presented in the results section in the form of 'if…then' statements that connect attributes of mentee learning to mentoring

activities. Where reference is made in the results section to an attribute of mentee teacher learning or to a mentoring activity, the corresponding letter and number combination from Appendix 2 is indicated after the attribute, or the corresponding number from Table 5.1 in Chapter 5 (see section 5.2.3.1) is indicated before the mentoring activity, in parentheses.

6.4 Results

In this section, we first present the shared attribute-activity associations and the mentoring situations that mentors identified for these attributes in their descriptions. In the subsequent four sections we present the common response patterns for these attributes, organized according to the concomitant four domains of mentee functioning. Each section presents the patterns of attribute-activity associations in mentor teachers' descriptions, followed by a condensed account of these patterns in the form of 'if...then' heuristics.

6.4.1 Shared attribute-activity associations

Ten attributes met at least two of the criteria for shared attribute-activity associations (see Appendix 3). Table 6.2 presents the attribute-activity associations for these ten attributes, showing the mentoring activities that mentors mentioned multiple times (at least twice) in association with the attribute. The attributes in this table are ordered along the four domains of mentee functioning they relate to: interactions with pupils and classroom management (A1), knowledge, beliefs and approaches towards learning, instruction and content (A2), mentee teacher dealing with emotions in the learning process (B3), and mentee teacher role in guided problem solving (B4). The mentoring activities in this table are ordered along the four broad mentoring goals they are oriented toward: A) providing emotional and psycho-social support, B) supporting construction of personal practical knowledge of teaching, C) creating a favourable context for mentee learning, and D) changing mentee teacher behaviour.

For the two domains of mentee teaching (A1 and A2 in Table 6.2), the shared mentoring activities generally represent two of the four mentoring goals;

combining support for knowledge construction with either emotional support or efforts to change mentee behaviour. For the two domains of mentee learning to teach (B3 and B4 in Table 6.2), these mentoring activities generally represent all four mentoring goals. Several attributes were mostly mentioned in combination with each other, as part of interconnected pattern of attributes and activities (B3.20b doubting/ B3.21b emotional, and B4.22b closed/ B4.23b unaware/ denying). These attributes are therefore presented in combination in Table 6.2.

In their descriptions of the shared attribute-activity associations, mentor teachers tended to differentiate their response for an attribute of mentee teacher learning according to their interpretation of the mentoring situation at hand. Table 6.3 provides an overview of these mentoring situations, ordered along domain of mentee functioning and attribute of mentee learning. For most attributes, mentor teachers' descriptions of their response were differentiated according to situational interpretations that involved causal explanations or attributions. For instance, for mentee teachers that have an unsure presence in class, mentor teachers' described responding differently according to whether they attributed this to mentee insecurity and self-doubt, or to a lack of skills for classroom management (see Table 6.3).

The following four sections present the common response patterns for the four domains of mentee functioning. Each section presents the patterns of attribute-activity associations in mentor teachers' descriptions, followed by a condensed account of these patterns in the form of 'if...then' heuristics.

Table 6.2. Shared attribute-activity associations expressed by mentor teachers in this study.

Attribute	**Mentoring goals and activities**			
	A. Providing emotional and psycho-social support	B. Supporting construction of personal practical knowledge about teaching	C. Creating a favourable context for learning	D. Changing novice teacher behaviour
A1. Teaching: Interactions with pupils and classroom management				
A1.2b. impersonal	8.incite 9.reassure	15.focus contact		33.suggest
A1.4b unsure	1.affirm 8.incite 9.reassure 10.solicit self-affirmation	13.focus discipline		
A2. Teaching: Knowledge, beliefs and approaches towards learning, instruction and content				
A2.6b.relaxed		17.guide application		28.confront 30.dictate
A2.8b.uneducated		14.focus instruction 17.guide application		28.confront
A2.11 educational values		16.use		28.confront
B3. Learning to teach: Mentee teacher dealing with emotions in the learning process				
B3.20a.self-confident	2. attune	12.focus teaching 14.focus instruction	21.defer 27.self-adjust	28.confront
B3.20b doubting/ B3.21b emotional	1.affirm 2.attune 5.focus emotions 8.incite 9.reassure 10.solicit self-affirmation	13.focus discipline		28.confront
B4. Learning to teach: Mentee teacher role in guided problem solving				
B4.22b closed/ B4.23b unaware/ denying	2.attune	18.solicit	19.abbreviate	28.confront

Table 6. 3. Mentoring situations identified based on shared attribute-activity associations expressed by mentor teachers in this study.

Domain of mentee functioning	**Attribute of mentee learning**	**Mentoring situations: when mentees…**
A1. Teaching: Interactions with pupils and classroom management	A1.2b.impersonal	…are fearful of engaging with pupils …do not recognize the importance of engaging with pupils
	A1.4b unsure	…lack assertive presence due to self-doubt …lack skills for classroom management.
A2. Teaching: Knowledge, beliefs and approaches towards learning, instruction and content	A2.6b.relaxed	…are competent but unmotivated to plan for teaching. …set low standards for teaching and learning. …lack skills for lesson planning
	A2.8b.uneducated	…have a deficit in content knowledge
	A2.11 educational values	…have strong personal views.
B3. Learning to teach: Mentee teacher dealing with emotions in the learning process	B3.20a.self-confident	…are confident and capable …are overconfident and self-centred
	B3.20b doubting/ B3.21b emotional	…are emotionally vulnerable …are insecure due to perfectionism …feel incompetent because of problems in teaching
B4. Learning to teach: Mentee teacher role in guided problem solving	B4.22b closed/ B4.23b unaware/ denying	…have impediments to productive reflection on teaching …are closed due to over-confidence …refuse to be mentored

6.4.2. Heuristics for mentee interactions with pupils and classroom management

6.4.2.1 Mentee teachers who are impersonal and distant towards pupils (A1.2b).

This set contained eight card sorts by six mentors, involving nine mentee teachers. There were two patterns: 1) mentee teachers who mentors saw as retreating from making contact with pupils because of their own insecurities and fears (four card sorts), and 2) mentee teachers who mentors saw as having a 'blind spot' for making contact with pupils (four card sorts). For both groups, mentors mentioned they responded by (15) focussing on this issue, (33) making suggestions on how to engage into contact, and (8) inciting mentees to stretch beyond their comfort zone. For a fearful mentee, inciting was mentioned to get over her fears, and for two 'blind spot' mentees it was mentioned to change their typical dealing with a class, and to either show more warmth or create more room for pupil interaction by using more collaborative forms of learning. For the fearful mentees, mentors especially mentioned (9) reassuring them to put their experiences into perspective. To summarize, mentors identified two mentoring situations for mentees that were distant and impersonal with pupils: when mentees 1) are fearful of engaging with pupils, or 2) do not recognize the importance of engaging with pupils. Box 6.1 provides a condensed account of their response to these mentoring situations.

6.4.2.2 Mentee teachers with an unsure presence in class (A1.4b).

This set contained six card sorts by five mentors, involving nine mentee teachers. Mentors saw all but one of these mentee teachers also as doubting and insecure (B3.20b). The dominant response that mentors mentioned was (8) inciting mentee teachers to take more risks in order to learn, and to overcome the insecurities that made them unsure in class. Their further response depended on whether they saw unsure presence as emanating mostly from insecurity and self-doubt, or mostly from lacking skills for classroom management, even if this was accompanied by self-doubt. Depending on this distinction, mentors expressed either 1) a more 'support' oriented response or 2) a more 'task' oriented response. Mentors who

expressed a more support-oriented response pattern mentioned building confidence by (9) reassuring, (1) affirming and (10) asking for self-affirmation, in the form of asking the mentee teachers for examples of success and improvements made. Mentors who expressed a more task-oriented response pattern (13) focussed on discipline and classroom management, and combined this with (32) monitoring progress through observation, (22) giving mentee teachers the status of teacher by not intervening and (16) using mentee teachers' existing reflective skills to (17) guide application by training and building competence in incremental steps. In sum, mentors described their response for two mentoring situations when mentees have an unsure presence in class: when mentees 1) lack assertive presence due to self-doubt, or 2) lack skills for classroom management (see Box 6.1).

Box 6.1. Mentoring heuristics for mentee interactions with pupils and classroom management.

If the mentee...	**...then...**	**...and if the mentee...**	**...then...**
…is impersonal and distant towards pupils (A1.2b)	...focus time on the issue, incite stepping out of his/her comfort zone to approach pupils, suggest how to make contact…	...is actually fearful, afraid of engaging with pupils or the class...	...reassure the mentee to help put his/her experiences in perspective and especially pay attention to giving suggestions for ways to make contact. Perhaps increase the intensity of mentoring.
		...has a blind spot for the importance of contact with pupils...	...put extra emphasis on inciting the mentee to get out of his/her comfort zone.
...has an unsure presence in class (A1.4b)	...incite the mentee to step out of his/her comfort zone…	...has deep doubts about him/herself as a teacher and a low expectation of success...	...affirm the mentee teacher of his/her capability where possible, reassure the mentee to help put experiences into perspective, and also ask the mentee to self-affirm by asking or examples of success and improvements over time.
		…lacks skills for classroom management...	...take time to focus on discipline and classroom management. Perhaps try not to intervene to prevent undermining mentee teachers' authority in class. Make use of mentee teachers' reflective skills in guiding application of new knowledge, and monitor progress with the mentee.

6.4.3. Heuristics for mentee knowledge, beliefs and approaches towards learning, instruction and content

6.4.3.1 Overly relaxed mentee teachers (A2.6b).

This set contained seven card sorts by seven mentors, involving seven mentee teachers. Mentors predominantly saw these mentees as overly relaxed in the sense that they did not adequately plan for instruction. There were three patterns of response. Three mentee teachers were seen as strong mentees with good content knowledge (A2.8a) and a flexible disposition (A2.7a), but with a tendency to teach too much 'on the fly' without specific planning for instruction (A2.10b). Mentors mentioned taking a' tough' approach with theses mentees by (28) confronting them with their lack of planning and (30) dictating the performance of specific steps in planning lessons, even if the mentor realized this would probably not have a lasting effect because the mentee teachers' "relaxed' disposition was too strong. For two mentee teachers, mentors took the same 'tough' approach as in the first pattern, but here this was because the mentees' performance and the learning results were not up to standards (A2.9b). Finally, two mentee teachers also performed below standards (A2.9b), but in these cases the mentors took a (17) guiding approach, to help build required skills with regard to planning for instruction or classroom management. Therefore, mentors differentiated their response to mentees that did not adequately plan for instruction according to three different mentoring situations: when mentees 1) are competent but unmotivated to plan for teaching, 2) set low standards for teaching and learning, or 3) lack skills for lesson planning (see Box 6.2)

6.4.3.2 Uneducated mentee teachers with knowledge deficiencies (A2.8b).

This set contained five card sorts by four mentors, involving seven mentee teachers. All mentors saw these mentees as having a superficial, limited or narrow understanding of content, which they connected to mentee teachers' problems with bringing content across to pupils. The dominant response was to provide (17) guidance in skill acquisition, by training how to prepare for the lesson content as well as for a good lesson structure and ways to bring the content across

clearly for pupils. Two mentors combined this with an extended (14) focus on this issue, and one mentor also (28) confronted his two mentees with their deficits. For one of these two mentees, the mentor also chose to (25) shield the mentee, a non-native speaker with language deficits, from potential conflict with colleagues by correcting spelling errors in her tests. These response patterns were all oriented to one mentoring situation: when mentees have a deficit in content knowledge (see Box 6.2).

6.4.3.3 Mentee teachers with particular educational values (A2.11).

This set contained five card sorts by three mentors, involving ten mentee teachers. The dominant response for this attribute was to make productive (16) use of the mentee teachers' values and to build upon them. Each mentor expressed a distinct pattern of reasoning. One mentor contrasted mentees with a more progressive and a more conservative stance, which also influenced their larger goals for pupil learning. The mentor mentioned making (16) use of and stimulating both stances, because pupils needed to see a diversity of teachers. A second mentor contrasted mentees motivated to teach through content, versus a mentee motivated by the desire to work with children. She found both motivations for teaching valuable and tried to accommodate both. In addition, she tried to remediate potential pitfalls of each, by (29) curbing the tendency of the content-oriented mentee to plan and control too much (A2.10a), and (28) confronting the pupil-oriented mentee with teaching too much ad hoc and not planning for instruction thoroughly enough (A2.10b). The third mentor mentioned the influence of cultural backgrounds of mentee teachers on their views of teaching. In one case, this had led to strong external attributions by the mentee teachers, which expressed itself by them being closed (B4.22b), denying of their own role in teaching situations (B4.23b) and thereby not trying to change their teaching (B4.24b). She had responded by (28) confronting, but indicated that since this had not been productive, she would now be more inclined to (18) solicit problem solving by taking a more questioning approach. In the second case from the same mentor, she mentioned how two mentees' background led them to have a pupil-oriented orientation towards teaching (A2.11), providing for pupil autonomy in the classroom. She (16) used this orientation in a different sense than in the above

examples: when problems with pupils arose, she mentioned being able to (16) use the mentees' existing orientation towards pupils to help them solve problems by having them re-establish positive contact with pupils. These response patterns were all oriented to one mentoring situation: when mentees have strong personal views (see Box 6.2).

Box 6.2. Mentoring heuristics for mentee knowledge, beliefs and approaches towards learning, instruction and content.

If the mentee...	**...then...**	**...and if the mentee...**	**...then...**
...is relaxed and easy-going (A2.6b)		...generally performs well as a teacher, but prefers teaching 'on the fly' and sees planning as cumbersome or unnecessary...	...confront the mentee with what is expected of professional teachers and what is necessary for pupils to know what they are learning and what for, and dictate the mentee teacher to regularly submit lesson plans...
		...teaches ad hoc, sets low standards for pupil learning, puts in too little effort, achieves poor outcomes...	...confront the mentee with what is expected of professional teachers, the standards teachers should have for pupil learning, and dictate the mentee teacher to set a higher standard in subsequent lessons...
		...lacks skill or understanding of how to professionally plan for pupil learning...	...train skills, provide practice opportunities and guide application of new knowledge, perhaps make use of mentee teachers' reflective skills to support skill acquisition.

Box 6.2 (continued).

If the mentee...	...then...	...and if the mentee...	...then...
...is uneducated in essential areas of content (A2.8b)	...guide skill acquisition in preparing for lesson content, structuring of lessons and bringing content across for pupils…		...take time to focus mentoring on issues of instruction, confront the mentee teacher with his/her deficit to help them develop learning intentions and a willingness to learn, perhaps temporarily shield the mentee teacher from possible negative effects of his/her lack of skill or knowledge.
...has strong personal views about the goals of education and the teacher role (A2.11)	...make use of the mentee teacher's orientation as a quality to build upon…	...has a perspective with pitfalls that might adversely affect pupil learning…	…confront the mentee teacher with the pitfalls of his/her perspective and teaching approach, and help the mentee teacher to overcome these pitfalls by soliciting problem-solving, and by actively curbing undesired teaching behaviour.

6.4.4. Heuristics for mentee dealing with emotions in the learning process

6.4.4.1 Highly self-confident mentee teachers (B3.20a).

This set contained nine card sorts by seven mentors, involving 12 mentee teachers. There were two overall patterns. Four mentors saw the self-confidence of six mentee teachers as well founded, because they were either independent problem solvers (B4.25a), responding rationally to teaching experiences (B3.21a), mature (C.31a) and/or had an assertive presence in class (A1.4a). The mentors thus saw these mentees as confident and capable. This opened up room

to focus on learning the task of teaching, and mentors mentioned they therefore focused mentoring time on (12) teaching or more specifically on (14) instruction, and (21) deferring attention for the mentees' sense of self in the learning process. Three mentors saw six mentee teachers as over-confident, too aggressively assertive of themselves in class or in the mentoring relationship, and as self-centred (A1.1b), closed (B4.22b) or having a disagreeable and unsociable disposition (C.30b). The mentors mentioned a combination of (2) attuning the mentoring approach to the emotional state of the mentee teacher and (27) adjusting themselves to be able to work with the unpleasant aspects of the mentee teachers' over-confidence, combined with (29) confronting the mentee teacher where necessary. Depending on the nature of the emotional state of the mentee teacher, (2) attuning took on a different forms. One mentor mentioned initially taking a non-confrontational and somewhat submissive stance towards a mentee teacher that was highly self-assured (B3.20a) and closed (B4.22b), in order to create room for the mentee teacher to open up. Another mentor mentioned taking a more distant stance towards male mentee teachers (C.26b) whom she saw as generally more self-centred (A1.1b) than female mentee teachers (C.26a). Two mentors mentioned (27) adjusting themselves to cope with the resistance engendered by the self-assertiveness of the mentee teacher. One mentor had made an effort to overcome her initial tendency to slow down the mentee teacher's' tendency for taking initiatives. A second mentor had felt initial resistance and antipathy towards a mentee teacher he saw as disagreeable to work with (C.30b) because she was very confrontational. He had made an effort to overcome his feelings, on the grounds that he felt he had to be able to adapt as a mentor, and had therefore also decided to (21) defer attention for certain aspects of her personality and behaviour, to make the mentoring relationship work. Thus, mentors differentiated their response to mentees that were highly self-confident according to two different mentoring situations: when mentees 1) are confident and capable, or 2) are overconfident and self-centred (see Box 6.3).

6.4.4.2 Doubting and emotional mentee teachers (B3-20b/21b).

This set contained 15 card sorts by ten mentors, involving 18 mentee teachers. There were three patterns. Seven mentors saw 11 mentee teachers as highly sensitive and emotionally vulnerable, which expressed itself in various forms,

such as crying a lot, being easily daunted by adversity, depending on the mentor for problem solving (B4.25b), and being closed to advice and feedback (B4.22b). The dominant response was to (2) attune the mentoring approach to the vulnerable emotional state of the mentee teacher by being cautious and gentle, (5) take time to focus on emotions and personal experiences of learning to teach, (9) reassure and help put experiences into perspective, and (8) incite the mentee to take risks and stretch beyond their comfort zone. Two mentors saw three mentee teachers as mainly too self-critical and perfectionist. The dominant response was to create affirmation of existing capabilities, by either (1) indicating what went well or how the mentee teacher had improved or by (10) asking the mentee teacher to do so him/herself, to help them to be less overly self-critical and more positive about their accomplishments. Finally, three mentors saw the doubtfulness of four mentee teachers as arising from recurring issues with classroom management and instruction due to a lack of skill. Their dominant response was therefore task-oriented, by (13) focussing on issues of discipline with those mentees that also had an unsure presence in class (A1.4b), by (22) giving the mentee teacher status by not intervening in class and by (32) monitoring progress through observation. One mentor indicated how a mentee teacher had initially been passive (B2.16b) and dependent (B4.25b) by wanting to copy the mentor, whereas the mentor's approach did not work for her. He mentioned (23) shielding the mentee after a blackout in class by taking over the class, (28) confronting her with the fact she had a problem to deal with, and subsequently helping to (17) build skills in developing a different teacher approach by (23) increasing the intensity of mentoring. So, mentors differentiated their response to mentees that were doubting and emotional according to three different mentoring situations: when mentees 1) are emotionally vulnerable, 2) are insecure due to perfectionism, or 3) feel incompetent because of problems in teaching (see Box 6.3).

Box 6.3. Mentoring heuristics for mentee dealing with emotions in the learning process

If the mentee...	...and if the mentee....	...then...
... is highly self-confident (B3.20a)	...is justly confident because he/she shows maturity, independent problem solving, responds rationally to teaching experiences and has assertive presence in class…	...defer attention for how the mentee personally experiences teaching (since this does not pose a barrier to learning), and take time to focus on issues of teaching performance and especially instruction of content.
	...is over-confident and asserts him/herself too aggressively in class or in the mentoring relationship, is self-preoccupied, or unwilling to accept feedback and be mentored…	...attune the mentoring approach to what the mentee can handle, perhaps taking a helping stance to help the mentee to 'open up'; self-adjust to be able to productively cope with the unpleasant aspects of the mentee teachers' stance; confront the mentee where necessary with undesired effects of his/her overly assertive stance, and perhaps curb undesired behaviour.

Box 6.3. (continued).

If the mentee...	...and if the mentee....	...then...
...is doubting, insecure, with a low expectation of success, and/or responds emotionally to teaching experiences, taking them highly personally (B3.20b/21b)	...is highly sensitive and emotionally vulnerable, and easily daunted, highly dependent and/or defensive and closed…	....attune the mentoring approach to what the mentee can handle emotionally to prevent withdrawal from learning, take time to focus on emotions and personal experiences of learning to teach, console and reassure the mentee to help put experiences into perspective, and incite him/her to take risks, persevere and stretch beyond his/her comfort zone.
	...is doubtful because he/she is too self-critical and perfectionist…	...affirm the mentee teacher's capabilities and ask him/her to explicate his/her own successes and improvements to become aware of strengths
	...has doubts because lack of classroom management skills or style of teaching leads to repeated problems…	...provide task-oriented support by taking time to focus on classroom management and interaction with pupils, and perhaps confront where necessary with problematic aspects of teaching style. Monitor progress, increase mentoring intensity and temporarily shield the mentee from potential negative effects of his/her lack of skill, try not to intervene to prevent undermining the mentee teacher's authority in class.

6.4.5. Heuristics for mentee teacher role in guided problem solving

6.4.5.1 Closed and unaware/denying mentee teachers (B4 22b/23b).

This set contained 11 card sorts by six mentors, involving 12 mentee teachers. For all these mentee teachers, mentors identified various forms of unwillingness or inability to initiate or complete the process of reflecting on teaching, thinking through problems and trying out solutions to improve teaching. Four mentors saw nine mentee teachers as being impeded to reflect through their misconceptions about teaching, advanced age, inability to face problems, or lack of understanding of what to look for in reflecting on teaching. The dominant response was to (28) confront mentee teachers with discrepancies between current and desired states, and/or to question them in order to (18) solicit problem solving. In one case, where the mentor saw the underlying problem as an unwillingness to question ingrained assumptions, the mentor relied solely on (18) soliciting by (4) focussing on the mentee teachers' personal experiences of classroom events. Two mentors saw two mentee teachers as closed (B4.22b); one as a result of being overly self-assured (B3.20a), the other as a result of being overly sensitive and insecure (B3.20b). Both mentors (2) attuned their approach to the confidence level of the mentee teacher by being cautious, deliberately avoiding a confrontational approach to prevent withdrawal by the mentee teacher. Finally, one mentor indicated (19) abbreviating the mentoring relationship because of a mentee teachers' extreme unwillingness to be mentored (B4.22b). To summarize, mentors identified three different situations for mentee teachers that were unwilling or incapable of reflecting on teaching: when mentees 1) have impediments to productive reflection on teaching, 2) are closed due to over-confidence, or 3) refuse to be mentored.

Box 6.4. Mentoring heuristics for mentee teacher role in guided problem solving

If the mentee...	...and if the mentee....	...then...
..is closed to feedback and advice, unaware or denying of his/her influence on pupils and lessons, making external attributions (B4.22b/23b)		...confront the mentee teacher with discrepancies between current and desired situations to make him/her see the necessity of change, and solicit problem solving to stimulate thinking through problems and ownership of solutions.
	...is closed because of being overly self-assured or overly sensitive and insecure…	...attune the mentoring approach, for instance by being more cautious and less confrontational in choice of words.
	...is extremely closed and unwilling to be mentored…	...abbreviate or terminate the mentoring relationship.

6.5 Discussion

The research question for this study was: *What are mentor teachers' heuristics for adaptive response to their mentee teachers' learning?* The main finding is that mentors expressed shared heuristics for seventeen distinct mentoring situations. These heuristics involve four domains of variation in novice teacher learning: 1) their interactions with pupils and classroom management, 2) their knowledge, beliefs and approaches towards learning, instruction and content, 3) their dealing with emotions in the learning process and 4) their role in guided problem solving. The heuristics for the second two domains were oriented toward a wider range of mentoring goals than the heuristics for the first two domains.

The main aim of this study was to contribute to the knowledge base of teacher mentoring and to the further development of educative, adaptive mentoring practices. The unique contribution of this study is the focus on shared patterns of adaptive response that connect actions to situations in the form of

heuristics. Most of these heuristics show that mentors differentiate their response according to how they explain the mentoring situation. If for instance a mentee doesn't engage in contact with pupils in class, is this because the mentee is fearful of doing so or does the mentee somehow not recognize the importance of teacher-pupil contact? The response that mentors describe differs accordingly: for instance reassuring the mentee or trying to change the mentees' view. In this way, these heuristics connect actions and intentions to situational interpretations or contextual grounds (Fenstermacher, & Richardson, 1993; Gholami & Husu, 2010; Kennedy, 2004).

In this study we have attempted to make mentor teachers' heuristics communicable by representing them in the form of condensed 'if...then' statements that connect attributes of mentee learning to mentoring activities. This form emphasizes mentor teachers' practical knowledge as actionable, practical principles (Elbaz, 1981) or forms of practical reasoning (Gholami & Husu, 2010) that guide mentor teacher action. The organization of the heuristics around seventeen situations reflects how mentor teachers' practical knowledge of individual differences between novices' learning and of mentoring strategies is "intertwined, organized (...) according to the problem the knowledge is intended to address" (Hiebert et al., 2002, p.6). This does not mean that such practical reasoning is correct; it is fallible and may be biased (Randi & Corno, 2005).

The heuristics described in this study do not in itself present or pretend to present statements of how mentors should act in the seventeen mentoring situations contained in the heuristics. Rather, they provide a mirror of practitioner knowledge in which mentor teachers can reflect their own practical reasoning with regard to these seventeen mentoring situations. Mentor teachers may disagree with the usefulness, appropriateness or desirability of the actions contained in these heuristics, based on different interpretations of the situations in these heuristics or on personal principles, beliefs and values with respect to mentoring novice teachers. They may also note how their response to these situations would be contingent upon possible additional situational considerations not related to the mentee teachers' learning, such as time set aside for mentoring (Brooks, 2000). We would argue that such is the nature of practical reasoning (Kennedy, 2004).

For several attributes, heuristics were differentiated between a more task-oriented and a more support-oriented response, depending on whether mentors

understood the situation as related to mentee issues of teaching competence or of mentee dealing with the self in learning to teach. Highly similar heuristics are proposed in the model of adaptive mentoring developed by Ralph & Walker (2013a). Previous studies have also found that novice teachers also perceive mentor teacher assistance as either emotional support or task assistance (Hennissen, Crasborn, Brouwer, Korthagen, & Bergen, 2011).

6.5.2 Limitations and suggestions for further research

The shared heuristics in this study are represented in the form of condensed accounts, to emphasize shared patterns of reasoning. Consequently, this study does not portray the richness and detail of the lived experiences of mentoring involved in these heuristics. However, the more detailed accounts of mentor teachers' views of their mentees and of their mentoring activities in Chapters 4 and 5 serve to compensate this to a degree. The repertory-grid interviews in this study have been functional in eliciting how mentor teachers connect their actions to situational conditions of mentee teacher learning, and in uncovering shared heuristics. However, our study only involved 11 mentors. In future studies, including more mentors may help to find additional shared heuristics, and provide evidence of more common grounds in mentor teachers' practical reasoning about adaptive response to their mentee teachers' learning. With Verloop et al. (2001) we suggest that such studies attend to the context in which the practical knowledge of mentors is studied. This may be as specific as a particular mentoring practice such as co-planning or debriefing lessons (Stanulis et al., 2018), or specific to certain levels of novice teacher preparation or induction into the profession. A limitation of the interview protocol in this study was that it did not probe mentors to justify their actions (Fenstermacher & Richardson, 1993; Gholami & Husu, 2010, Kennedy, 2004). With small adjustments, future studies could incorporate questions that probe justifications of knowledge, and this may help to develop descriptions of mentor teachers' practical reasoning in a more complete form, including warrants for what actions would be just or effective in a situation (Gholami & Husu, 2010). Finally, this study has been limited to mentor teachers' views of adaptive response through a retrospective method. Further research should compare both mentor teachers' and novice teachers' views of adaptive response in longitudinal studies of mentoring relationships, to

include effectiveness as a criterion of adaptive response (Van de Pol, Volman, & Beishuizen, 2010).

6.5.3 Suggestions for practice

The heuristics developed in this study may be used as a mirror for mentor teachers. Not in the sense of prescription, but they can serve to make them "more aware of their own thinking and to heighten the sense that alternative ways of thinking are possible" (Floden & Feiman, 1981, p. 280). Mentor teachers may be presented with a case description, and then be provided with different heuristics that represent various contrasting understandings of the underlying nature of the situation, and asked to develop an approach for the case. Encountering such different perspectives on an event during decision making, promotes the activation of adaptive metacognition (Lin et al., 2005). The seventeen mentoring situations can serve as source material to create vignettes or case descriptions of mentoring situations. The response patterns in the heuristics can serve to create mini-strategies for responding to situations. Together this may help to create a rich set of case materials for use in professional development activities with mentors.

6.6 Conclusion

This study provides representations of mentor teachers' shared conditional knowledge, in the form of heuristics for adaptive response to seventeen distinct mentoring situations. If mentoring is to become a professional role with a distinct knowledge base (Schwille, 2008), then conditional knowledge that connects both knowledge of learner variation and knowledge of mentoring activities needs to be part of this knowledge base. Such conditional knowledge provides a foundation for mentor teachers' ability to create learning opportunities that suit where the novice teacher is as a learner of teaching.

7

GENERAL CONCLUSIONS, DISCUSSION AND IMPLICATIONS

The purpose of this thesis was to contribute to the knowledge base of mentoring by exploring mentor teachers' practical knowledge of adaptive mentoring. Five studies were conducted. In this final chapter, we discuss the main findings in light of theoretical and practical contributions to the knowledge base of mentoring as a professional practice.

In section 7.1, we first provide a short recapitulation of the overall design and the main findings of the five studies. In section 7.2, we discuss the methodological strengths and limitations of the study. In section 7.3, we return to the main aim of the thesis; contributing to the knowledge base of teacher mentoring, by making practical knowledge explicit. In sections 7.4 and 7.5 we take up the issues of representation and verification of mentor teachers' practical knowledge. In these sections, we discuss possible avenues for future research. Finally, in section 7.6 we take up the issue of improvement of mentor teachers' practical knowledge, with suggestions for professional preparation of mentor teachers.

7.1 Four components, five studies

In the general introduction, four components were introduced that guide the overall research design of the study. These are all assumed to play a role in mentor teachers' capacity to adaptively respond to their mentee teachers' learning: (1) a disposition of collaboration and inquiry, (2) practical knowledge of mentoring activities, (3) practical knowledge of novice teachers and their learning, and (4) heuristics for adaptive mentoring. These heuristics connect (2) and (3) as

actionable knowledge. Each of the five studies in this thesis focused on one of these four components. Study 1 focused on mentor teachers' *disposition of collaboration and inquiry*, through a large-scale survey with questionnaire. This study also provided the criterion for the purposive sampling of participants for the subsequent interview studies. The goal was to maximize variation by selecting mentors with different patterns of mentoring conceptions. It was assumed this would maximize the chances of finding a variety of mentoring activities and attributes of mentee teacher learning. Study 2 focused on mentor teachers' *practical knowledge of mentoring activities* through task-based interviews. The final three studies used repertory-grid interviews to explore shared elements in mentor teachers' practical knowledge. Study 3 focused on *practical knowledge of mentee teachers' learning* and study 4 focused on *practical knowledge of mentoring activities*. Study 5 combined the analyses of study 3 and 4 to focus on mentor teachers' shared *heuristics for adaptive response* to their mentee teachers' learning. Table 7.1 presents the main findings of the five studies.

Table 7.1. Overview of main findings in the five studies in this thesis.

Study	Component	Main findings
1 (Ch2)	Disposition of collaboration and inquiry	• Two personal mentoring motives: personal learning motive and generative outcome motive • Two mentoring conceptions: instrumental mentoring conception and developmental mentoring conception. • Mentors show equal agreement with personal learning motive and generative outcome motive. • Mentors prefer a developmental mentoring conception to an instrumental mentoring conception. • Strong relationship between personal learning motive and developmental mentoring conception: being a co-learner and a co-thinker is related in mentor teachers' views.
2 (Ch3)	Practical knowledge of mentoring activities	• 29 mentoring activities oriented towards four broad mentoring goals. • Four adaptive mentoring activities: attuning emotions, adapting conversations, aligning expectations and building tasks from simple to complex • Adaptive mentors focus more on support for constructing practical knowledge, and less on creating a favourable context for mentee learning. • Adaptive mentors were cognitively or emotionally adaptive.

Table 7.1. (continued).

Study	Component	Main findings
3 (Ch4)	Practical knowledge of mentee teachers' learning	• 33 bipolar constructs related to four broad domains of mentee teacher functioning. • Dominant constructs reflected differences in mentee personal engagement with pupils, identifying as a teacher, perfectionism and self-confidence. • Dominant constructs combine according to dimensions of social judgement: social desirability and social utility. • Mentors use predominantly dispositional explanations for dominant constructs.
4 (Ch5)	Practical knowledge of mentoring activities	• 34 mentoring activities oriented towards four broad mentoring goals. • Confronting mentees with problems is the dominant mentoring activity, most often combined with guiding application. • Mentors describe confronting as telling versus developing the problem, depending on the issue that mentors try to address by confronting mentees. • In developing the problem, mentors describe crafting the response through 1) taking the mentee perspective, 2) timing confrontation, 3) monitoring mentee reactions and 4) self-monitoring.
5 (Ch6)	Heuristics for adaptive response	• Common heuristics for 17 different mentoring situations, related to two domains of mentee teaching and two domains of mentee learning to teach. • Heuristics for the domains of mentee learning to teach are oriented toward a wider range of mentoring goals than heuristics for the domains of mentee teaching.

The central question of this thesis was: *What is the content of mentor teachers' practical knowledge of adaptive response to their mentee teachers' learning?* The answer to this question is provided with the various representations of the content of mentor teachers' practical knowledge in the studies, at different levels of reduction. First, the interview fragments presented in Chapters 4 and 5 provide representations of this practical knowledge closest to mentor teachers' narration of the lived practice of mentoring. Second, more condensed representations of the content of mentor teachers' practical knowledge are provided in the form of the 'if…then' heuristics in Chapter 6, and the themes in Chapters 4 and 5 that show how mentors view their mentee teachers' learning and how they describe the enactment of confronting. Finally, the most reduced representations are provided in the form of the structured lists of mentoring activities and attributes of mentee teachers' learning in Chapters 3, 4 and 5, organized according to mentoring goals and domains of functioning of mentee teachers.

Figure 7.1 presents a provisional component model to represent the content of mentor teachers' practical knowledge of adaptive response to their mentee teachers' learning, based on the findings in this thesis. It outlines the four components introduced in Chapter 1 and the general categories of mentor teachers' practical knowledge related to adaptive mentoring identified in the five studies. The nested organization of the model draws in part on the general structure of teachers' lines of thinking when they account for their practice, moving from actions, intentions and interpretations of situations towards standing beliefs (Kennedy, 2004). The model intends to convey how the four components relate to each other. Mentor teachers' heuristics for adaptive response constitute conditional knowledge, in which mentors combine practical knowledge of mentoring activities and of mentee teachers' learning. In turn, these are assumed to be embedded in mentor teachers' dispositions toward mentoring. The model takes into account that a disposition of collaboration and inquiry is assumed to be conducive to adaptive mentoring, and that mentoring conceptions and motives for being a mentor form part of this disposition.

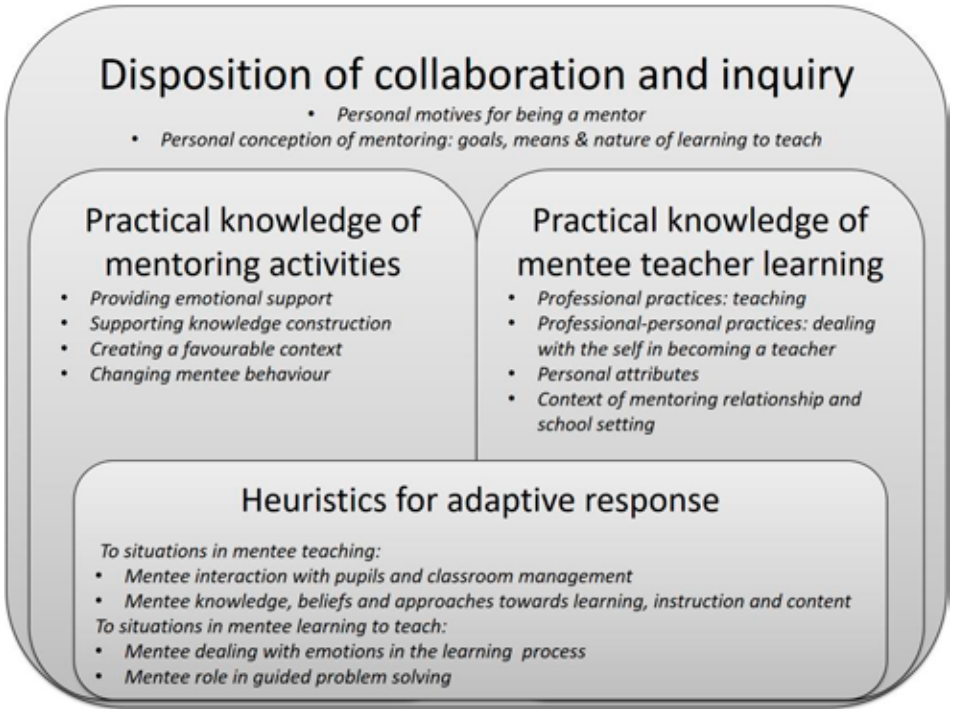

Figure 7.1. Component model of mentor teachers' practical knowledge for adaptive response to their mentee teachers' learning, based on the findings in this study[7].

[7] Note that for brevity, not all seventeen heuristics identified in study 5 are mentioned in the model, only the domains of mentee learning they relate to.

7.2 Strengths and limitations

7.2.1 Strengths

7.2.1.1 Study design

The study used a purposive sampling based on the results of the first study. The assumption that this would generate a large variety in the small scale studies was born out in the results: study 2 identified 29 mentoring activities, study 3 identified 33 constructs, and study 4 identified 34 mentoring activities. For the identification of mentoring activities, two different instruments were used: a task-based interview in study 2 and a repertory grid interview in study 4. The interview protocol for the task-based interviews addressed 'here-and-now' as well as 'there-and-then' aspects of mentors' professional practices. The repertory grid interviews sampled a large span of mentor teachers' experience, focussing on well-remembered mentees that are likely to have influenced the development of their personal heuristics for adaptive response (Corno, 2008). The two instruments provided complementary data on mentoring activities and adaptive mentoring activities (see section 7.4.1): both at the level of addressing specific issues of mentee learning and at the level of shaping the overall mentoring process. In total, approximately 46 distinct mentoring activities were identified across the two studies (see section 7.4.1).

7.2.1.2 Qualitative data and analysis

The transcripts of the task-based interviews and the repertory-grid interviews showed many mentors engaging in significant storytelling about their practices, shifting into performed direct speech (directly performing speech as a mentor, novice or pupil), and co-constructing the narrative with the interviewer. The narrative quality of much of the interview data suggests that within the limitations of a single interview, significant information on mentors' views of their mentoring knowledge and experience is likely to have surfaced. The coding of mentoring activities and attributes of mentee learning in this research was performed close to the data, using guiding concepts from the research domain,

but with little a-priori imposition of a theoretical framework. Coding was systematically calibrated between two coders leading to good levels of inter coder reliability. The illustrations of themes in Chapters 4 and 5 with examples from the interviews enable the reader to judge if they would make the same inferences based on the data. The use of a second-order perspective in study 4 provides a degree of theoretical verification of the results.

7.2.2 Limitations

7.2.2.1 Generalisability

Apart from study 1, the studies were small in scale, with 18 mentors included in the task-based interviews and 11 mentors in the repertory-grid interviews. In all three qualitative studies in Chapters 3, 4 and 5, several constructs or mentoring activities were encountered only once, and sometimes it took one very explicit articulation to recognize similar instances in other parts of the data. Even in the larger-scale first study, the pilot study to identify mentoring motives indicated that a possible third, school-organization oriented motivation may be present, but there were too few items to construct a reliable scale from. Combined with the finding that mentoring practices tend to be highly idiosyncratic (Hawkey, 1997), there is enough reason to believe that a larger sample may have generated a larger diversity of motives, attributes of mentee learning, mentoring activities and mentoring heuristics.

7.2.2.2 Validity

Mentor teachers' practical knowledge, even if limited to the domain of adaptive response, is a broad construct and several facets have not been captured in this study. A limitation of the interview protocols used in this study was that these did not probe mentors to justify their actions (Fenstermacher, & Richardson, 1993; Gholami & Husu, 2010; Kennedy, 2004). Such questions can elicit practical principles and underlying beliefs of mentors about why they consider their response effective or just (Kennedy, 2004, Morine-Dershimer, 1987). Such principles and beliefs also form part of mentor teachers' practical knowledge (Elbaz, 1981). Incorporation of such questions could have provided a fuller

account of mentor teachers' practical knowledge, but would also have made the interviews sessions longer. In study 4, the analysis of the repertory-grid interviews showed that mentors tended to use dispositional explanations in their descriptions. This may in part be an artefact of the method used, as comparing mentee teachers may operate at a higher level of abstractness and promote inferring of traits (Moskowitz & Okten, 2016). All interviews were conducted retrospectively at one point in time, and only the task-based interviews were conducted close to a mentoring event. Mentor teachers' interactive cognitions have therefore not been queried, for instance through stimulated recall techniques. Such cognitions may uncover heuristics for momentary adaptations, and show how additional considerations other than characteristics of learners influence mentors' response (Kennedy, 2004). In addition, this could have provided evidence of practical knowledge as it is enacted in real-time mentoring events (Kane, Sandretto, & Heath, 2002).

7.3 Contributing to the knowledge base of mentoring

The aim of this thesis has been to contribute to the knowledge base of mentoring by exploring mentor teachers' understanding and practical knowledge of adaptive mentoring. This has been attempted in this thesis through representations and descriptive accounts of mentor teachers' practical knowledge, and through the use of theoretical perspectives to elucidate specific characteristics of this knowledge. Verloop, Van Driel and Meijer (2001) argued that for practitioner knowledge to contribute to the professional knowledge base, it is desirable to focus on common elements in teacher knowledge, or elements that are shared by teachers, even though it remains a continuing empirical question regarding which elements are shared. The focus in the final three studies has therefore been on common elements in mentor teachers' views of their mentees, their mentoring activities and their heuristics for adaptive response and creating learning opportunities. In the individual chapters of this thesis, the argument of Hiebert, Gallimore and Stigler (2002) has repeatedly been put forward that in order for practitioner knowledge to become professional knowledge, it "must be public, it must be represented in a form that enables it to be accumulated and shared with other members of the profession, and it must be continually verified and improved " (p.

4). In the following three sections, we therefore discuss our findings in view of these three issues of representation, verification and improvement of mentor teachers' practical knowledge.

7.4 Representations of mentor teachers' practical knowledge

As indicated in section 7.1, the content of mentor teachers' knowledge has been made public and sharable in this thesis through different kinds of representations: scales of mentoring conceptions (Chapter 2), structured lists of mentoring activities (Chapters 3 and 5) and attributes of mentee teacher learning (Chapter 4), mentors' narration of the lived experience of mentoring (Chapters 4 and 5), themes in mentor teachers' descriptions (Chapters 4 and 5) and heuristics for seventeen mentoring situations in the form of condensed 'if...then' statements (Chapter 6). These heuristics capture mentor teachers' shared actionable knowledge of adaptive response, linking both mentoring situation and response within the heuristics. The organization of these heuristics around attributes of novice teachers' learning was chosen to reflect how mentor teachers' practical knowledge of adaptive response is predominantly practice-oriented knowledge, (Aspfors & Fransson, 2015), functioning primarily for mentors "to guide their actions when they encounter the critical question, 'what should I do in this particular situation?'" (Gholami & Husu, 2010, p. 1520), and is therefore organized "according to the problem the knowledge is intended to address" (Hiebert et al., 2002, p. 6). It represents mentor teachers' practical knowledge as actionable, practical principles (Elbaz, 1981) or forms of practical reasoning (Gholami & Husu, 2010) that guide mentor teacher action. In reducing mentor teachers' descriptions to the structured lists of mentoring activities in chapters 3 and 5, the relationship that mentors describe between these activities and the goals they attempt to realize with these activities was therefore also maintained, again reflecting the practical and goal-oriented nature of this mentor knowledge.

In at least one sense, however, the representation of the heuristics in chapter 6 presents forms of professional judgement or practical reasoning that are incomplete. Complete forms of practical reasoning not only connect actions and intentions to situational interpretations or contextual grounds, but also connect

these to accumulated principles, values and beliefs that contain warrants for why these actions may be just or effective in this situation (Fenstermacher, & Richardson, 1993; Gholami & Husu; 2010, Kennedy, 2004). In this second sense, the heuristics described in this study do not represent complete forms of practical reasoning since they contain no shared warrants for their justness or effectiveness. Future studies could incorporate questions to probe justifications and to develop descriptions of mentor teachers' practical reasoning in a more complete form, including warrants for what is effective or just to do in a situation.

7.4.1 Grain size in representing practical knowledge of adaptive mentoring

In relation to defining the knowledge base for teaching in teacher education, Kennedy (2016) and Forzani (2014) state that representing knowledge of practice is inherently problematic. Any representation necessarily partitions the knowledge of practice in order to articulate its constituent parts. The inherent problem in identifying these constituent parts is the grain size of parts (Forzani, 2014; Kennedy, 2016). Representing the knowledge of practice in terms of what practitioners do or know runs the risk of creating ever-expanding lists of activities or knowledge domains at highly different grain sizes.

Chapters 3 and 5 provided representations of mentor teachers' practical knowledge of mentoring activities, but at different grain sizes. In both chapters, mentoring activities were listed and organised according to four broad mentoring goals that mentors oriented themselves to in describing these activities. Although both representations used these same four broad mentoring goals, the mentoring activities contained in these lists differed to a degree between the two studies. Table 7.2 presents all mentoring activities according to the degree of overlap between the two studies. This shows that there is only partial overlap in mentoring activities between the two studies. Seven mentoring activities are similar across both studies, and 32 are unique to one of the two studies. For 16 mentoring activities, different verbs were used in the two studies, but the content of the activities exhibits overlap. For instance, the mentoring activities of initiating and soliciting share the aspects of initiating topics, reflective questioning and stimulating mentee ownership of solutions. Some of these mentoring activities were identified separately in one study, but combined in a single activity in the

other study. For instance, the mentoring activities of confronting mentees with problems and dictating mentee behaviour are identified separately in study 4, but are combined in the mentoring activity of imposing in study 2. The differences in verbs are the result from trying to stay as close to the data as possible in developing the coding schemes in the two studies, without imposing a predetermined structure, theoretical or otherwise, on mentor teachers' descriptions.

The comparison between the mentoring activities in the two studies shows that they mostly operate at different grain sizes. Mentoring activities that were only identified in study 3 operate mostly at the level of shaping the overall mentoring process (i.e. aligning mutual expectations at the start, linking across mentoring conversations, facilitating access to learning experiences). Mentoring activities that were only identified in study 5 operate mostly at the level of addressing specific issues of mentee learning (i.e. helping mentees to cope with personal limitations, using mentee qualities, stopping specific mentee behaviours). Mentoring activities identified in both studies mostly constitute activities that can be enacted both as 'standard' mentoring practice and to resolve specific issues in mentee learning (i.e. attuning to the emotional state of the mentee, being there, making mentees responsible for tasks, questioning to elicit reflection and problem solving).

Table 7.2. Mentoring activities according to their degree of overlap between study 2 and study 4.

	Mentoring activities			
Degree of overlap	Providing emotional and psycho-social support	Supporting construction of personal practical knowledge about teaching	Creating a favourable context for mentee teacher learning.	Changing mentee teacher behaviour.
Same term, similar in content	Affirm Attune * Be there Reassure		Give status Make responsible	Model Monitor
Different term, some overlap in content	(2) Address ~ (4) Focus motives (2) Indicate growth ~ (4) Solicit self-affirmation	(2) Initiate ~ (4) Solicit	(2) Intervene + (2) Protect ~ (4) Shield	(2) Advise ~ (4) Suggest (2) Impose ~ (4) Confront + (4) Dictate (2) Orchestrate challenge ~ (4) Orchestrate crisis
No overlap, only in study 2	Buffer feedback Orchestrate success Share	Access thinking Adapt * Build * Encourage Link Structure	Align * Bound Facilitate Induct	
No overlap, only in study 4	Focus person Focus emotions Help cope Incite	Explore self-questioning Focus teaching Focus discipline Focus instruction Focus instruction Focus pupil contact Guide application Use	Abbreviate Decrease Defer Increase Prolong Self-adjust	Curb behaviour

Note: * indicates mentoring activities identified as adaptive activities in study 2. Numbers in parentheses refer to study 2 and study 4.

The two studies therefore complement each other by providing insight into adaptive mentoring activities at different grain sizes and into generic mentoring activities for shaping the overall mentoring process. The differences between the two sets of mentoring activities can largely be explained in terms of the focus of the interviews and the resulting content of the mentoring activities. The task-based interviews used in Chapter 3 focused mostly on how mentor teachers' normally shaped the mentoring process. This elicits more mentoring activities which are pro-actively undertaken by mentors and operate at the larger grain size of the overall mentoring process. It likely leads to underreporting of activities undertaken for specific adaptive purposes. In the repertory-grid study in Chapter 5 however, the card sorting method forced mentors to explicate activities linked to specific attributes of mentee teacher learning. This likely leads to underreporting of activities at larger grain sizes of shaping the overall mentoring process.

To conclude, we note that grain size poses a challenge for the development of more comprehensive knowledge frameworks for adaptive mentoring practices. We propose that grain size be carefully considered in future studies that intend to develop knowledge of adaptive mentoring. Future studies can use our findings to consider the grain size at which they intend to capture and elicit knowledge of attributes of mentee learning, mentoring activities and heuristics, to choose appropriate instruments for that grain size.

7.5 Verification of mentor teachers' practical knowledge

With regard to verification, Verloop et al., (2001) warned against simple application of theory and the mere redefinition of practice in formal-theoretical terms. They argued that a comprehensive conception of a professional knowledge base that includes practitioner knowledge:

> implies a need to look differently at the relationship between theory and practice. Combining, integrating, and exchanging the two components become more important. Before this relationship can be studied adequately, there must be a balanced view of both theory and

> practice (i.e., teacher knowledge). As insight into teacher knowledge is still lacking, the first step needs to be an investigation of this component of the knowledge base of teaching. (p. 445).

In this thesis, the function of theoretical terms has been mostly to help describe mentor teachers' practical knowledge that was explicated in the interviews, or to relate findings in a post-hoc manner to more formal-theoretical concepts and models. In terms of staying close to the practical knowledge of mentors and its' meaningful integration as practical knowledge, the interview fragments in Chapters 4 and 5, and the heuristics for seventeen mentoring situations in Chapter 6 arguably come closest. In this section, we discuss five strands of theory building that may be further developed from or linked to the findings in this thesis.

7.5.1 Theorizing levels of change in becoming adaptive as a mentor

In Chapter 3, we concluded that the four adaptive mentoring activities identified in the task-based interviews reflect three current notions in research work on novice teacher mentoring of what it means to be adaptive: matching mutual expectations (Rajuan, Beijaard & Verloop, 2010), being versatile through shifting style (Crasborn, Hennissen, Brouwer, Korthagen, & Bergen, 2008) and helping novices to reframe teaching (Bradbury, 2010). Taking this a step further, these three notions of being adaptive may require different levels of change of mentor teachers in becoming more adaptive. It may be a fairly simple change in mentor behaviour to start incorporating discussion of mutual expectations at the beginning of the mentoring relationship and to revisit these expectations in the course of the mentoring process. This change may in first instance mainly require an increased readiness to accept the risk of criticism of personal mentoring practices. Shifting style may however require a more elaborate knowledge of a repertoire of mentoring activities, and require more diagnostic thinking by the mentor to judge when to shift style. Finally, deciding to start helping novices to reframe teaching may require completely revisiting one's conception of the goals of mentored learning to teach, to one that is more in line with a developmental mentoring conception. This may also involve more substantial changes in

mentoring practice. For instance, the more adaptive mentors in Chapter 3 described more activities connected to stimulating novice teachers to adopt a meaning-oriented learning orientation, similar to what expert teacher educators in Bronkhorst, Meijer, Koster, and Vermunt (2011) define as “learning to teach by developing an informed, personal theory of practice” (p.1127). They were more likely to mention activities oriented at supporting construction of personal practical knowledge, such as encouraging novice teachers to think through problems they bring in, and structuring mentoring conversations to complete a process of reflection. This may require mentors to function at more complex levels of development. Such more complex levels have been shown to correlate with "a greater ability to “read and flex” with [learners], to take the emotional perspective (empathy) of others, think on their feet and find alternative solutions (less “functional fixedness”)" (Sprinthall, Reiman, & Thies-Sprinthall, 1993, p. 285). Bringing these three forms of being adaptive together in this way may help to connect them within a broader notion of levels of change or development (Korthagen & Vasalos, 2005; Sprinthall et al., 1993).

7.5.2 Adaptive mentoring involves social judgement

For the description of mentor teachers' views of mentees in Chapter 4, the distinction between dimensions of social judgement constitutes a redefinition in more formal-theoretical terms. If social judgements are pervasive in everyday life as indicated by social judgement theory, they are likely to be part of practical knowledge, which encompasses all of mentor teachers' cognitions.

A main finding in Chapter 4 was that mentor teachers’ views of their mentees predominantly reflected separate judgements of social desirability and social utility, each combining a few attributes of mentee teacher teaching and learning to teach. This suggests that mentor teachers' views of their mentee teachers may be parsimoniously captured using a framework of two dimensions (i.e. social utility and social desirability) by two domains (i.e. mentee teaching and mentee learning to teach). This would consist of: 1) a social desirability component regarding mentee teachers' a) professional identification and b) contact with pupils, and 2) a social utility component regarding mentee teachers' a) self-confidence, b) independence in problem-solving, c) assertive presence in class, d) seriousness and e) planning for teaching. Such a framework could be

used to develop an instrument to chart mentor teachers' views of mentee teachers across contexts or across time. Research using such a framework could focus on the different phases of the mentoring relationship where mentor teachers' views of their mentee teachers may have different impacts: the initiation phase, the productive or cultivation phase, and the termination phase (Chao, 1997). Mutual impression formation by the mentor and mentee of each other at the initiation phase of the mentor relationship has been shown to be an important determinant of the match in the mentoring relationship (Kroeze, 2014). In the productive phase, these views will influence how mentor teachers diagnose individual mentee teachers' learning, as a basis for responding to their mentees. In the termination phase, mentors in teacher education and induction often have a role in summative judgement, with potentially high stakes for the mentee involved. Using the two by two framework may provide the tools to study the degree to which mentors carry over their views of their mentee teachers from phase to phase, or change these views as a result of the mentoring process. This may provide indications of mentor teachers' capacity to match the learning needs of their mentees. Mentors that are capable of adaptively responding to their mentee teachers' learning, should be able to achieve change in their mentee teachers' functioning and subsequently arrive at different judgements of it. This may help further uncover areas of mentee teacher learning that mentor teachers find hard to support.

7.5.3 Adaptive mentoring as scaffolding

Although the four broad mentoring goals provided a sufficient framework for organising mentor teachers' descriptions of mentoring activities in this thesis, other frameworks are also possible. Though not reported in this thesis, we also explored the possibility of analysing mentoring activities according to the framework of scaffolding intentions developed by Van de Pol, Volman and Beishuizen (2010). We discuss this application here because it suggests potential benefits for both mentoring research and scaffolding research. Similar concepts to scaffolding such as assisted performance have been used to analyse adaptive mentoring (Stanulis, Brondyk, Little, & Wibbens, 2014), but scaffolding has so far focused mostly on contexts of tutoring and classroom situations (Van de Pol et al., 2010).

The concept of scaffolding refers to the temporary support provided for a learner, to achieve a result that is beyond the unassisted effort of the learner. Van de Pol et al. (2010) synthesized five scaffolding intentions from their review of the literature. These scaffolding intentions differ according to their orientation, and can be oriented at learners' meta-cognitive activities, cognitive activities, or affect. In our exploration, we used these scaffolding intentions and domains of support for the second-order analysis of mentoring activities. Table 7.3 presents the scaffolding intentions that were tentatively formulated as a result of this exploration. All but two of the mentoring activities identified in the analysis of the repertory-grid interviews could be classified according to these scaffolding intentions. This classification was used to explore the patterns of scaffolding intentions involved in the heuristics in study 5 (Chapter 6). The exploration suggested a similar pattern as found in this study: for attributes of mentee teachers' learning to teach, mentors mentioned a broader set of scaffolding intentions than for attributes of mentee teachers' teaching. This tentatively suggests that a more formal-theoretical verification of the activity patterns found in Chapter 6 may be possible.

We suggest that future studies explore the possibility of applying the framework of scaffolding intentions to studies of teacher mentoring. The mentoring activities formulated in this thesis, and the tentatively formulated scaffolding intentions in Table 7.3 could provide a good starting point. Such studies could combine data on mentor teachers' thinking and behaviour to identify both mentoring activities and the intentions they are oriented toward. Mentors could for instance be asked to keep a log of mentoring activities and goals, in addition to methods to capture mentoring interactions such as audio or video recording. The development of such a more comprehensive description of scaffolding intentions in teacher mentoring could help to broaden the scope of scaffolding research and provide a more solid theoretical grounding and verification for notions of adaptive mentoring.

Table 7.3. A tentative set of scaffolding intentions involved in mentoring activities.

Domain of support	Scaffolding intention	Content of the scaffolding intention
Support of meta-cognitive activities	Goal setting *	Developing learning goals with or for the learner to pursue.
	Direction maintenance	Keeping learning on target and maintaining the learner's pursuit of a particular objective.
Support of cognitive activities	Cognitive structuring	Providing explanatory and belief structures that organize and justify.
	Reduction of degrees of freedom	Taking over those parts of a task that the learner is not yet able to perform and thereby simplifying the task for the learner.
	Expansion of degrees of freedom *	Increasing task complexity for learners by handing over parts of the task to learner independence.
Support of learner affect	Recruitment	Getting learners interested in a task and helping them adhere to the requirements of the task.
	Frustration control	Facilitating learner performance and keeping learners motivated via the prevention or minimization of frustration.

Note: * = Formulated from the explorations for this thesis, absent in Van de Pol et al. (2010).

7.5.4 Adaptive mentoring involves mentor self-regulation

Early studies of teacher practical knowledge identified knowledge of self as an important component of this knowledge (Elbaz, 1981). In several of our findings, mentor teachers' practical knowledge of adaptive response related to themselves, mostly to processes of mentor self-regulation. In Chapter 5 we found that when mentors describe 'developing the problem' they also tend to describe their awareness of how their own thoughts and feelings influence their response to their

mentee, and how they self-monitor as part of crafting their response in order to ensure that their response remains adaptive to the mentee teacher. In Chapter 6, mentors mentioned self-adjusting as an adaptive response for when mentees are overconfident and self-centred and therefore not open to feedback. This self-adjusting functioned to prevent the emotions or self-appraisals that the mentoring situation evokes for the mentor from impeding the initiation or productive functioning of the mentoring relationship. These forms of active self-monitoring and self-adjusting suggests that mentors know that the match in mentoring relationships may derive in part from active and deliberated self-work on the part of the mentor teacher, which may be seen as a form of self-regulation by the mentor.

Recent research has shown that engaging in the role of mentor may engender significant emotions for mentors (Hastings, 2004). Mentor teachers' self-regulation may therefore also involve significant regulation of emotions. Schunk and Mullen (2013) suggested that mentoring research should conceptually integrate with research on self-regulation in learning. They proposed a process model of mentoring interactions that attends to the self-regulatory cognitions and affects of both the mentor and the mentee, and how these shape the subsequent actions of each. They argued for longitudinal studies in mentoring that monitor the dynamic nature of self-regulation of both mentor and mentee. We suggest that such micro-level studies may help uncover how different mentoring situations affect mentors. For example, some situations may require more intense self-regulation by the mentor, to maintain a working relationship with their mentee, and the question may be how different mentors manage to self-regulate in such situations. This may help to inform ways that mentors may support novices in how they regulate their learning and to change as a learner (Oosterheert, 2001).

7.5.5 Adaptive mentoring towards novice teacher change as a learner

Oosterheert (2001) provided indications for how novice teachers with different learning orientations may be supported to change as a learner. These complex learning orientations represent attributes of novice teacher learning that operate at a much larger grain size than those described in our thesis. Orientations to

learning to teach involve combinations of novice teachers' mental models of learning to teach, their cognitive activities and their emotion regulation (Oosterheert, 2001). The heuristics described in Chapter 6 for the two domains of learning to teach come closest to mentors identifying the latter two components of mentee teachers' learning orientations: making use of mentor support in problem solving and dealing with emotions in learning. The themes in mentor teachers' views of their mentees in Chapter 4 may also reflect these components: independent problem solving comes from inner strength, and perfectionism hampers reflection.

An example from the interviews that may most clearly reflect this larger grain size of a learning orientation and mentor support to change as a learner, is the example of Kay and Deke in Chapter 5 (see section 5.3.2.2). In the account of the mentor Kay, mentee Deke had no idea how to learn to teach and had very little strategies for regulating the cognitive and emotional elements of the learning process. The example showed the difficulties that mentor Kay had experienced in trying to change Deke's learning orientation, without success. This may be considered an instance of a mentor trying to help a novice with an inactive/survival orientation to change as a learner (Endedijk, 2010; Oosterheert, 2001). Retrospectively, Kay could provide an overview of Deke's pattern of learning and his inability to make productive use of Kay's support. It remains an open question however, whether mentors can diagnose larger patterns of mentee learning in the process of mentoring, and adapt to these patterns on the fly. Our findings suggest they may identify specific components, mostly how mentees regulate their learning cognitively and emotionally.

Oosterheert (2001) proposed that ideally, novice teachers are stimulated to change as a learner, and move from inactive and more closed and reproductive learning orientations toward more open and meaning oriented learning orientations. However, novice teachers' orientations to learning to teach tend to also differentially predispose them to make proactive broad use of their mentor teachers (Endedijk, 2010; Oosterheert, Vermunt, & Denessen, 2002). For mentors, this may pose a triple challenge: helping the novice learn to teach, helping the novice change as a learner, and working around potential resistance to accept mentor support. Future research could study how the attributes that mentors tend to notice in novice teachers' learning relate to the learning orientations that novice teachers themselves report, and how mentor teachers

could be supported to notice such attributes earlier on in order to provide support that may help novices change as a learner. Somehow, this would require mentors to combine attributes of mentee teachers' learning they notice into heuristic profiles of mentees as learners at the level of their overall pattern of learning. Novice teachers' learning orientations tend to shift during professional preparation (Endedijk, 2010), but the exact contribution of the learning context and the mentor in this context is still unclear. Future studies could therefore explore how novices with specific learning orientations make use of mentor support and how and whether mentors can respond adaptively to help them change as a learner.

7.6 Improvement of mentor teachers' practical knowledge

With regard to improvement of practical knowledge, Verloop et al. (2001) argued that the main function of a professional knowledge base "is not prescription, but improving the "practical arguments" in the thinking process of the teacher" (p. 443). Here, we first discuss how mentor teachers' practical knowledge may affect their participation in current attempts to improve teacher preparation. Subsequently, we discuss how findings may translate more directly into efforts at developing mentor teachers' practical knowledge of adaptive mentoring.

7.6.1 Alignment with current developments in teacher preparation

Recent views of how teacher education and induction may be improved include suggestions toward a curriculum organized around core teaching practices and deliberate practice (Kennedy, 2016) and teacher collaborative research. These forms of preparation may provide more adaptive support for novice teacher learning in various ways. These suggestions may or may not align with mentor teachers' practical knowledge. Findings in this thesis point both ways.

7.6.1.1 Misalignment with mentor teachers' practical knowledge

A main finding in Chapter 4 was that mentor teachers' views of their mentees involve frequent use of a dispositional explanatory style. Parker-Katz and Bay (2008) found a similar dominance of mentor dispositional reasoning in their study of mentor knowledge, noting that "mentors listed mostly dispositional qualities in response to our question about the knowledge novices needed" (Parker-Katz & Bay, 2008, p. 1263). They concluded that mentor teachers' are less focused on what novices need to know and more on who they can become as teachers.

In our study, mentors use of a dispositional style of reasoning was most pronounced with regard to mentee lesson planning. This raises questions with regard to redefinitions of teacher education that focus on learning through deliberate practice, targeting high leverage core teaching practices (Grossman, Hammerness, & McDonald, 2009), and the involvement of mentor teachers in supporting certain core practices, especially planning for teaching. In the exploratory study of deliberate practice in teaching by Dunn and Shriner (1999), the six activities that best reflected deliberate practice included both mental and written planning of teaching. Stanulis et al. (2018) also identify co-planning as an important mentoring practice. Mentors that successfully engage novices in deliberate practice have been found to have a targeted practice for novices and assume a stance as teacher leader, holding novices accountable for trying out ideas (Stanulis et al., 2014).

When mentors attribute mentee teachers' level of planning to disposition rather than effort, they may not be predisposed to hold novices accountable for planning, and may not engage them in deliberate practice for lesson planning. Further research seems warranted on how mentor teachers' view the adoption of specific core teaching practices, and specifically on the explanatory styles they may use for mentee teachers that show resistance to such practices.

7.6.1.2 Alignment with mentor teachers' practical knowledge

The findings in Chapter 5 suggest alignment between mentor teachers' practical knowledge and forms of teacher preparation that involve more deliberate practice. In Chapter 5, we concluded that the dominant mentoring activity of confronting constitutes a form of goal setting. Mentors combined the dominant

combination of confronting and guiding application with a wide range of additional mentoring activities across four broad mentoring goals, amongst which they often mentioned focussing time on specific aspects of teaching. This indicates a conscious effort by mentors to engage their mentee teachers in forms of intentional learning and deliberate practice, related to goals that represent both work-based goals and self-improvement goals for the novice teachers (Dunn & Shriner, 1999; Bronkhorst et al., 2011). Such a process differs from mere workplace learning support, as workplace learning tends to be mostly incidental and non-deliberative, without "a definite learning goal and time (...) set aside for acquiring new knowledge" (Eraut, 2004, p. 50). Such an intentional approach to mentee learning may link up well with current proposals for improvement of teacher education that include more focus on deliberate practice of core teaching practices (Grossman et al., 2009). This may predispose mentors to engage with efforts to realize these forms of teacher preparation.

As noted at the start of this thesis, a culture of collaboration and inquiry is considered beneficial for novice teacher learning. The main findings in Chapter 2 were that mentors prefer a developmental mentoring conception to an instrumental mentoring conception, and the strong relationship between holding a developmental mentoring conception and a personal learning motive. Mentors holding these conceptions and motives may be more disposed to engage in collaborative forms of professional development such as mentor study groups that focus on developing specific core mentoring practices (Stanulis et al., 2018). They may also be more disposed to engage positively with current developments toward more collaborative forms of professional support for novice teachers in which mentors are not the sole or primary support providers, such as teacher collaborative research (Willegems, Conseugra, Struyven, & Engels, 2017). These forms of professional support may also be more adaptive to novice teacher learning through providing a richer culture of support than when novices need to rely mostly on one mentor (Kroeze, 2014). Key elements in teacher collaborative research include shared inquiry into pupil learning, less hierarchical relationships and mutual learning between multiple participants at different levels of expertise. These elements are highly congruent with beliefs that form part of the developmental mentoring conceptions that Dutch mentors in our study hold, and with holding a personal learning motive for being a mentor.

We note that creating these more collaborative and deliberative forms of professional development for novice teachers requires a shared view of a continuum of tasks for professional development (Feiman-Nemser, 2001a), and structures for engaging multiple actors within the partnership in more concerted ways around this continuum (Birkeland & Feiman-Nemser, 2012). Hence, making good use of these openings may require a restructuring and rethinking of many current practices in partnerships between teacher education institutes and schools.

7.6.2 Practical suggestions for professional preparation of mentor teachers

We know that mentor teachers are often underprepared for their role, and that preparation can have beneficial effects on their mentoring practice (Hoffman, Wetzel, Maloch, Greeter, Taylor, DeJulio, & Vlach, 2015). We suggest that the various representations of mentor teachers' practical knowledge in this thesis (outlined in section 7.3.1) provide ample source for the development of materials and activities for professional development. We discuss four suggestions.

7.6.2.1 Reconsidering goals for mentor training

Based on the component model presented in Figure 7.1, we suggest that if mentor training wishes to contribute to mentor teachers' capacity for adaptive response, it is likely to require attention for all four components of being adaptive. We suggest that developers of mentor trainings use the component model to assess which goals they are targeting in their training. This component model may be used to provide mentors with an overview of the knowledge base they are developing, to organize training materials, and to sequence training modules. This may help to move mentor preparation beyond only provision of role clarification, programme information and basic skills for observation and conferencing. Even if it might be too far-reaching to target the development of heuristics for adaptive response at the level of basic preparation, what may well be included is explicit consideration for how novice teachers learn to teach, for personal motives for being a mentor and for personal conceptions of mentoring. Considerations of mentor professional development are likely to tie into broader

issues regarding the agendas of schools and training institutes in partnerships for teacher education and induction, and the positioning of mentors in this collaboration (Clarke, Triggs, & Nielsen, 2014). Should mentoring practice, for instance, be mainly led by novice teachers' concerns, by broad competence frameworks, by novice teachers' tensions of professional identity formation (Pillen, Beijaard, & Den Brok, 2013), by attempts to develop novice teachers' level of self-regulation of learning (Endedijk, 2010), by a focus on specific high-leverage core teaching practices (Grossman et al., 2009; Stanulis & Brondyk, 2013)? Is there a curriculum of core mentoring practices that mentor teachers are expected to be capable of enacting (Schwille, 2008; Stanulis et al., 2018)? We suggest that any training effort needs to recognize that mentors bring their own conceptions and motives to their practice of mentoring novice teachers' learning, and cannot be seen as simply executing a role that is given to them (Hawkey, 1997). More advanced training targeting mentor teachers with some experience in mentoring, might start to explicitly consider the 'core component' of heuristics for adaptive response and creating learning opportunities. Such training would need to help mentor teachers connect knowledge of novice teachers' learning to knowledge of a repertoire of mentoring activities. As mentors develop such heuristics, it is possible that their conceptions of what it means to learn to teach and how this can be supported start to change; other components of the model therefore may require attention at advanced levels of training as well.

7.6.2.2 Activating mentors' adaptive meta-cognition

Consistent with the framework presented in Figure 7.1, we suggest that promoting mentor teachers' capacity for adaptive response to their mentee teachers' learning should be an explicit objective of professional development activities. Based on the work of Lin, Schwartz and Hatano (2005), we suggest that professional development activities should aim to activate mentor teachers' adaptive meta-cognition. Key features for activating adaptive meta-cognition are active decision making in practical situations, and encountering different perspectives on a situation that contain different values. These two features reduce the likelihood that events are seen as routine, or that only surface features of an event are noticed. They promote seeing novelty in events and help to open up problem finding. To engage mentors in active decision making, they may be

asked to develop a response to a case or vignette, to start out from an experience in their own mentoring practice, or they may be asked to develop a more elaborate case from their own mentoring practice (Shulman, 2002). To introduce multiple perspectives on a mentoring situation, questions can be provided for additional information that others would ask based on different goals and values and experiences. This postpones jumping to a solution, and opens op problem finding (Lin et al., 2005). Alternatively, several heuristics could be provided that represent various contrasting understandings of the underlying nature of the situation. Subsequently, discussion may then be framed around the question of 'what is this a case of' (Shulman, 2002) to further stimulate problem finding and integration of multiple perspectives of the situation and potential ways to respond.

7.6.2.3 Using mirrors of practitioner knowledge

Our study provides various representations of mentor teachers' knowledge that might be used to help generate discussion and deliberation among mentor teachers about the nature of being adaptive to novice teachers' learning. The items from the questionnaire, the interview fragments, the list of mentoring activities, the list of constructs, the list of adaptive mentoring activities and, perhaps most of all, the condensed accounts of the 'if…then' heuristics, all constitute partial representations of mentor teachers' practical knowledge related to being adaptive. In piloting our questionnaire for study 1, we experienced that by simply encountering explicated alternative approaches and beliefs, mentor teachers may be incited to reflect on what they are doing and on possible alternatives to their current mentoring practice. Similarly, presenting a list of activities such as those developed in study 2 and 4 may be a simple step-up to open up discussions of what mentor teachers do; for instance, whether they explicitly discuss expectations with the mentee teacher at the beginning of the mentoring relationship. Likewise, presenting a list of constructs such as the one in study 3 may help to generate reflections and discussions on the differences mentor teachers experience between their mentee teachers and how they might respond to these differences.

7.6.2.4 Using techniques for knowledge explication

The repertory-grid technique of sorting cards with mentee teachers' names proved a viable way of getting mentor teachers to talk about differences in their mentee teachers' learning. The technique helped to elicit concrete notions of how mentees were different, how this had manifested itself in their teaching and in their relationship with the mentor, and what mentors had been able to do, to adapt to and work with these differences. Even with a smaller number of card sorts, this may still engage mentor talk close to the lived practice of mentoring and narrative ways of knowing mentoring practice (Shulman, 2002). An alternative would be to let mentors do a 'full card sort', in which a complete set of cards is grouped into piles. It has been suggested that such sorting activities may engage mentor teachers' thinking at the more implicit and non-rational level of holistic images, rather than at an analytical level (Korthagen, 1993). Such an activity could provide an experiential starting point for collaborative learning in a group of mentor teachers or teacher educators, for instance between new/aspiring mentors and more experienced mentors. This may help to develop a more shared discourse of practice (Feiman-Nemser, 2012) that is also attentive to the issue of adaptive response to individual differences in novice teachers' learning.

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SUMMARY

Chapter 1: General introduction

Mentoring relationships are vital for the successful preparation and induction of novice teachers. Making such mentoring relationships work requires a good match between the mentor and the novice teacher. The responsibility for this tends to rest with the mentor teacher. Mentor teachers therefore need to be capable of adaptively responding to the momentary and individual learning needs of their mentee teachers, as these arise in the process of learning to teach. This requires mentor knowledge of novice teacher learning and of a broad repertoire of mentoring activities. In addition, mentors need to capable of connecting this knowledge in such a way that they can 'read' a mentoring situation and respond adaptively. Such knowledge is a critical, but still underdeveloped component in the knowledge base of mentoring. Drawing on practitioner knowledge can help to inform and develop the knowledge base of professional mentoring. The aim of this thesis is therefore to contribute to the professional knowledge base of teacher mentoring by exploring mentor teachers' own, practical knowledge of adaptive mentoring. The central question is: *What is the content of mentor teachers' practical knowledge of adaptive response to their mentee teachers' learning?* For practitioner knowledge to become professional knowledge, it must be represented in such a way that it can be shared with practitioners, and subsequently verified and improved. This study aims to do so through 1) uncovering mentor teachers' practical knowledge of their mentee teachers' learning and of ways to adaptively respond to this learning, 2) providing descriptive accounts of its content, and 3) elucidating specific characteristics of this knowledge through the use of theoretical perspectives.

Mentor teachers' practical knowledge is understood in this thesis as the whole of knowledge and insights that underlie mentor teachers' actions in practice. The study of mentor teachers' practical knowledge in this thesis focuses on four components of practical knowledge assumed relevant for mentor teachers' capacity for adaptive mentoring. According to the literature, these are: 1) a disposition of collaboration and inquiry, 2) knowledge of a repertoire of mentoring activities, 3) knowledge of novice teachers' learning, and 4) heuristics that connect knowledge of mentoring activities and of mentee teachers' learning

as actionable knowledge. These four components therefore guide the overall design of the study.

Each of the five studies in the thesis focuses on one of the four components. Study 1 focuses on mentor teachers' *disposition of collaboration and inquiry*, through a large-scale survey with questionnaire. The study explores the relation between mentor teachers' mentoring conceptions and their motives for mentoring, as expressions of their underlying disposition towards collaboration and inquiry. Study 2 focuses on mentor teachers' *practical knowledge of mentoring activities* through task-based interviews, and explores individual differences between mentors in their practical knowledge of adaptive mentoring. The final three studies use repertory-grid interviews to explore shared elements in mentor teachers' practical knowledge. Study 3 focuses on *practical knowledge of mentee teachers' learning* and study 4 focuses on *practical knowledge of mentoring activities*. Study 5 combines the analyses of study 3 and 4 to focus on mentor teachers' shared *heuristics for adaptive response* to their mentee teachers' learning. The studies in this thesis focus on the viewpoint of mentor teachers, are mostly small-scale, exploratory and descriptive, and use a mix of quantitative and qualitative measures. The terms mentor (teacher) and novice/mentee (teacher) are used to refer to the participants in mentoring relationships. Mentors in this study were schoolteachers in secondary education. They reported on mentees who at the time of their mentoring relationship were in some form entering the profession and hence novice teachers.

Chapter 2: Why mentor? Linking mentor teachers' mentoring motivations to their mentoring conceptions.

The study described in this chapter focused on mentor teachers' *disposition of collaboration and inquiry*. Current mentoring models for teacher preparation and induction emphasize the need to engage novice teachers' learning through collaborative professional learning. Mentors are therefore expected to engage in joint knowledge construction with novices; to be 'co-thinkers' who enact a developmental view of mentoring, as well as 'co-learners' who are willing to engage in mutual learning with their novices. Being a co-thinker and a co-learner are assumed to be associated in mentor thinking. The aim of this questionnaire study was therefore to explore the relationship between mentors' mentoring

conceptions and their mentoring motives. The study addressed two research questions: *1) To what extent do mentor teachers report generative outcome motives, personal learning motives, and instrumental and developmental mentoring conceptions? 2) What is the relationship between mentor teachers' mentoring motives and their mentoring conceptions?* From a review of the literature, the study developed a questionnaire measuring mentor teachers' agreement with an instrumental mentoring conception (getting mentees to act as a teacher), a developmental mentoring conception (getting mentees to develop their views on learning and teaching), a generative outcome motive (being a mentor to pass on knowledge and experience), and a personal learning motive (being a mentor to learn from mentoring). Respondents were 726 mentors associated with 13 Dutch teacher education institutes, both vocational (8 institutes) and university level (5 institutes).

Four statistically significant results were found. Mentors reported stronger agreement with a generative outcome motive than with a personal learning motive, but with a small effect size. Mentors also reported stronger agreement with a developmental conception than with an instrumental conception, with a large effect size. The correlation between a personal learning motive and a developmental mentoring conception was stronger than the correlation between a personal learning motive and an instrumental mentoring conception. The same was found for a generative outcome motive, though less pronounced.

The strong link between holding a personal learning motive and a developmental mentoring conception supports the idea that being a 'co-thinker' and being a 'co-learner' with novice teachers is associated in mentor thinking. The preference of Dutch mentor teachers for a developmental over an instrumental mentoring conception is in contrast to previous studies in Anglo-Saxon countries. This may be due to the influence of models of realistic teacher education in the Netherlands. The on average equal agreement of Dutch mentor teachers with personal learning and generative outcome motives is in contrast to previous studies. These reported generative outcome motives as dominant. This may be explained by the finding that Dutch mentors report a preference for a developmental conception and the link between holding this conception and a personal learning motive.

The results of this questionnaire study informed the selection of the participants for the interview studies described in Chapters 3, 4, 5 and 6. The goal was to maximize the variation in the mentoring conceptions of the participants, to enhance the chances of finding a variety of mentoring activities, constructs and heuristics in the relatively small samples of the interview studies. Participants were selected from the 245 mentor teachers in this study who indicated a willingness to participate in a follow-up study. Mentors were divided according to the mean scores for all respondents on the two mentoring conception scales, resulting in four groups: two groups of mentors scoring either above average or below average on both mentoring conception scales, and two groups of mentors scoring above average on one scale, and below average on the other scale. Equal numbers of mentors were selected at random from all four groups and invited to participate in the follow-up studies.

Chapter 3: Adapting mentoring to individual differences in novice teacher learning; the mentor's viewpoint.

The study described in this chapter focused on mentor teachers' *practical knowledge of mentoring activities*. The aim of this study was to explore 1) mentoring activities through which mentors intend to adapt to the individual novice teacher, and 2) characteristics of adaptive mentors, who mention many adaptive mentoring activities. Participants were 18 mentors holding different mentoring conceptions, from 13 different programs for Initial Teacher Education in the Netherlands. The study used on-site task-based interviews with mentors, directly following a post-lesson conversation with one of the mentor's 'own' mentee teachers. Through template analysis of the interviews, 29 mentoring activities were coded that were oriented toward four broad mentoring goals: A) providing emotional and psycho-social support B) supporting construction of personal practical knowledge of teaching, C) creating a favourable context for mentee teacher learning, and D) changing mentee teacher behaviour.

Mentors mentioned four adaptive mentoring activities: 1) aligning mutual expectations about the mentoring process, 2) attuning to the novice's emotional state, 3) adapting the mentoring conversation to match the reflective capacity of the novice teacher, and 4) building tasks from simple to complex relative to the novices' competence-level. Correlation analysis showed distinctive features of the practical knowledge of more adaptive mentors. They mentioned

relatively more activities oriented at support for mentee construction of personal practical knowledge, and less activities oriented at creating a favourable context for novice teacher learning. More adaptive mentors were either more 'cognitively adaptive' or more 'emotionally adaptive'. The more cognitively adaptive mentors described more adapting to novice teachers' reflective capacity, indicating novice growth and linking mentoring conversations to ensure a sense of continuity. The more emotionally adaptive mentors mentioned more attuning to emotional states of the mentee, and keeping mentoring bounded to specific moments.

The four adaptive mentoring activities found in this study reflect current notions of what it means to be adaptive: matching mutual expectations, shifting style and helping novices to reframe teaching. The pattern of activities mentioned by the adaptive mentors may stimulate novice teachers to adopt a meaning-oriented learning orientation and to develop an informed, personal theory of practice. The activities of the more cognitively adaptive mentors may help to enhance novice teachers' sense of continuity and growth in learning to teach. The activities of the more emotionally adaptive mentors may help to make mentoring interactions safer for novices, while simultaneously protecting mentors from being over-taxed as they provide emotional support. The study shows that emotionally adaptive mentors combine a focus on emotional aspects of learning with attention for encouraging reflective thought and progressively developing novice teacher competence. Previous studies have found mentors to focus on either emotional support or on reflection and inquiry.

The studies described in Chapters 4, 5 and 6 were based on repertory-grid interviews with 11 mentor teachers. This technique allowed mentors to express their narrative ways of knowing mentoring practice, while also eliciting their connected thinking about their mentees' learning and their own response to this learning. Mentors recalled the names of six mentee teachers they had mentored. Then they were given three of these names on cards. They were asked to identify how two mentees had been similar to each other and dissimilar to the third mentee, to name the terms that best described the difference, and to provide examples. Finally, they were asked to describe how they had responded to these similarities and differences, and provide examples. These repertory grid interviews provided three kinds of descriptions: 1) descriptions of characteristics of their mentee teachers' learning, 2) of mentoring activities, and 3) of the connections between these two.

Chapter 4: Mentor teachers' views of their mentee teachers' learning

The study described in this chapter focused on mentors' *shared practical knowledge of mentee teachers' learning*. High diagnostic ability is a distinctive feature of successful mentoring. This requires knowledge of mentee teachers as adult learners. The central question in this study was therefore: *What attributes of novice teachers' learning do mentor teachers focus on most in describing similarities and differences between their mentee teachers?* This study analysed mentor teachers' descriptions in the repertory grid interviews of the characteristics of mentee teachers' learning. Interviews were analysed using content analysis. Interviews were also analysed with the second-order conceptual lens of the two core dimensions that people tend to use in social judgement of others: social desirability (warmth) and social utility (competence).

Mentors expressed 33 constructs: bi-polar oppositions that discriminate between two opposing attributes of mentee teachers' learning, for instance; being self-confident versus insecure, or being mature versus immature. The constructs were related to four domains of functioning of mentee teachers; A) mentee teaching, B) mentee development and learning to teach, C) personal attributes of the mentee, and D) the mentoring and school context of the mentee. Approximately two-thirds of the constructs reflected social judgement, mostly judgements of social utility. The four constructs mentioned most often referred to mentee 1) engaging in personal contact or remaining more distant with pupils, 2) being serious and driven or more relaxed and playful in teaching, 3) identifying with the responsibilities of a being a teacher or not, and 4) being self-confident or being doubting and insecure. These four dominant constructs reflected both dimensions of social judgement and the two domains of a) mentee teaching and b) learning to teach. Mentor teachers often combined the dominant constructs across the two domains, but not across the two dimensions of social judgement. This suggests mentors' views of these differences in their mentee teachers' learning represent two separate dimensions of social judgement. Themes in judgements of social desirability were: 1) care for pupils is a disposition, and 2) properly identifying as a teacher requires a balance of care and professional distance. Themes in judgements of social utility were: 1) strong novices balance ambition and playfulness, in which flexible teaching and reflection are both hampered by perfectionism, 2) planning for teaching is a disposition, and 3)

strong novices have inner strength, in which both assertive presence and independent problem-solving come from self-confidence.

The study concluded that for dominant constructs, mentor teachers used a dispositional explanatory style (attributing to fixed traits or dispositions) much more frequently than historicism (attributing to biography and historical circumstances) or control (attributing to willpower and effort). For particular attributes, such as the degree to which mentee teachers plan for teaching, mentor teachers almost exclusively used dispositional explanations. Mentors with a tendency towards dispositionism over historicism could be less attentive to historical and formative origins of mentee teachers' functioning, and potentially put less effort in helping mentees to develop more effective forms of functioning. Previous studies have conceptualized mentor teachers' views of their mentees as reflecting mostly personal attributes and professional practices of the mentee. This study suggests mentor teachers' view of their mentees also incorporates a third domain regarding novice teacher learning to teach. This domain 'bridges' the domain of personal attributes and professional practices: a professional-personal domain of dealing with the self in becoming a teacher. The study presents a conceptual model that encompasses these three domains of mentor teachers' knowledge about their mentee teachers' learning.

Chapter 5: 'We need to talk': confronting as an adaptive response in mentoring

The study described in this chapter focused on mentors' *shared practical knowledge of mentoring activities* for adaptively responding to their mentee teachers' learning This study analysed mentor teachers' descriptions in the repertory grid interviews of mentoring activities. The study explored what mentoring activities mentors mention most in talking about their response to similarities and differences between their mentee teachers, as an indication of shared knowledge. The central research question is: *What are dominant mentoring activities in mentor teachers' descriptions of their response to similarities and differences between their mentee teachers?* Interviews were analysed using content analysis; the four broad mentoring goals identified in the study described in Chapter 3 served as a guideline for coding mentoring activities. Mentors expressed 34 adaptive mentoring activities, oriented toward four broad mentoring goals: A) providing emotional and psycho-social support, B)

supporting construction of personal practical knowledge of teaching, C) creating a favourable context for novice teacher learning, and D) changing novice teacher behaviour. The single most dominant mentoring activity in mentor teachers' descriptions was confronting. In confronting, the mentor makes the beginner aware of discrepancies between what the beginner does and/or achieves on the one hand, and professional norms of conduct and/or what the beginner is supposed to achieve on the other hand. This confrontation is aimed at changing the behaviour of the novice teacher and at developing the novice teachers' intention to change behaviour. The mentor does this by giving a 'reality check' (bringing the beginner's perception in line with reality), by clarifying expectations and professional standards, and by showing the novice the necessity for change. Mentors most often combined confronting with guiding application, which is oriented at construction of knowledge about teaching. Guiding application refers to the mentor's activity of trying to build skill or knowledge in a gradual, incremental or stepwise manner by providing direct guidance in mentoring conversations or by providing opportunities to practice skills.

Mentors described confronting as *telling* or *developing* the problem. Telling or developing the problem tended to differ according to the nature of the problem that mentors tried to address through confronting the mentee. Telling the problem was mentioned for more observable issues of mentee teaching (i.e. dressing appropriately or planning for teaching). Developing the problem was mentioned for less observable issues of mentee learning to teach (i.e, openness to experience or doubting). For confronting with guiding application, mentors described *crafting the response* to ensure their actions remained responsive to the mentee teacher, through 1) *taking the mentee perspective, 2) timing confrontation, 3) monitoring mentee reactions, and 4) self-monitoring by the mentor*. Mentors mentioned these four aspects of crafting the response mostly for when they described confronting as *developing* the problem. The study concludes that mentors' description of confronting is highly similar to the concept of goal setting in goal setting theory (Locke & Latham, 2002). This suggests that mentor teachers construct their practical knowledge of adaptive response in large part around goal setting with mentees. Mentor preparation should therefore include goal setting through confronting as a mentoring role, skill and practice. This includes how mentors can help mentee teachers to accept goals, especially when addressing less observable and complex issues of mentee learning to teach.

Chapter 6: Mentor teachers' heuristics for adaptive response to their mentee teachers' learning

The study described in this chapter focused on mentor teachers' *shared heuristics for adaptive response*. The aim of this study was to explore how mentors shape their adaptive response by connecting their knowledge of mentee teachers' learning to their knowledge of mentoring activities. As a result of their day-to-day micro-adaptive responses (Corno, 2008) in the course of mentoring different mentee teachers, mentors develop actionable heuristics for specific mentoring situations. These heuristics connect specific characteristics of novice teacher learning to the mentoring activities that mentors see as an appropriate response. In the analysis of the repertory-grid interviews, this study combined the two coding schemes described in Chapters 4 and 5 to explore the associations that mentor teachers describe between (1) attributes of their mentee teachers' learning and (2) mentoring activities to respond to these attributes. These associations were considered indicative of mentor teachers' actionable heuristics. The focus was on associations that were shared across the interviews, as an indication of shared knowledge of mentor teachers.

The shared associations involved ten attributes related to four domains of mentee functioning: 1) interactions with pupils and classroom management, 2) knowledge, beliefs and approaches towards learning, instruction and content, 3) dealing with emotions in the process of learning, and 4) the role of the mentee teacher in guided problem solving. Mentors mentioned a broader set of mentoring goals for the latter two domains. In their descriptions, mentors tended to differentiate their response according to their interpretation of the mentoring situation at hand. For instance, for mentee teachers they viewed as having an unsure presence in class, their response differed according to whether they saw this as an issue of mentee insecurity and self-doubt, or as an issue of a lack of skills for classroom management. In total mentors expressed shared heuristics for seventeen distinct mentoring situations. These were represented in the form of condensed 'if...then' statements that connect attributes of mentee learning to mentoring activities. The study concludes that the heuristics connect actions and intentions to situational interpretations. The organization of the heuristics around the seventeen distinct mentoring situations reflects how mentor teachers' practical knowledge is organized according to the problem this knowledge addresses. In several heuristics, mentors distinguished between a more task-oriented and a

more support-oriented response, according to whether the situation related to mentee competence or mentee dealing with the self. Previous research shows novices also make this distinction in their views of mentor support, and similar heuristics have been proposed in a model for adaptive mentoring.

Chapter 7: General conclusions and discussion

In this chapter the main findings are summarized, strengths and limitations of the research are indicated, and suggestions are provided for how the study can contribute to the knowledge base of mentoring. The discussion integrates the findings of the separate studies according to three themes: 1) representation, 2) verification, and 3) improvement of mentor teachers' practical knowledge.

(1) Representation of practical knowledge

In this thesis, the content of mentor teachers' practical is represented at different levels of reduction, through 1) scales of mentoring conceptions, 2) structured lists of mentoring activities and attributes of mentee teacher learning, 3) mentors' narration of the lived experience of mentoring, 4) themes in mentor teachers' descriptions, and 5) heuristics for seventeen mentoring situations as 'if...then' statements. The heuristics represent mentor teachers' shared actionable knowledge of adaptive response, incorporating both the mentoring situation and the response to this situation within each heuristic. Mentoring activities identified in study 2 and 4 mostly operate at different grain sizes, as a result of different interview instruments. The two studies complement each other by identifying activities at the level of shaping the overall mentoring process (i.e. aligning mutual expectations at the start) as well as at the level of addressing specific issues of mentee learning (i.e. stopping specific mentee behaviours).

(2) Verification of practical knowledge

Five strands of theory building can be linked to the findings of this thesis for theoretical verification of results, which also suggest directions for future research. First, the three notions of adaptive mentoring identified in the task-based interviews (i.e. matching mutual expectations, shifting style and helping to reframe teaching) may constitute different levels of change for the mentor in becoming more adaptive. Second, future research could use the two-by-two framework of the two domains (mentee teaching and mentee learning to teach)

and the two dimensions of social judgement, to study how mentor teachers' views of their mentees changes across time or differs across contexts of mentoring. Third, exploratory analyses using the framework of scaffolding developed by Van de Pol, Volman, & Beishuizen (2010) suggest that applying this framework to mentoring could provide a theoretical ground for describing adaptive mentoring of novice teachers. Fourth, our findings suggest future studies should explore mentor self-regulation as part of adaptive mentoring. Finally, findings in this study show that mentors notice how mentee teachers' regulate their learning both cognitively and emotionally. Such regulation is part of novice teachers' orientations to learning to teach (Oosterheert, 2001). Future research could explore how mentors could notice learning orientations of novice teachers and help them change as a learner.

(3) Improvement of practical knowledge

Results of the thesis can inform the professional preparation of mentor teachers in four ways. First, the component model can inform the establishment of goals for mentor preparation. Second, findings can inform the design of activities that activate mentor teachers' adaptive meta-cognition. Third, findings may provide mentors with mirrors of practitioner knowledge. Finally, the repertory-grid technique can help mentors to explicate their practical knowledge and re-examine it.

NEDERLANDSE SAMENVATTING

Hoofdstuk 1: Algemene inleiding

Om beginnende leraren goed voor te bereiden op het beroep, zowel tijdens hun opleiding als in de inductiefase, is het belangrijk dat zij bij het leren lesgeven begeleiding krijgen van meer ervaren leraren. In het Engels is hiervoor de term 'mentoring' gangbaar: de begeleider is een 'mentor teacher', de beginnende leerkracht is een 'novice teacher' of 'mentee teacher' en de begeleidingsrelatie is een 'mentoring relationship'. In het Nederlandse onderwijs worden hiervoor verschillende termen gebruikt (werkplekbegeleider, schoolopleider, coach, en LIO, DIO, starter etc). In deze Nederlandse samenvatting worden de generieke termen 'mentor' en 'beginner' of 'beginnende leerkracht' gebruikt. Mentoren in dit onderzoek zijn ervaren leraren in het voortgezet onderwijs (VO en MBO) die beginners begeleiden tijdens het leren lesgeven in de school, tijdens hun opleiding en/of bij hun start in het beroep. In deze begeleidingsrelaties is een goede match tussen mentor en beginner belangrijk. De verantwoordelijkheid hiervoor ligt meestal bij de mentor. Mentoren moeten daarom in staat zijn om adaptief te reageren op de momentane en individuele leerbehoeften van de beginnende leerkracht, zoals deze zich voordoen tijdens het proces van het leren lesgeven. Dit vereist van de mentor zowel kennis van het leren van de beginnende leerkracht als kennis van een repertoire aan begeleidingsactiviteiten. Daarnaast moet de mentor ook in staat zijn deze twee soorten kennis zo aan elkaar te koppelen dat het handelingsmogelijkheden biedt om met verschillende begeleidingsituaties om te gaan. Dergelijke kennis is een belangrijke maar nog onderontwikkelde component in de kennisbasis van de begeleiding van beginnende leraren.

Onderzoek naar de praktijkkennis van mentoren over adaptief begeleiden kan bijdragen aan de professionele kennisbasis van het begeleiden van beginnende leraren. In dit proefschrift wordt daarom deze praktijkkennis onderzocht. De centrale vraag is: *Wat is de inhoud van de praktijkkennis van mentoren over het adaptief begeleiden van hun beginnende leraren?* Voordat praktijkkennis kan bijdragen aan een professionele kennisbasis, moet deze eerst zodanig gerepresenteerd worden dat deze kan worden gedeeld, geverifieerd en verbeterd. Deze studie beoogt dit te doen door 1) het achterhalen van de

praktijkkennis van mentoren over adaptief begeleiden, 2) het beschrijven van de inhoud van deze praktijkkennis en 3) het belichten van specifieke kenmerken van deze kennis met behulp van theoretische perspectieven.

De praktijkkennis van mentoren wordt in dit proefschrift begrepen als het geheel van kennis en inzichten dat ten grondslag ligt aan hun handelen in de praktijk. Het onderzoek richt zich op vier componenten in deze praktijkkennis, die in de literatuur verondersteld worden relevant te zijn voor de capaciteit van mentoren om adaptief te begeleiden. Dit zijn: (1) gericht zijn op samenwerkend en onderzoekend leren, (2) kennis van een repertoire van begeleidingsactiviteiten, (3) kennis van het leren van beginnende leraren, en (4) heuristieken die kennis van begeleidingsactiviteiten en van het leren van beginners verbinden tot handelingsgerichte kennis. Deze vier componenten zijn leidend voor de vormgeving van dit onderzoek.

Elk van de vijf studies in dit proefschrift richt zich op een van de vier componenten. Studie 1 richt zich op het *gericht zijn op samenwerkend en onderzoekend leren*, door middel van een grootschalig vragenlijstonderzoek. Deze studie onderzoekt de relatie tussen de begeleidingsopvatting en begeleidingsmotivatie van mentoren, als uitingen van het gericht zijn op samenwerkend en onderzoekend leren. Studie 2 richt zich op de *praktijkkennis van begeleidingsactiviteiten* bij mentoren door middel van taakgebaseerde interviews, en onderzoekt individuele verschillen tussen mentoren op het gebied van hun praktijkkennis over adaptief begeleiden. De laatste drie studies gebruiken repertory-grid interviews om gedeelde elementen in de praktijkkennis van mentoren te verkennen. Studie 3 onderzoekt de *praktijkkennis van het leren van de beginner* bij mentoren, en studie 4 onderzoekt de *praktijkkennis van begeleidingsactiviteiten*. Studie 5 combineert de analyses van onderzoek 3 en 4, en verkent de gedeelde *heuristieken* bij mentoren om adaptief op het leren van de beginner in te spelen. Het onderzoek is gericht op het perspectief van de mentor, het is exploratief en beschrijvend en het maakt gebruik van een mix van kwantitatieve en kwalitatieve onderzoekstechnieken.

Hoofdstuk 2: Waarom begeleider zijn? De link tussen begeleidingsmotivaties en begeleidingsopvattingen van mentoren

De studie die in dit hoofdstuk wordt beschreven richtte zich op de gerichtheid van mentoren op samenwerkend en onderzoekend leren. In huidige visies op het

voorbereiden van beginnende leraren wordt het belang van samenwerkend professioneel leren benadrukt. Van mentoren wordt daarom verwacht dat ze met beginners kennis over lesgeven co-construeren. De mentor denkt daarin mee met de beginner vanuit een ontwikkelingsgerichte begeleidingsopvatting (co-thinker), en is daarbij ook bereid tot wederzijds leren (co-learner). De aanname is dat deze twee aspecten van meedenken en wederzijds leren samenhangen in het denken van mentoren. Het doel van deze vragenlijststudie was daarom om de relatie te onderzoeken tussen de begeleidingsopvattingen van mentoren en hun begeleidingsmotivaties. De onderzoeksvragen waren: *1) In hoeverre rapporteren mentoren dat zij een generatieve motivatie en een persoonlijke leermotivatie voor begeleiden hebben, en een instrumentele en ontwikkelingsgerichte begeleidingsopvatting? 2) Wat is de relatie tussen de begeleidingsmotivaties van mentoren en hun begeleidingsopvattingen?*

Op basis van literatuurstudie werd een instrument ontwikkeld om te bepalen in hoeverre mentoren het eens zijn met een instrumentele begeleidingsopvatting (beginners snel goed laten functioneren), een ontwikkelingsgerichte begeleidingsopvatting (beginners leren kijken naar leren en lesgeven), een generatieve motivatie (begeleiden om kennis en ervaring door te geven) en een persoonlijke leermotivatie (begeleiden om er zelf van te leren). Respondenten waren 726 mentoren betrokken bij 13 Nederlandse lerarenopleidingen, zowel hogere beroepsopleidingen (8 instituten) als universitaire opleidingen (5 instituten).

Er werden vier statistisch significante resultaten gevonden. Mentoren waren het meer eens met een generatieve begeleidingsmotivatie dan met een persoonlijke leermotivatie, maar met een kleine effectgrootte. Ook waren mentoren het meer eens met een ontwikkelingsgerichte begeleidingsopvatting dan met een instrumentele opvatting, en met een grote effectgrootte. De correlatie tussen een persoonlijke leermotivatie en een ontwikkelingsgerichte begeleidingsopvatting was sterker dan de correlatie tussen een persoonlijke leermotivatie en een instrumentele begeleidingsopvatting. Hetzelfde werd gevonden voor een generatieve motivatie, maar minder uitgesproken.

Het sterke verband tussen een persoonlijke leermotivatie en een ontwikkelingsgerichte begeleidingsopvatting ondersteunt het idee dat het meedenken met de beginner en het wederzijds leren van elkaar in het denken van mentoren samenhangen. De voorkeur van Nederlandse mentoren voor een

ontwikkelingsgerichte ten opzichte van een instrumentele begeleidingsopvatting komt niet overeen met eerdere studies in Angelsaksische landen. Dit kan een effect zijn van de in Nederland gangbare didactiek van het realistisch opleiden van leraren. Dat mentoren het gemiddeld even eens zijn met een persoonlijke leermotivatie als met een generatieve motivatie komt niet overeen met eerdere studies. Daarin gaven mentoren aan het meer eens te zijn met een generatieve motivatie. Een verklaring is de voorkeur van Nederlandse mentoren voor een ontwikkelingsgerichte begeleidingsopvatting, en het sterke verband tussen deze opvatting en een persoonlijke leermotivatie.

Aan de hand van de resultaten van dit vragenlijstonderzoek werden de deelnemers geselecteerd voor de interviewstudies die beschreven worden in de Hoofdstukken 3, 4, 5 en 6. Door de variatie in de begeleidingsopvattingen van de deelnemers te maximaliseren werd geprobeerd om de kans te vergroten dat een verscheidenheid aan begeleidingsactiviteiten, constructen en heuristieken kon worden gevonden in de kleinschalige vervolgstudies. Deelnemers werden geselecteerd uit de 245 mentoren die in de vragenlijststudie aangaven deel te willen nemen aan vervolgonderzoek. Mentoren werden verdeeld aan de hand van de gemiddelde scores voor alle respondenten voor de twee begeleidingsopvattingen. Dit resulteerde in vier groepen: twee groepen van mentoren die het met beide opvattingen ofwel bovengemiddeld ofwel ondergemiddeld eens waren, en twee groepen van mentoren die het bovengemiddeld eens waren met de ene begeleidingsopvatting en ondergemiddeld met de andere. Gelijke hoeveelheden mentoren werden willekeurig uit alle vier de groepen geselecteerd en uitgenodigd om deel te nemen aan de vervolgstudies.

Hoofdstuk 3: Begeleiding aanpassen aan individuele verschillen in het leren van beginnende leraren; het perspectief van de mentor.

De studie die in dit hoofdstuk wordt beschreven richtte zich op de *praktijkennis van begeleidingsactiviteiten* bij mentoren. De doelstelling van deze studie was het verkennen van 1) begeleidingsactiviteiten waarmee mentoren proberen de begeleiding aan te passen aan de individuele beginnende leerkracht, en 2) kenmerken van adaptieve mentoren, die veel adaptieve begeleidingsactiviteiten noemen. Deelnemers waren 18 mentoren met verschillende begeleidingsopvattingen, verbonden aan 13 verschillende initiële

lerarenopleidingen in Nederland. Het onderzoek maakte gebruik van taakgebaseerde interviews op locatie met mentoren, direct na een observatiegesprek van de mentor met een 'eigen' beginnende leerkracht. In de interviews werden 29 begeleidingsactiviteiten gecodeerd, die waren gericht op vier brede begeleidingsdoelen: A) het bieden van emotionele en psychosociale ondersteuning, B) het ondersteunen van de constructie van persoonlijke praktische kennis van lesgeven, C) het creëren van een gunstige context voor het leren van de beginner, en D) het veranderen van het gedrag van de beginnende leerkracht.

Van de 29 genoemde begeleidingsactiviteiten benoemden mentoren er vier als adaptief: 1) afstemmen van wederzijdse verwachtingen van de begeleiding, 2) afstemmen op de emotionele toestand van de beginner, 3) aanpassen van het begeleidingsgesprek aan het reflectieve vermogen van de beginner, en 4) opbouwen van taken van eenvoudig naar complex in relatie tot het bekwaamheidsniveau van de beginner. Correlatieanalyse liet onderscheidende kenmerken zien van de praktijkkennis van meer adaptieve mentoren. Ze noemden relatief meer activiteiten gericht op het ondersteunen van constructie van persoonlijke praktijkkennis, en minder activiteiten gericht op het creëren van een gunstige context voor het leren van de beginner. Meer adaptieve mentoren waren ofwel meer 'cognitief adaptief' of meer 'emotioneel adaptief'. De meer cognitief adaptieve mentoren benoemden vaker dat ze het begeleidingsgesprek aanpassen aan het reflectievermogen van de beginner, dat ze de groei van de beginner benoemen, en dat ze koppelingen leggen tussen begeleidingsgesprekken om de beginner een besef van continuiteit in de eigen ontwikkeling te geven. De meer emotioneel adaptieve mentoren noemden vaker dat ze afstemmen op de emotionele toestand van de beginner en dat ze de begeleiding afbakenen tot specifieke momenten. De vier adaptieve begeleidingsactiviteiten die in dit onderzoek werden gevonden, weerspiegelen huidige noties van wat het betekent om adaptief te zijn: het afstemmen van wederzijdse verwachtingen, het veranderen van begeleidingsstijl en het beginners helpen om hun perspectief op lesgeven te herstructureren.

De activiteiten die de adaptieve mentoren noemen kunnen beginners stimuleren om een betekenisgerichte leeroriëntatie aan te nemen en een geïnformeerde, persoonlijke praktijktheorie te ontwikkelen. De activiteiten van de meer cognitief adaptieve mentoren kunnen dienen om het gevoel van

continuïteit en groei in het leren van de beginnende leerkracht te vergroten. De activiteiten van de meer emotioneel adaptieve mentoren kunnen ertoe bijdragen dat de begeleiding veiliger wordt voor de beginner, terwijl tegelijkertijd de mentor wordt beschermd tegen overbelasting bij het bieden van emotionele steun. De studie laat zien dat emotioneel adaptieve mentoren aandacht voor de emotionele aspecten van leren combineren met aandacht voor het aanmoedigen van reflectief denken en het geleidelijk ontwikkelen van competenties. Eerdere studies lieten zien dat mentoren zich richtten op ofwel het bieden van emotionele steun ofwel het ondersteunen van reflectief en onderzoekend leren.

De studies die worden beschreven in de Hoofdstukken 4, 5 en 6 waren gebaseerd op repertory-grid interviews met 11 mentoren. Door deze interviewtechniek konden mentoren op een verhalende manier praten over het leren van hun beginnende leraren en over hun eigen reacties hierop. Mentoren noemden de namen van zes beginners die ze hadden begeleid. Daarna kregen ze drie van deze namen op kaartjes te zien. Ze werden gevraagd om aan te geven in welk opzicht twee beginners op elkaar leken en anders waren dan de derde beginner, om de termen op te schrijven die dit verschil het beste beschrijven, en om voorbeelden te geven van de verschillen en overeenkomsten. Ten slotte werden zij gevraagd te beschrijven hoe zij op deze overeenkomsten en verschillen hadden gereageerd en hier voorbeelden van te geven. Dit repretory-grid interview leverde drie soorten beschrijvingen op: beschrijvingen van kenmerken van het leren van beginnende leraren, van begeleidingsactiviteiten en van de verbanden hiertussen.

Hoofdstuk 4: Hoe mentoren het leren van beginnende leraren zien

De studie die in dit hoofdstuk wordt beschreven richtte zich op de *gedeelde praktijkkennis van het leren van beginners* bij mentoren. Een goed diagnostisch vermogen is een belangrijk kenmerk van goede begeleiding. Dit vereist kennis van het leren van beginnende leraren. De centrale vraag in dit onderzoek was daarom: *Op welke eigenschappen van het leren van beginnende leraren richten mentoren zich het meest bij het beschrijven van overeenkomsten en verschillen tussen hun beginnende leraren?* Deze studie analyseerde de beschrijvingen die de mentoren in de repertory-grid interviews gaven van de kenmerken van het leren van de beginners. Interviews werden geanalyseerd met behulp van inhoudsanalyse. Interviews werden daarnaast ook geanalyseerd vanuit het

perspectief van de twee kerndimensies die mensen gebruiken in het sociaal beoordelen van anderen: sociale wenselijkheid (warmte), en sociaal nut (competentie).

Mentoren benoemden 33 constructen: tegenstellingen tussen twee eigenschappen van het leren van beginnende leraren, bijvoorbeeld; zelfverzekerd versus onzeker zijn, of volwassen versus onvolwassen zijn. Deze hadden betrekking op vier domeinen van het functioneren van de beginner; A) het lesgeven, B) het leren lesgeven, C) persoonlijke eigenschappen, en D) de begeleidings- en schoolcontext van de beginner. Ongeveer tweederde van de constructen betroffen sociale beoordelingen; vooral oordelen over sociaal nut. De vier meest genoemde constructen hadden betrekking op 1) contact maken met leerlingen of afstandelijk blijven, 2) serieus en gedreven of meer ontspannen en speels zijn in het lesgeven; 3) zich identificeren met de verantwoordelijkheden van het leerkracht zijn of niet, en 4) zelfvertrouwen hebben of twijfelen en onzeker zijn. Deze vier dominante constructen weerspiegelden beide dimensies van sociaal beoordelen en de twee domeinen van a) lesgeven en b) leren lesgeven. Mentoren combineerden de dominante constructen wel over deze twee domeinen heen, maar niet over de twee dimensies van sociaal beoordelen heen. Dit suggereert dat sociale wenselijkheid en sociaal nut afzonderlijke dimensies zijn aan de hand waarvan mentoren verschillen in het leren van beginnende leraren beoordelen. Thema's in de beoordeling van sociale wenselijkheid waren: 1) zorg voor leerlingen is een dispositie, en 2) een goede identificatie met de rol van leerkracht vereist een evenwicht tussen zorg en professionele afstand. Thema's in de beoordeling van sociaal nut waren: 1) sterke beginners balanceren ambitie en speelsheid, waarbij flexibel lesgeven en reflectie beide gehinderd worden door perfectionisme, 2) lessen plannen is een dispositie, en 3) sterke beginners hebben innerlijke kracht, waarin zowel assertieve aanwezigheid als onafhankelijk probleemoplossend vermogen voortkomen uit zelfvertrouwen.

De studie concludeerde dat mentoren voor dominante constructen een dispositionele verklarende stijl gebruikten (toeschrijven aan vaste kenmerken of gerichtheid), veel vaker dan historicisme (toeschrijven aan biografie en historische omstandigheden) of controle (toewijzen aan wilskracht en inspanning). Voor bepaalde kenmerken, zoals de mate waarin beginners lessen plannen, gebruikten mentoren bijna uitsluitend dispositionele verklaringen. Mentoren met een neiging tot dispositionisme ten opzichte van het historicisme,

kunnen minder aandacht hebben voor de historische oorsprong van het functioneren van de beginner, en kunnen daardoor mogelijk minder in staat zijn om moeite te doen om de beginner te helpen effectiever te functioneren. In eerdere studies over hoe mentoren het functioneren van beginners zien, is dit benoemd als betrekking hebbend op ofwel persoonlijke kenmerken ofwel de professionele praktijk (het lesgeven) van de beginner. Deze studie geeft aan dat mentoren ook een derde domein zien: het leren lesgeven van de beginner. Dit domein 'overbrugt' het domein van persoonlijke kenmerken en professionele praktijk: het professioneel- persoonlijke domein van het omgaan met jezelf bij het leerkracht worden. De studie levert een conceptueel model op met deze drie domeinen van praktijkkennis van mentoren over het leren van beginnende leraren.

Hoofdstuk 5: 'Wij moeten praten': confronteren als adaptief handelen in de begeleiding

De studie die in dit hoofdstuk wordt beschreven richtte zich op de *gedeelde praktijkkennis van begeleidingsactiviteiten* bij mentoren voor het adaptief inspelen op het leren van beginnende leraren. Deze studie analyseerde de beschrijvingen van begeleidingsactiviteiten in de repertory-grid interviews, en exploreerde welke begeleidingsactiviteiten mentoren het meest noemen bij het praten over hun reacties op de overeenkomsten en verschillen tussen hun beginnende leraren. De centrale onderzoeksvraag was: *Wat zijn dominante begeleidingsactiviteiten in hoe mentoren hun reactie beschrijven op overeenkomsten en verschillen tussen hun beginnende leraren?* Interviews werden geanalyseerd met behulp van inhoudsanalyse. De vier begeleidingsdoelen die in studie 2 werden geïdentificeerd
dienden als richtlijn voor het coderen van begeleidingsactiviteiten.

Mentoren benoemden 34 adaptieve begeleidingsactiviteiten, gericht op vier brede begeleidingsdoelen: A) het bieden van emotionele en psychosociale ondersteuning, B) het ondersteunen van de constructie van persoonlijke praktijkkennis van lesgeven, C) het creëren van een gunstige context voor het leren van de beginnende leerkracht, en D) het veranderen van het gedrag van de beginnende leerkracht. De meest dominante begeleidingsactiviteit in de beschrijvingen van mentoren was confronteren. Bij confronteren maakt de mentor de beginner bewust van discrepanties tussen enerzijds wat de beginner

doet en/of daarmee bereikt, en anderzijds wat professionele gedragsnormen zijn en/of wat de beginner geacht wordt te bereiken. Deze confrontatie is gericht op het veranderen van het gedrag van de beginner en het ontwikkelen van de intentie tot deze gedragsverandering door de beginner. De begeleider doet dat door een 'reality-check' te geven (het overeenstemmen van de waarneming van de beginner met de werkelijkheid), door verwachtingen en professionele normen te verduidelijken, en door de beginner de noodzaak van verandering te laten zien. Mentoren noemden het confronteren het meest in combinatie met het helpen opbouwen van kennis en vaardigheden op een geleidelijke, incrementele, stapsgewijze manier, door directe steun in begeleidingsgesprekken en door het bieden van gelegenheid om vaardigheden te oefenen.

Mentoren beschreven het confronteren als het *vertellen* of het *ontwikkelen* van het probleem, en dit verschilde naar gelang de aard van het probleem waarmee mentoren de beginner wilden confronteren. Vertellen van het probleem werd genoemd voor meer waarneembare problemen in het lesgeven (i.e. gepaste kledij dragen of lesplanningen maken). Ontwikkelen van het probleem werd genoemd voor minder waarneembare problemen in het leren lesgeven (i.e. openstaan voor ervaring of twijfelen en onzeker zijn). Voor de combinatie van het confronteren met het helpen opbouwen van kennis en vaardigheden beschreven mentoren hoe ze hun reactie zo vormgaven dat deze responsief bleef. Ze benoemden hierbij: 1) het perspectief van de beginner innemen, 2) het timen van de confrontatie, 3) het monitoren van de reacties van de beginner, en 4) het monitoren van zichzelf. Ze benoemden deze 4 aspecten vooral wanneer ze confronteren beschreven als het *ontwikkelen* van het probleem.

Hoe mentoren het confronteren beschrijven komt overeen met het concept van het stellen van doelen in 'goal-setting theory' (Locke & Latham, 2002). Dit suggereert dat mentoren hun praktijkkennis van adaptief begeleiden grotendeels construeren rond het stellen van doelen met beginners. In de voorbereiding van mentoren zou daarom het stellen van doelen door confronteren aan bod moeten komen. Dit omvat onder meer hoe mentoren beginners kunnen helpen om doelen te accepteren, vooral voor minder waarneembare en complexe problemen van leren lesgeven.

Hoofdstuk 6: Heuristieken van mentoren voor het adaptief inspelen op het leren van beginnende leerkrachten.

De studie die in dit hoofdstuk wordt beschreven richtte zich op de *gedeelde heuristieken* bij mentoren voor het adaptief inspelen op het leren van beginnende leerkrachten. Het doel van deze studie was om te onderzoeken hoe mentoren vormgeven aan hun adaptieve respons door het verbinden van hun kennis van het leren van beginners aan kennis van begeleidingsactiviteiten. Als gevolg van hun dagelijkse micro-adaptieve reacties (Corno, 2008) in de loop van het begeleiden van verschillende beginnende leerkrachten, ontwikkelen mentoren handelingsgerichte heuristieken voor specifieke begeleidingssituaties. Deze heuristieken verbinden specifieke kenmerken van het leren van beginnende leerkrachten met begeleidingsactiviteiten die mentoren zien als passend hierbij. Deze studie combineerde de twee codeerschema's van de vorige twee studies voor het analyseren van de repertory-grid interviews. De studie verkent de associaties die mentoren beschrijven tussen 1) kenmerken van het leren van beginnende leerkrachten en 2) begeleidingsactiviteiten om op deze kenmerken in te spelen. Deze associaties werden beschouwd als indicatief voor de handelingsgerichte heuristieken van mentoren. De studie was gericht op gedeelde associaties in de interviews, als indicatie van de gedeelde praktijkkennis van mentoren.

De gedeelde associaties hadden betrekking op tien kenmerken, gerelateerd aan vier domeinen van het functioneren van de beginner: 1) interacties met leerlingen en klassenmanagement, 2) kennis, opvattingen en aanpak met betrekking tot leren, instructie en inhoud, 3) omgaan met emoties in het eigen leerproces, en 4) de rol van de beginner bij het begeleid oplossen van problemen. Voor de laatste twee domeinen noemden mentoren een bredere reeks begeleidingsdoelen. In hun beschrijvingen differentieerden begeleiders hun reacties op basis van hun interpretatie van de begeleidingssituatie. Bijvoorbeeld, voor beginners die volgens de mentor een onzekere uitstraling in de les hadden, verschilde hun reactie naargelang zij dit zagen als een kwestie van onzekerheid van de beginner, of als een gebrek aan vaardigheden voor klassenmanagement. In totaal benoemden mentoren gedeelde heuristieken voor zeventien verschillende begeleidingssituaties. Deze werden weergegeven in de vorm van samengevatte 'als ... dan'-uitspraken waarin kenmerken van het leren van beginners gekoppeld werden aan begeleidingsactiviteiten. De studie concludeerde dat de heuristieken acties en intenties verbinden aan interpretaties

van de situatie. De organisatie van de heuristieken rondom de zeventien verschillende begeleidingssituaties geeft weer hoe de praktijkkennis van mentoren is georganiseerd rond het probleem waar deze kennis op is gericht. In verschillende heuristieken maakten mentoren een onderscheid tussen een meer taakgerichte en een meer ondersteuningsgerichte reactie, al naar gelang de begeleidingssituatie betrekking had op de bekwaamheid van de beginner of het omgaan met zichzelf in het leerproces. Eerder onderzoek laat zien dat beginners dit onderscheid ook maken in hoe zij de begeleiding waarnemen, en vergelijkbare heuristieken zijn voorgesteld in een model voor adaptief begeleiden.

Hoofdstuk 7: Algemene conclusies en discussie

In dit hoofdstuk worden de belangrijkste bevindingen samengevat, worden sterke punten en beperkingen van het onderzoek aangegeven en worden suggesties gegeven voor hoe het onderzoek kan bijdragen aan de kennisbasis van het begeleiden van beginnende leerkrachten. De discussie integreert de bevindingen van de afzonderlijke onderzoeken op basis van drie thema's: representatie, verificatie en verbetering van praktijkkennis van mentoren.

(1) Representatie van praktijkkennis

In dit onderzoek is de inhoud van de praktijkkennis van mentoren op verschillende niveaus van reductie gerepresenteerd, via 1) schalen van begeleidingsopvattingen, 2) gestructureerde lijsten met begeleidingsactiviteiten en kenmerken van het leren van beginnende leerkrachten, 3) het verhalend vertellen door mentoren over hun praktijk, 4) thema's in de beschrijvingen van mentoren, en 5) heuristieken voor zeventien begeleidingssituaties in de vorm van 'als ... dan'-uitspraken. De heuristieken representeren de gedeelde handelingsgerichte kennis van het adaptief begeleiden van mentoren, waarin zowel de begeleidingssituatie als de erbij passende begeleidingsactiviteiten opgenomen zijn. De begeleidingsactiviteiten die in studie 2 en 4 werden geïdentificeerd betreffen verschillende niveaus van begeleidend handelen, als gevolg van de twee verschillende interviewinstrumenten. De twee studies vullen elkaar aan en identificeren activiteiten op het niveau van het vormgeven van het begeleidingsproces als geheel (i.e. afstemmen van wederzijdse verwachtingen aan het begin), evenals activiteiten op het niveau van het omgaan met specifieke problemen (i.e. het afstoppen van specifiek gedrag van de beginner).

(2) Verificatie van praktijkkennis

De bevindingen uit de studies worden ter verificatie belicht vanuit vijf theoretische perspectieven, waarmee ook aanwijzingen voor toekomstig onderzoek gegeven worden. Ten eerste, de drie noties van adaptief begeleiden die in de tweede studie benoemd werden (wederzijdse verwachtingen afstemmen, aanpassen van begeleidingsstijl en helpen herstructureren van perspectief op lesgeven) kunnen gezien worden als verschillende niveaus van verandering voor de mentor bij het adaptiever gaan begeleiden. Ten tweede, het raamwerk van twee domeinen van functioneren (lesgeven en leren lesgeven) en twee dimensies (sociale wenselijkheid en sociaal nut) kan gebruikt worden om te onderzoeken hoe het beeld dat mentoren van beginners hebben verandert in de loop van de begeleiding, of verschilt tussen verschillende begeleidingscontexten. Ten derde, verkennende analyses op basis van het raamwerk voor scaffolding ontwikkeld door Van de Pol, Volman, en Beishuizen (2010) suggereren dat dit een mogelijke theoretische basis kan vormen voor het beschrijven van adaptief begeleiden van beginnende leerkrachten. Ten vierde suggereren onze bevindingen dat toekomstige studies zelfregulering door de mentor zouden moeten onderzoeken als onderdeel van adaptief mentorschap. Ten slotte tonen de bevindingen in dit onderzoek aan dat mentoren opmerken hoe beginners hun leren cognitief en emotioneel reguleren. Dergelijke regulering maakt deel uit van de oriëntaties op leren lesgeven van beginnende leerkrachten (Oosterheert, 2001). Toekomstig onderzoek zou kunnen onderzoeken hoe mentoren leeroriëntaties van beginnende leerkrachten kunnen herkennen en hen kunnen helpen zich te ontwikkelen als lerende.

(3) Verbetering van praktijkkennis

De resultaten van het proefschrift kunnen op vier manieren gebruikt worden in de professionalisering van mentoren. Ten eerste kan het model van de componenten van praktijkkennis doelen voor professionalisering helpen bepalen. Ten tweede kunnen resultaten gebruikt worden bij het ontwerp van activiteiten die de adaptieve meta-cognitie van mentoren activeren. Ten derde kunnen de bevindingen mentoren een spiegel van praktijkkennis voorhouden. Ten slotte kan de repertory-grid methode mentoren helpen om hun praktijkkennis te expliciteren en te onderzoeken.

APPENDICES

A

Appendix 1. Interview topic list for the task-based interviews

Task-based section

Probes regarding the mentor teachers' approach:

- What where your goals in the mentoring conversation?
- How did you try to achieve these goals?
- Did you achieve your goals? Why/why not?
- Where you satisfied with the conversation? Why/why not?
- What did this conversation confirm for you about this novice teacher?
- What new insights did you gain about this novice teacher?
- How does this conversation compare to conversations you normally have with this novice teacher?
- How does this conversation compare to how you generally carry out mentoring conversations?

Specific probes based on observed mentoring conversation:

- Present observed behavior
- Do you often do that?
- Why do you consider it important to do that?
- What is the effect of doing that?

Probes regarding the mentor teachers' appreciation of the novice teacher:

- What do you think the novice teacher tried to achieve in the conversation?
- How did he/she try to achieve that?
- Did he/she succeed in doing so? Why/why not?
- What do you think is his/her major concern currently?
- What is your current major concern about this novice teacher?
- What have you learned from this novice teacher?

General section

- How do you build up the mentoring process from the beginning, when the novice teacher enters school, to the end when he/she leaves?
- How does the relationship between you and your mentees change in the course of the practicum?
- What does this mean for your role in the relationship?
- Do you recognize common patterns in how novice teachers develop?
- How do you accommodate to these patterns in your mentoring approach?
- Are you involved in assessment for the teacher education institute?
- Are you involved in assessment for school tenure?
- Does mentoring have an impact? In what way?
- How have you changed in your mentoring approach?
- What has been most influential in how you mentor novice teachers?

Appendix 2. Attributes of mentee teachers' learning expressed by mentor teachers.

Domain of mentee teacher functioning	Attribute of mentee teacher learning	Content of the attribute
A. Teaching: mentee teacher teaching behaviour		
A.1 Interactions with pupils and classroom management	1a. Selfless	being selfless, considering the needs of others
	1b. Self-centred	being self-centred, preoccupied with oneself, one's own status, needs, feelings.
	2a. Personal	engaging in personal contact with and being close to pupils, having a friendly relationship with pupils and caring for their personal well-being
	2b. Impersonal	remaining distant and impersonal towards pupils, showing little care for pupil's personal well-being, not engaging in personal contact with pupils.
	3a. Pupil influence	providing for pupil autonomy, influence, self-expression, collaboration, interaction.
	3b. Teacher control	being controlling/strict, offering little room for pupil autonomy, influence, self-expression, collaboration, interaction.
	4a. Assertive	having an assertive and authoritative presence in class with few problems in maintaining discipline.
	4b. Unsure	having an unsure, nervous presence in class with regular problems in maintaining discipline.
	5a. Consistent	being clear and consistent towards pupils about expectations, rules and consequences, providing structure.
	5b. Inconsistent	being inconsistent towards pupils about expectations, rules and consequences, being chaotic, unclear, disorganized and not providing structure.

Appendix 2. (continued).

Domain of mentee teacher functioning	Attribute of mentee teacher learning	Content of the attribute
A.2 Knowledge, beliefs and approaches towards learning, instruction and content	6a. Serious	being serious and perfectionist about teaching, setting high standards for oneself.
	6b. Relaxed	being relaxed and playful about teaching, not setting high standards for oneself, being quickly satisfied.
	7a. Flexible	being flexible in executing lesson plans, deviating from lesson plans to adapt lessons to emerging circumstances.
	7b. Inflexible	being inflexible and sticking to the lesson plan regardless of circumstances.
	8a. Knowledgeable	being knowledgeable about content, having a deep/broad understanding/knowledge of content.
	8b. Uneducated	being uneducated, having a superficial/narrow understanding/knowledge of content.
	9a. Excellent teaching/learning	teaching with excellence, achieving deep learning in pupils
	9b. Inferior teaching/learning	providing mediocre/inferior teaching, achieving only superficial learning in pupils.
	10a. Planned teaching	planning for learning outcomes and various teaching strategies to achieve these outcomes.
	10b. Ad hoc teaching	teaching ad hoc without much planning for learning outcomes and appropriate teaching strategies.
	11. Educational values and mission (various)	differences in personal values and beliefs regarding the purpose of teaching, schooling and the role of the teacher.

Appendix 2. (continued).

Domain of mentee teacher functioning	**Attribute of mentee teacher learning**	**Content of the attribute**
B. Learning to teach: mentee teacher learning to teach and development as a teacher.		
B1. Generic attributes of mentee teacher learning to teach	12a. Quick proficiency	quickly being proficient at teaching, already having or quickly developing critical skills/qualities.
	12b. Hard learning	having to work hard to become proficient at teaching and develop critical skills/qualities, having little/few of them to start with.
	13a. Good outcomes	finishing teacher training with good outcomes, well up to standards.
	13b. Poor outcomes	finishing teacher training with poor outcomes, not or barely up to standards.
	14a. Easy to mentor	being easy to mentor, requiring little mentor effort to achieve desired interactions and outcomes.
	14b. Difficult to mentor	being difficult to mentor, requiring much mentor effort to achieve desired interactions and outcomes.

Appendix 2. (continued).

Domain of mentee teacher functioning	**Attribute of mentee teacher learning**	**Content of the attribute**
B2. Mentee teacher professional commitment and identity	15a. Identification	identifying with the tasks, responsibilities and role boundaries of being a teacher, knowing and performing these.
	15b. Non-identification	not identifying with the tasks, responsibilities and role boundaries of being a teacher or having much difficulty doing so, not knowing or not performing these.
	16a. Enterprising	being enterprising, taking initiative, risk, exploring teaching and widening one's experience.
	16b. Passive	being passive, avoiding risk, not exploring teaching, restricting one's experience.
	17a. Staying	staying on as a teacher and pursuing a teaching career.
	17b. Leaving	leaving the profession, not pursuing a teaching career.
	18a. Classroom	focusing on classroom work, not on the wider school organization.
	18b. School	focusing on and pro-actively participating in and being a member of the school organization.

Appendix 2. (continued).

Domain of mentee teacher functioning	Attribute of mentee teacher learning	Content of the attribute
B3. Mentee teacher dealing with emotions in the learning process	19a. Persevering	persevering, maintaining effort to learn and improve despite adversity.
	19b. Giving up	lowering effort, giving up, walking out, and acting helpless.
	20a. Self-confident	being confident, assured and secure about one's own capabilities, having a high expectation of success.
	20b. Doubting	doubting and being unsure, insecure about one's own capabilities, having a low expectation of success.
	21a. Rational	reacting rationally to teaching experiences, focused on the teaching/learning process, not taking experiences very personally.
	21b. Emotional	reacting more emotionally to teaching experiences, focused on feelings about teaching, taking experiences very personally.
B4. Mentee teacher role in guided problem solving	22a. Open	being open/willing to being mentored and to consider feedback and advice.
	22b. Closed	being closed/unwilling to be mentored and to consider feedback and advice.
	23a. Aware/ accepting	being aware of and accepting responsibility for one's influence on pupils and lessons, attributing internally.
	23b. Unaware/ denying	being unaware of and denying responsibility for one's influence on pupils and lessons, attributing externally.
	24a. Trying out	trying out devised solutions and changing one's teaching.
	24b. Not trying	not trying out devised solutions and not realizing changes in teaching.

Appendix 2. (continued).

Domain of mentee teacher functioning	Attribute of mentee teacher learning	Content of the attribute
C. Person: personal attributes of mentee teachers		
	25a. Independent	showing independent thought to find and solve problems in teaching.
	25b. Dependent	depending on the mentor to find and solve problems in teaching.
	26a. Female	being female.
	26b. Male	being male.
	27a. Younger	being younger.
	27b. Older	being older.
	28a. Regular route	following regular teacher training.
	28b. Alternative route	following an alternative route to teacher certification.
	29a. Original	having a unique, remarkable, individual personality.
	29b. Common	having a common, unremarkable personality.
	30a. Agreeable	having a positive, agreeable, sociable disposition.
	30b. Disagreeable	having a negative, disagreeable, unsociable disposition.
	31a. Mature	being mature, having a well-formed sense of self, personal purpose and society, being capable of independent choice in personal life and accepting consequences of personal choices.
	31b. Immature	being immature, having limited knowledge of society, seeking a sense of self and purpose, being incapable of independent choice and/or accepting consequences of choices.

Appendix 2. (continued).

Domain of mentee teacher functioning	Attribute of mentee teacher learning	Content of the attribute
D. Context: the mentoring or school context of mentee teachers		
	32a. Match	a good match between the mentee teacher and the school system, local school or educational culture/profession.
	32b. Mismatch	a mismatch between the mentee teacher and the school system, local school or educational culture/profession.
	33. Mentor (various)	differences in mentor knowledge and experience impacting on the mentoring relationship with the mentee teacher.

Appendix 3. Attributes of mentee teacher learning and indicators of association with mentoring activities.

Attribute of mentee teachers' learning	**1 Range of mentoring activities[1]**	**2 Total associations[2]**	**I Maximum agreement[3]**	**II Proportional agreement[4]**	**III Ratio (1/2)[5]**
A. Teaching					
A1.1a. Selfless	1	1	0	0,00	1,0
A1.1b. Self-centred	7	7	0	0,00	1,0
A1.2a. Personal	7	10	2	0,01	0,7
A1.2b. Impersonal*	16	25	**4**	**0,06**	**0,6**
A1.3a. Pupil influence	2	3	1	0,00	0,7
A1.3b. Teacher control	9	11	2	0,01	0,8
A1.4a. Assertive	8	9	2	0,01	0,9
A1.4b. Unsure*	12	19	**3**	**0,03**	**0,6**
A1.5a. Consistent	1	1	1	0,00	1,0
A1.5b. Inconsistent	1	1	1	0,00	1,0
A2.6a. Serious	9	10	1	0,00	0,9
A2.6b. Relaxed*	9	15	**4**	**0,08**	**0,6**
A2.7a. Flexible	2	2	1	0,00	1,0
A2.7b. Inflexible	2	2	1	0,00	1,0
A2.8a. Knowledgeable	4	4	1	0,00	1,0
A2.8b. Uneducated*	6	10	**3**	**0,04**	**0,6**
A2.9a. Excellent teaching	1	1	1	0,00	1,0
A2.9b. Inferior teaching	2	3	2	**0,03**	0,7
A2.10a. Planned teaching	5	6	2	0,01	0,8
A2.10b. Ad hoc teaching	5	7	2	0,02	0,7
A2.11. Educational values*	5	10	**3**	**0,04**	**0,5**
B. Learning to teach					
B1.12a. Quick proficiency	4	4	1	0,00	1,0
B1.12b. Hard learning	8	9	2	0,01	0,9
B1.13a. Good outcomes	2	2	1	0,00	1,0
B1.13b. Poor outcomes	5	7	2	0,01	0,7
B1.14a. Easy to mentor	1	1	1	0,00	1,0
B1.14b. Difficult to mentor	7	8	2	0,01	0,9
B2.15a. Identification	3	3	1	0,00	1,0
B2.15b. Non-identification	5	7	2	0,02	0,7
B2.16a. Enterprising	2	2	1	0,00	1,0
B2.16b. Passive	10	11	2	0,01	0,9
B2.17a. Staying	1	1	1	0,00	1,0
B2.17b. Leaving	2	2	1	0,00	1,0
B2.18a. Classroom	1	1	1	0,00	1,0
B2.18b. School	1	1	1	0,00	1,0
B3.19a. Persevering	1	1	1	0,00	1,0
B3.19b. Giving up	4	4	1	0,00	1,0
B3.20a. Self-confident*	11	17	2	**0,03**	**0,6**
B3.20b. Doubting*	16	31	**4**	**0,07**	**0,5**
B3.21a. Rational	2	2	1	0,00	1,0
B3.21b. Emotional*	2	4	2	**0,04**	**0,5**
B4.22a. Open	4	4	1	0,00	1,0
B4.22b. Closed*	9	15	**3**	0,02	**0,6**

Appendix 3. (continued).

Attribute of mentee teachers' learning	1 Range of mentoring activities[1]	2 Total associations[2]	I Maximum agreement[3]	II Proportional agreement[4]	III Ratio (1/2)[5]
B4.23a. Aware/accepting	5	5	1	0,00	1,0
B4.23b. Unaware/ denying*	7	11	**3**	**0,03**	**0,6**
B4.24a. Trying out	2	2	1	0,00	1,0
B4.24b. Not trying	6	9	2	0,01	0,7
B4.25a. Independent	4	4	1	0,00	1,0
B4.25b. Dependent	9	12	2	0,01	0,8
C. Person					
C.26a. Female	4	5	2	0,02	0,8
C.26b. Male	3	3	1	0,00	1,0
C.27a. Younger	4	4	1	0,00	1,0
C.27b. Older	7	8	2	0,01	0,9
C.28a. Regular route	1	1	1	0,00	1,0
C.28b. Alternative route	1	1	1	0,00	1,0
C.29a. Original	2	2	1	0,00	1,0
C.29b. Common	0	0	0	n/a	n/a
C.30a. Agreeable	2	2	0	0,00	1,0
C.30b. Disagreeable	6	7	2	0,01	0,9
C.31a. Mature	7	9	**3**	0,02	0,8
C.31b. Immature	7	8	2	0,01	0,9
D. Context					
D.32a. Match	0	0	0	n/a	n/a
D.32b. Mismatch	2	2	1	0,00	1,0
D.33. Mentor (various)	0	0	0	n/a	n/a

Note: * Indicates attributes for which at least two indicators meet criteria for shared attribute-activity associations.

Numbers **in bold** indicate scores on indicators that meet criteria for shared attribute-activity associations.

[1] Range: number of different mentoring activities that mentors expressed in association with the attribute of mentee learning.

[2] Total associations: number of times the attribute of mentee learning was mentioned in association with a mentoring activity.

[3] Indicator I: Agreement at activity level - highest number of mentors that mention the same mentoring activity for the attribute of mentee learning.

[4] Indicator II: Agreement at pattern level - average proportional agreement between mentors across all mentoring activities expressed in association with the attribute of mentee learning.

[5] Indicator III: Discrimination at pattern level - ratio of Range (1) over Total associations (2), calculated as (1) / (2).

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CURRICULUM VITAE

Gisbert van Ginkel was born in Utrecht, the Netherlands on December 7, 1970. He completed his secondary education at the Christelijk Lyceum in Zeist, graduating in 1989. Afterwards he studied Tropical Land Use at Wageningen University. He graduated in 1997 as a Master of Science in Tropical Land Use. His master's thesis was titled 'Getting organized; a comparative study on standards of organizational practice in two villages cooperating with social forestry projects in Senegal'. From 1998 to 2000, Gisbert was employed as a math teacher at Scholengemeeschap de Goudse Waarden in Gouda, and subsequently at Olympus College in Arnhem. In 2000, Gisbert enrolled as a PhD candidate at ICLON, Leiden University Graduate School of Teaching. His research project focused on mentor teachers' practical knowledge of adaptive mentoring. From 2007 to 2009, he combined this with a part-time appointment as an education development assistant at the Instituut voor Leraar en School, Radboud Universiteit Nijmegen and the Expertisegroep Opleiden in the Dieptepilot De Professionele Opleidingsschool, Alliantie VO Nijmegen. Since 2009, Gisbert is employed as a teacher educator at Radboud Teachers Academy, Radboud Universiteit Nijmegen. He works as instituutsopleider for the aspirant Opleidingsschool Noord Limburg and as schoolbegeleider for the project Begeleiding Startende Leraren.

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