Exploring mentors' roles and feedback strategies to analyze the quality of mentoring dialogues[☆]

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HIGHLIGHTS

- Combining mentor roles and feedback strategies reveals patterns within dialogues.
- Mentor teachers often show primarily one mentoring role within a learning dialogue.
- Feedback provided by the mentor is often positive and non-specific.
- Promising mentoring strategies failed to focus on progress/discrepancy feedback.
- Current mentoring practice may improve and thereby teacher training and learning.

ARTICLE INFO

Since the 1980s, there has been a massive increase in the number of beginning teachers (hereafter referred to as teachers) receiving within-school support in the form of mentoring. Mentoring has been shown to have added value for the teaching profession and the adjustment, socialization, and integration of new teachers within schools (Ingersoll & Strong, 2011; Izadinia, 2015). Mentoring helps teachers tackle problems they may encounter during their first year of teaching (Helms-Lorenz, Slof, & Van de Grift, 2013) and helps mitigate the reality shock that teachers may experience once they leave teacher training and enter the real world of teaching (Ghosh, 2012). In addition to the socialization aspect of mentoring, mentoring teachers (hereafter referred to as mentors) are expected to support the learning of the teacher via, for example, observation and feedback on classroom practices (Feiman-Nemser, 2001). Unfortunately, research shows the extent to which mentors challenge teachers for their professional development to be limited (Kessels, 2010).

Classroom observation is considered one of the main resources for mentors to gain insight into the educational practices of teachers (Strong & Baron, 2004; Wang, Odell, & Schwille, 2008). When used as a formative assessment tool, classroom observation can provide opportunities for guidance and constructive conversations between mentor and teacher with clear strengths and weaknesses being pointed out for discussion (Hobson, Ashby, Malderez, & Tomlinson, 2009; Wood & Stanulis, 2009). The combination of classroom observations and conversations in which these observations are discussed contribute to the professional development of teachers (Hobson et al., 2009). Within-school support for teachers has been shown to promote not only professional growth (Danielson, 2002) but also, when combined with classroom observation, to be highly valued by teachers, mentors (Clarke, Triggs, & Nielsen, 2014; Stanulis & Floden, 2009), and researchers (Van de Grift, 2007, 2010).

Following Kearney (2014), we assume that classroom observation can help mentors provide formative feedback and optimally guide the teacher in subsequent conversations. However, a number of problems have been reported to arise in conjunction with the task of the mentor: (1) difficulties taking a more general view as the teaching norm rather than just the mentor's own personal preferences (Clarke et al., 2014), (2) difficulties considering the broad spectrum of possible instructional methods rather than just their own personal practices and those exhibited by the teacher (Hoffman et al., 2015), and (3) difficulties providing productive feedback during mentoring dialogues (Hattie & Timperley, 2007; Kluger & DeNisi, 1996; Shute, 2008; Voerman, Meijer, Korthagen, & Simons, 2012).

Both the content of the feedback (Voerman et al., 2012) and the feedback strategy are crucial for the effectiveness of feedback (Hattie & Timperley, 2007; Kluger & DeNisi, 1996; Shute, 2008). There is not merely one best way to provide feedback, but it is

known that feedback does not elicit the desired outcome when concerned with the person as opposed to the task (Voerman et al., 2012). Feedback on behavior is most effective when it is connected to previous behavior or desired behavior opposed to feedback that has no focus on progress (Hattie & Timperley, 2007). Also, feedback is most effective when presented in manageable chunks for the receiver to process (Shute, 2008). In contrast, research shows mentoring dialogues to address situations that occurred during an observation mostly in general terms and mostly without reference to concrete behavior or clearly articulated goals (Geldens, Popeijus, Peters, & Bergen, 2005). In the majority of cases, mentors tend to determine the topic of the dialogue, talk most frequently, and use a directive mentoring style (Hennissen, Crasborn, Brouwer, Korthagen, & Bergen, 2008).

In light of the above, we explored the characteristics of the dialogues between a number of mentors and teachers when discussing the results of a structured lesson observation for mentoring roles and effective feedback. Since the role adopted by the mentor, the type of feedback provided, and the feedback strategy all shape the mentoring dialogue and thereby the teacher's learning, it seems promising to combine frameworks for mentoring behavior on the one hand and effective feedback on the other to study the quality of mentor dialogues. This article expands the knowledge base by providing examples of feedback that mentors can provide that help novices develop as reflective practitioners.

1. Theoretical framework

1.1. Induction at the start of the teaching career

During the first years of their career, teachers face challenges such as high workload and lack of supporting relationships (Helms-Lorenz & Maulana, 2015). If these challenges are not dealt with, they can lead to burnout and eventually to teacher attrition (Den Brok, Wubbels, & Van Tartwijk, 2017). Also, the beginning of their career is critical for teachers' professional development (Maskit, 2011). Induction programs offer a way to minimalize the challenges and to increase beginning teachers' professional learning (Helms-Lorenz & Maulana, 2015; Kessels, 2010). An important part of most induction programs is providing teachers with coaching and support from an experienced teacher in the same school who functions as a mentor (Helms-Lorenz, Van de Grift, & Maulana, 2016; Kessels, 2010).

1.2. Lesson observations by mentors

One of the most valued aspects of the work undertaken by mentors in schools is lesson observation with subsequent analysis (Hobson et al., 2009). Classroom observation can help mentors provide formative feedback and optimally guide the teacher in the following conversation (Kearney, 2014). However, there are some pitfalls regarding lesson observation by mentors. For example, mentors can refer to their own personal norm rather than a more evidence-based perspective on effective teaching (Clarke et al., 2014). Also, mentors can project their personal preferences onto the educational practices of the teacher rather than considering the broad spectrum of teaching methods when observing the teacher (Hoffman et al., 2015). By giving an overview of teacher behavior related to desired student outcomes (such as achievement), an observation instrument could potentially help mentors avoid these common pitfalls.

Based on an extensive review of studies of mentoring dialogues with prospective teachers, Hennissen et al. (2008) proposed a model that covers mentors' supervisory behavior in conversations with beginning teachers: MEntor Roles In Dialogues (MERID) model. The model describes the behavior of the mentor in terms of how much of the content of the conversation is determined by the mentor and how directive he or she is. A mentor that introduces more topics in the dialogue than the teacher does, reflects a more proactive mentoring role. Mentoring activities such as providing advice or feedback reflect a more directive mentoring role while activities such as summarizing or asking questions reflect a less directive mentoring role. When looking at directive mentoring activities, especially feedback is crucial for learning (Hattie & Timperley, 2007). The learning potential of feedback varies depending on specificity, positive or negative message, the content, and the strategy by which it is sent to the feedback receiver (Voerman et al., 2012).

1.3. The present study

In this study we used the MERID model to map mentors' supervisory behavior in dialogues in combination with a more fine-grained look at the feedback activities of mentors. Following Hennissen et al. (2008, p. 171), the term dialogue is used to refer to a formal conversation between two people, in this case the mentor and the beginning teacher. The ratio of topics introduced by the mentor relative to the teacher and the types of activities undertaken by the mentor are represented by two dimensions. As can be seen from Fig. 1, two dimensions of mentor behavior are identified for dialogues: topic *input* provided by the mentor and *directiveness* of the mentor (Hennissen et al., 2008). Using these two behavioral continua, four mentor roles can be distinguished for the mentoring dialogue: initiator, imperator, advisor, and encourager (Hennissen et al., 2008). These four roles are strongly related to the duration of speaking time of the mentor: the roles of initiator and encourager are related to a shorter duration of speaking time, the roles of imperator and advisor are related to a longer duration of speaking time (Hennissen et al., 2008).

As Crasborn, Hennissen, Brouwer, Korthagen, and Bergen (2011) have argued, there is not one mentoring role that is most effective. Being able to adapt one's mentoring to the specific needs of the teacher is, in fact, widely seen as most effective (Van Ginkel, Oolbekkink, Meijer, & Verloop, 2016). That is, effective mentors have been observed to shift between alternative roles depending on the particular needs of the mentee (Crasborn et al., 2011).

1.4. Types of feedback

Reviews have shown feedback to be crucial for learning (Hattie & Timperley, 2007; Kluger & DeNisi, 1996; Shute, 2008). And, as already stated, research has shown that mentoring dialogues can enhance the professional growth of teachers via the provision of formative feedback (Strong & Baron, 2004). Feedback however, does not automatically lead to learning. Based on the information provided in the reviews on the roles of feedback in learning, Voerman et al. (2012) developed an overview of effective teacher-student feedback (i.e., feedback that enhances learning). They defined feedback as information provided by the teacher concerning the performance or understanding of the student, referring to a goal, and aimed at improving learning (Voerman et al., 2012, p. 2). They further stated that positive and negative feedback (i.e., *feedback load*) can be distinguished as both influence learning in different ways. Positive feedback must outweigh negative feedback to enhance learning (Voerman et al., 2012, p. 4). Specific and non-specific feedback (i.e., *feedback specificity*) were distinguished as they also influence learning in different ways. Feedback can be construed as specific when the learner is able to connect it to exactly what has been done right or wrong. Feedback can be construed as non-specific when the learner is not able to connect it to something exact (e.g., the learner simply hears or reads "Great!" or "Not quite!"). In general, only specific feedback enhances learning and non-specific or
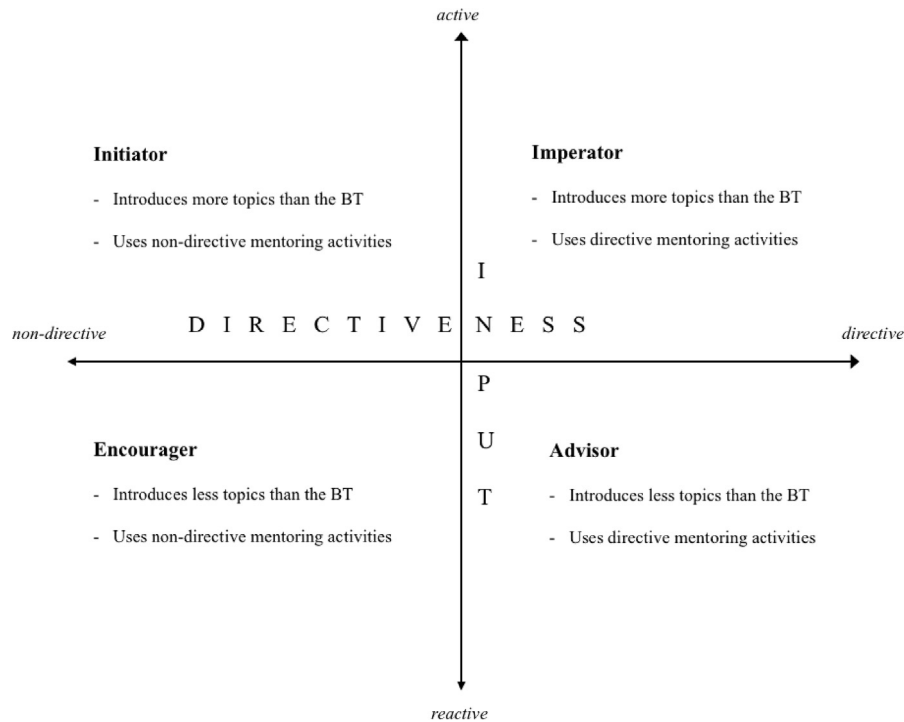
Fig. 1. The MEntoring Roles In Dialogues model (Hennissen et al., 2008).

unclear feedback simply frustrates learners (Shute, 2008).

Specific feedback can be subcategorized with respect to its focus. When specific feedback is provided with respect to the initial and current levels of performance, this is considered *progress feedback*. When specific feedback is provided on the current and desired levels of performance, this is considered *discrepancy feedback* (see Fig. 2). In short, progress feedback emphasizes what already has been achieved where discrepancy feedback emphasizes what is yet to be achieved (Voerman et al., 2012). Voerman et al. (2012) view progress and discrepancy feedback as feedback that is most effective for enhancing learning.

While the focus of the work of Voerman et al. (2012) is on teacher-student feedback, we believe that their observations hold for mentor-teacher feedback as well. The distinction between progress feedback and discrepancy feedback is in line with what has been found in observations of mentoring dialogues with teachers and types of dialogues that thus look back on what has happened in the lesson versus those that look forward to how to change to achieve the target level of performance or goal (Hennissen et al., 2008).

1.5. Feedback strategy

In addition to the different types of feedback provided and their differential contributions to learning, reviews of studies on feedback and learning also stress the impact of the *feedback strategy*.

According to Hattie and Timperley (2007), the appropriate level of feedback must be given for optimal learning to occur. When the level of feedback addresses competencies that are clearly above the learner's current level, the effectiveness of the feedback is diminished. Moreover, according to Shute (2008), feedback is most effective when it is presented in manageable units and the learner is thus not overwhelmed by the amount of information. Finally, and in addition to the above characteristics, Kluger and DeNisi (1996) found feedback to be most effective when provided continuously in a comprehensive form. Thus, mentors should not only mention the feedback but also elaborately discuss the feedback with the beginning teacher.

1.6. Purpose of the present study

The alternative roles for mentors along with what we know about effective feedback show the mentoring dialogue to be a complex enterprise. The mentoring dialogue is not just a conversation between mentor and teacher; the role adopted by the mentor, the type of feedback provided, and the feedback strategy all shape the mentoring dialogue and thereby the teacher's learning. Within the context of a teacher induction program, it can be assumed that both mentors and teachers can benefit from the use of a systematic lesson observation instrument for the provision of carefully considered feedback. In the present study, we undertook a qualitative analysis of eight mentoring dialogues involving the
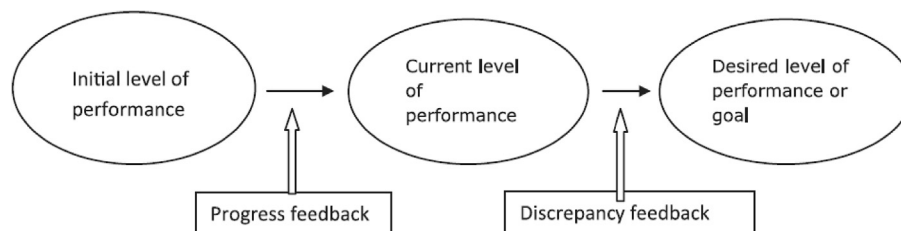

Fig. 2. Progress and discrepancy feedback (Voerman et al., 2012).

systematic lesson observation of eight teachers by their mentors. In the analyses, we focused on the role of the mentor, the types of feedback given, and the feedback strategies. By doing this, we hoped to gain greater insight into both macro (roles adapted by the mentor) and micro processes (feedback types and strategies) and thereby add to the knowledge base on the learning potential of mentoring behavior and mentoring feedback.

2. Method

2.1. Study context and observation instrument

The participants in the present study were involved in a nationwide teacher induction program in the Netherlands aimed at professionalisation and socialization of beginning teachers. The induction program aims at work load reduction, socialization, and professional development. During the program, teachers get in-service support throughout the first 3 years of their career. Each teacher is supported by an experienced colleague working in the same school, functioning as a mentor. Among other tasks, mentors conduct lesson observations and conduct subsequent feedback conversations with the beginning teacher in order to support his or her professional learning. These observations take place two times a year for three years, conversations last between 20 and 30 minutes. The observations were structured using the International Comparative Analysis of Learning and Teaching (ICALT) observational instrument (Van de Grift, 2007). The ICALT was designed on the basis of literature on teacher effectiveness (Van de Grift, 2007) and theories on teacher concerns (Fuller, 1969). The instrument focuses on teacher behavior related to academic achievement of students (Van de Grift, 2007, 2010).

2.2. Participants and procedure

Seven mentors working at six different secondary schools located in the same school district in central Netherlands were involved in the present study. The mentors were invited to participate with at least one teacher whom they mentored. When both the mentor and the teacher gave consent to participate, the mentors audiotaped a mentoring dialogue with the teacher. The dialogues were always based upon observation of a lesson using the ICALT instrument. After the dialogue, both the mentor and the teacher completed a short online survey about their experiences with the use of the observational instrument (ICALT). A total of nine mentors submitted recordings, but two of these recordings were unusable due to technical problems. One of the seven mentors recoded two dialogues with two different teachers. This meant that a total of eight mentoring dialogues was used for analysis.

Four of the seven mentors were female and three were male. The mean age of the mentors was 52.0 years ($SD = 12.7$) with a maximum of 61 and a minimum of 30. The mentors' teaching experience ranged between 6 and 35 years with a mean of 25 ($SD = 12.8$). Their mentoring experience ranged from 4 to 15 years with a mean of 8.1 ($SD = 3.7$). One mentor conducted both dialogues 2 and 3. For dialogue 7, the follow-up questionnaire was not completed which meant that information on the characteristics of the mentor is missing.

2.3. Data analysis

Data preparation. All of the audio recordings were transcribed verbatim. Given the focus of the present study on mentoring activity, only the utterances of the mentor were subsequently coded. Teacher responses to mentor utterances were read in order to increase our understanding of the mentor utterances. The mentor

utterances were first segmented into meaningful units. This meant that some mentor utterances had to be divided into multiple units, namely when a mentor conducted multiple activities within a single speaking turn. A speaking turn was simply defined as a mentor utterance bounded by teacher utterances. The time from the start to the end of each speaking turn was noted in seconds (column 1, Table 1). When a speaking turn contained only one mentoring activity, the whole speaking turn automatically became a single unit. An example of a speaking turn encompassing three mentoring activities and thus three meaningful units is as follows:

> Correct but in more detail I noticed that you took the time to check if all students were prepared at the beginning of the lesson and had brought the materials needed for your subject. This was something I appreciated. (feedback, unit 1) In addition, you walked through the classroom and paid attention to each student. Afterwards, if I remember correctly, you checked that they had finished their homework. (feedback, unit 2) You show there … Something I was wondering about, just for my curiosity, what are the consequences when students do not have their books with them? (question, unit 3) (dialogue 5)[2].

Topic and topic introduction. First, the topic of discussion for each meaningful unit was coded (column 4, Table 1). Then it was determined if the topic originated from the ICALT instrument or not (column 5, Table 1). Only when a teacher or mentor literally mentioned an item from the ICALT instrument was the topic coded as originating from the ICALT. Topics were defined specifically, meaning that every time a new element from the observation or from the teacher's teaching practice entered the conversation, this was coded as a new topic.

Drawing upon the dimensions of the MERID model (Hennissen et al., 2008), we next determined the degree of input for the mentor. For each topic present in the dialogue, it was coded whether the topic was initiated by the mentor or the teacher. If the topic was initiated by the mentor, it was coded as *active* for the mentor; if the topic was initiated by the teacher, it was coded as *reactive* for the mentor (column 6, Table 1).

Mentoring activities. Each meaningful unit for each mentor was assigned a code to describe the *type* of mentoring activity (column 7, Table 1). Based on Hennissen et al. (2008) and Voerman et al. (2012), seven types of mentoring activities were coded (i.e., summary, feedback, question, advice, active listening, sharing, and emotional support). *Active listening* was coded when the mentor responded with words of encouragement while the teacher was talking. *Sharing* was coded when the mentor shared a personal experience. *Emotional support* was coded when the mentor provided interpersonal support such as reassurance or small talk during the dialogue. *Summary* was coded when the mentor summarized what was being discussed or the topic brought up by the teacher. *Advice* was coded when the mentor gave the teacher suggestions or tips such as: "Well, in that case you could consider the didactic side … and yeah, by doing so you ensure variety …" (dialogue 4). *Question* was coded when the mentor asked the teacher a question. *Feedback* was coded when the mentor provided information on the performance or understanding of the teacher. In addition, it was assumed that all comments concerning the performance or understanding of the teacher were aimed at improving learning. Examples of feedback units are: "Well that's great, of course. That is a technique all students can use … the one of the Aboriginals from that point of view, this was quite a nice exercise. Nice performance". (dialogue 1) When a mentoring activity

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[2] All examples coming from the mentoring dialogues have been translated from Dutch.

Table 1
Example of coding scheme for dialogue 3.

Time (sec)	Turn	Segment	Topic		Activity		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Topic	ICALT	Input	Activity	Directive
12	mentor	The groups aren't divided in competence levels, isn't it? Or divided among some other characteristic? It's just at random	Differentiate	No	Active	Other	
2	teacher	No, this group already switched					
24	mentor	Would you rather choose to combine students based on their competence? Or based on the idea that they are more alike based on	Differentiate	No	Active	Question	Non-directive
20	teacher	Well, it's now focused on concentration and if the students wanted to be part of a particular group					
15	mentor	Okay, however it's not linked to the problem you experienced that you have to repeat yourself over and over because some group members aren't listening	Grouping strategy	No	Active	Feedback	Directive
13	mentor	Have you ever considered to divided them into smaller groups so you can give them private attention, let's say in the hallway	Differentiate	No	Active	Advice	Directive

met none of the criteria for the specific activities, it was assigned the code *other*.

In addition, we coded the *directiveness* of each mentoring activity. The basis for coding of directiveness depended on which of the seven types of mentoring activities was undertaken by the mentor (Hennissen et al., 2008). Giving advice, feedback, instructions, or a suggestion was coded as *directive*; asking a question, active listening, or summarizing was coded as *non-directive* (column 8, Table 1).

Feedback. When a meaningful unit was assigned the code *feedback* from the mentor, the load of the feedback (positive or negative), the specificity of the feedback (specific or non-specific), and the focus of the feedback (progress or discrepancy) were determined on the basis of the coding scheme put forth by Voerman et al. (2012). The load of the feedback was coded as positive when the mentor agreed with, expressed appreciation, encouraged, or complimented the teacher with regard to the topic of the dialogue: "You started the lessen with a nice assignment." (dialogue 2) The load of the feedback was coded as negative when the opposite occurred: "At that moment, you were talking in a tempo which they couldn't follow." (dialogue 1) To determine the specificity of the feedback given by the mentor, the coders asked themselves the following question: Does the teacher know exactly what he or she has done right or wrong? If the question could be answered positively, the feedback given by the mentor was coded as *specific*; when the question could be answered negatively, the feedback was coded as *non-specific*. When the coders could answer the question partly, feedback could be coded as *more non-specific than specific* or *more specific than non-specific* depending on the completeness of the feedback. For all of the mentor feedback coded as specific, it was next determined if the focus of the feedback was on *progress* or *discrepancy*. *Progress* feedback was coded when initial and current levels of performance were linked by the mentor and *discrepancy* feedback was coded when current and desired levels of performance were linked by the mentor. When the focus of the feedback appeared to be neither progress nor discrepancy, the mentoring activity received no code for focus.

Mentoring roles. For each of the mentoring dialogues, a profile was put together drawing upon the two dimensions of the MERID model. Each combination of input (predominantly active or reactive) and directiveness (predominantly directive or non-directive) translates into one of four mentoring roles, as depicted in Fig. 3. For example, the upper half of the vertical axis (input) represents the percentage of topics introduced by the mentor out of the total number of topics discussed (i.e., coded topics); the mentor thus initiated 31% of the topics of discussion in the dialogue in Fig. 3. The bottom half of the vertical axis (input) conversely shows 69% of the topics to have been introduced by the teacher, which makes the mentor predominantly reactive in this example. The right of the horizontal axis (directiveness) displays the percentage of mentor activities coded as directive; 78% in the example in Fig. 3. The left of the horizontal axis (directiveness) shows the mentor to be non-directive in 22% of the activities.

When the four coordinates in the model are connected, the profile for the specific mentoring dialogue can be visualized (see Fig. 3). In this example, the advisor role can be seen to be the dominant mentoring role. That is, this mentor mostly reacted to topics that were initiated by the teacher in the mentoring dialogue and was then predominantly directive in mentoring activities. The initiator role is characterized by more topic initiations (i.e., input) from the mentor combined with mostly non-directive mentoring activity. The imperator role translates as more topic initiatives (i.e., input) on the part of the mentor combined with mostly directive mentoring activities. The encourager role reflects less topic initiations (i.e., input) on the part of the mentor combined with mostly non-directive mentoring activities. The eight mentoring dialogues we clustered into patterns that appear to characterize the
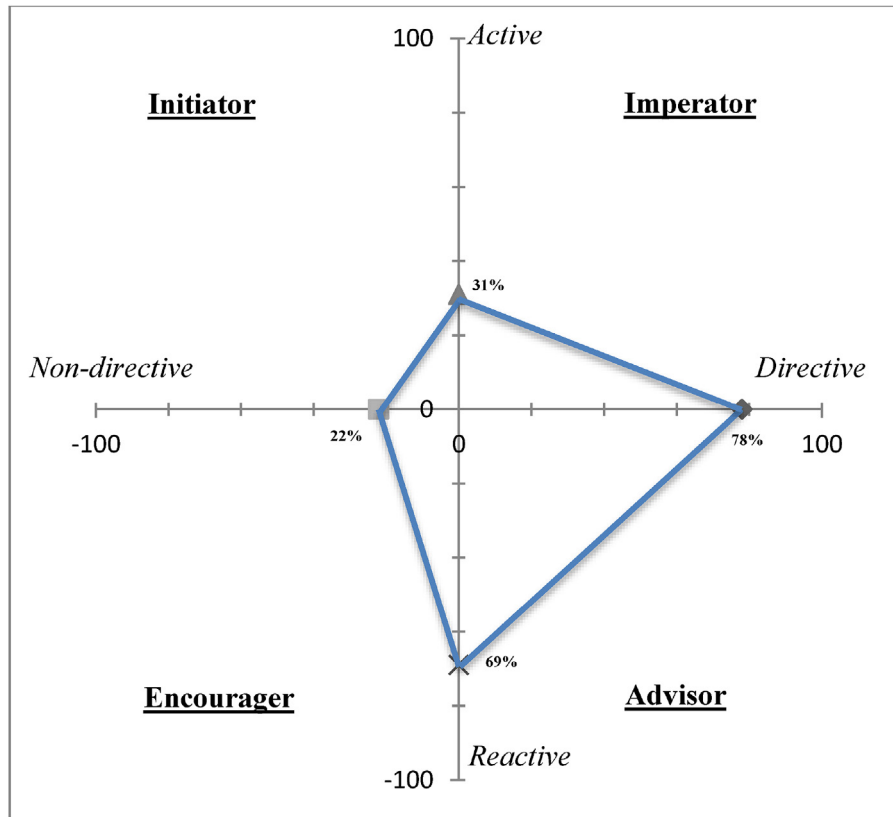
Fig. 3. Fictive example of dialogue visualization coded using the MERID model.

mentoring roles adopted by the mentors and the feedback provided by mentors during a mentoring dialogue based upon systematic observation of the teacher.

Characteristics of mentoring dialogue. To gain better insight into the characteristic of the mentoring dialogues conducted, we combined the coding for the mentoring roles with the load, specificity, and focus of the feedback provided by the mentor during the mentoring dialogues. Together the information on mentoring roles and feedback (i.e., load, specificity, and focus) provides insight into the macro processes and the micro processes within the dialogues.

Reliability. To determine the reliability of the coding procedure, we followed the unitization procedure of Campbell, Quincy, Osserman, and Pedersen (2013). First, the authors discussed the segmentation of the transcripts into meaningfull units until agreement could be reached. Next, the first author coded these for all of the transcripts. A research assistant then coded the same units for comparison purposes. The coded transcripts were compared and discrepancies in the codes were discussed until agreement was reached. Via an iterative process of unitizing, coding, discussion of coding, and refining of codes or code definitions, sufficient interrater reliability was gradually achieved. The Cronbach's alpha for activity type was 0.78, for feedback specificity Weighted Kappa was 0.47. For the coding of introduction of a topic, the Cronbach's alpha was 0.69. For the coding of ICALT-related topic or not, the Cronbach's alpha was 0.83. Due to low numbers of scores within specific coding categories for the positive/negative load of the feedback and the focus of specific feedback, the interrater reliabilities for these aspects of the mentoring dialogues could not be calculated ($n = 3$ for negative feedback and $n = 1$ for specific discrepancy-oriented feedback).

3. Results

In the following, we first describe the mentoring activities observed during the dialogues. We then discuss the mentor roles and feedback provided by the mentors. Thereafter, we combine these findings to identify recurring combinations of mentoring role and feedback type. This is done for each of the mentoring dialogues separately as mentors can behave differently in different mentoring dialogues.

3.1. Mentoring activities

To give an impression of the mentoring activities undertaken by the mentors during the mentoring dialogues, an overview of all mentoring activities is presented in Table 2. This is accompanied by the total number of dialogue turns taken by the mentor, which shows the number of mentoring activities to exceed the number of dialogue turns taken by the mentor. This finding will be considered further below in our discussion of the types of feedback provided.

Table 2
Number of topics discussed in dialogue, number of turns taken my mentor, and number of mentoring activities per mentoring dialogue.

Dialogue	1	2	3	4	5	6	7	8	Total
Topics	114	76	72	123	63	78	88	59	673
Turns	56	42	27	43	33	74	83	46	402
Feedback	53	11	22	33	20	14	5	21	179
Advice	9	2	9	23	4	6	6	11	70
Question	12	32	24	29	21	14	35	9	176
Summary	7	10	6	14	2	7	4	0	50
Listen	0	3	0	2	1	17	21	6	50
Share	5	0	0	1	0	2	0	1	9
Support	0	7	1	2	5	4	1	3	23
Other	28	11	8	3	10	14	3	8	85
Total	114	76	70	107	63	78	75	59	642

3.2. Mentoring roles

In six of the eight mentoring dialogues, the mentors predominated with respect to the introduction of dialogues topics. This positioned the majority of the mentors in the upper half of the MERID model, indicating more input from the mentor than from the teacher (dialogues 6 and 7 were exceptions). None of the mentors indicated any preparation when starting the dialogues in terms of a learning goal or specific observation goal besides the ICALT form. All mentors start the dialogue asking the teacher about their experience of the observed lesson and refer to the ICALT observation.

More variation was shown in the degree of directive mentoring activities, such as the provision of feedback and advice. In dialogues 1 and 8, for example, the mentors were predominantly directive and thus provided a relatively large amount of feedback, advice, and personal experiences. In four of the mentoring dialogues, equal amounts of directive and non-directive mentoring activities occurred. In dialogues 2 and 7, we observed more non-directive mentoring activities than directive mentoring activities. These

findings show one or two mentoring roles to predominate in the recorded mentoring dialogues.

When combining the information from the axes of the MERID model, the mentors in dialogues 1 and 8 can be seen to take the role of imperator; the mentors in dialogues 3, 4, and 5 switched back and forth between the roles of imperator and initiator; the mentor in dialogue 2 took the role of initiator; and the mentor in dialogue 7 switched back and forth between the roles of initiator and encourager. Only the mentor in dialogue 6 displayed all four roles during the dialogue (see Fig. 4 for a graphical representation of all eight dialogues).

3.3. Types of feedback

Table 3 provides an overview of both the load and specificity of the feedback provided. In five of the eight dialogues, the load of the feedback was both positive and negative. Overall, the ratio of positive to negative feedback was 6:1. The mentors did provide negative feedback. However, the ratio shows that the majority of
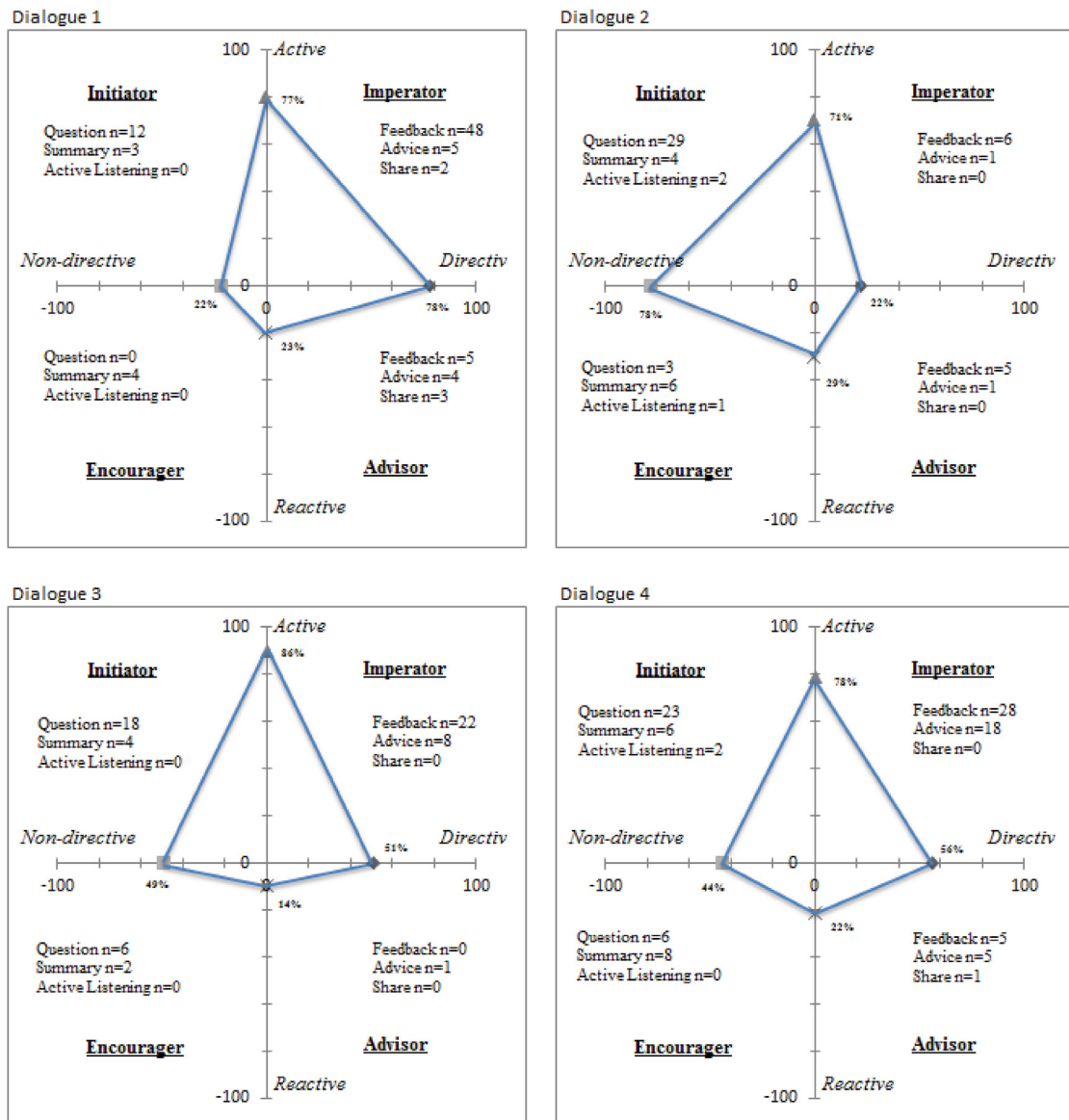

Fig. 4. Mentoring roles observed in eight mentoring dialogues.

provided feedback was loaded positive. The specificity of the feedback provided during the mentoring dialogues varied greatly. Some of the feedback was highly specific, involving extended detail. The majority of the feedback was either mostly non-specific, involving little or no detail, or much more non-specific than specific (see Table 3). With regard to the focus of the feedback, neither progress nor discrepancy feedback was observed in the eight dialogues. Only one question was raised with regard to a discrepancy between the teacher's current practice and the ideal future practice. In dialogue 2, the teacher gives an elaborate answer to this discrepancy question. The mentor then responds with two more questions, advice, a summary, another question, non-specific feedback on a different topic, another question, and then a statement about general teaching practice — all in a single dialogue turn. This example is illustrative of a more frequent though unproductive pattern encountered in the mentoring dialogues we recorded. The mentor poses a strategic question (e.g., a question highlighting a discrepancy between current and desired practice on the part of the teacher) but follows this up with additional questions, non-specific feedback, and a change of topic, indicating an information overload. A promising mentoring strategy has failed

Table 3
Feedback load and specificity.

Dialogue	1	2	3	4	5	6	7	8	Total
Load									
Positive	47	11	12	20	17	14	5	18	144
Negative	6	0	10	13	3	0	0	3	35
Specificity									
Non-specific	23	3	4	11	9	7	1	2	60
More non-specific than specific	13	4	6	8	1	3	4	5	44
More specific than non-specific	12	3	7	9	3	3	0	6	43
Specific	5	1	5	5	7	1	0	8	32
Total	53	11	22	33	20	14	5	21	179

despite the best of intentions.

3.4. Characteristic patterns of mentoring dialogue

By combining information on the mentoring roles played by the mentors within the mentoring dialogues and the nature of the feedback provided by the mentors, we were able to identify four characteristic patterns of dialogues. Appendix A shows an example
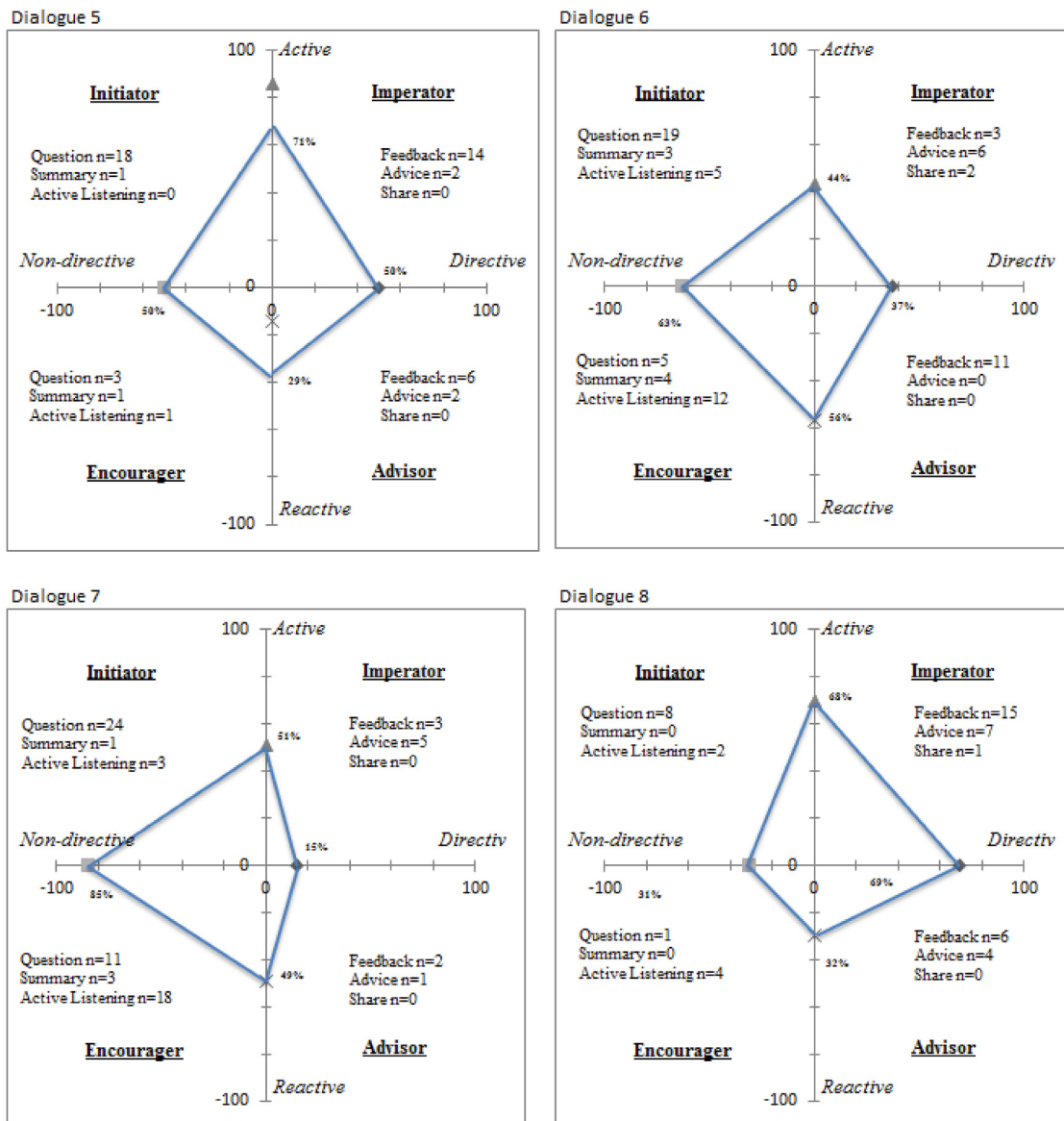

Fig. 4. (*continued*).

of each pattern.

Pattern A; directive role, non-specific and briefly discussed feedback. In this pattern of dialogue, the mentor provides lots of input, which is combined with directive activities. The amount of mentoring activities is high compared to that for the other patterns of dialogue; many topics are addressed, and the feedback provided by the mentor is mostly non-specific. The mentor mentions his or her feedback only briefly and does not respond to input from the teacher. Dialogue 1 is the only example that shows this pattern in our sample.

Pattern B; predominantly asking and active listening, positive and non-specific feedback. In this pattern of dialogue (dialogues 2, 6, and 7), the mentor exclusively provides positive feedback and mostly non-directive mentor behavior occurs. Most of the feedback provided by the mentor is non-specific. Although the amount of topic initiation varied widely in the three dialogues that reflecting pattern 2 (i.e., the activity-reactivity ratios), reactivity occurred least. Mentor activities characterized as active listening occurred frequently in dialogues 6 and 7 but rarely in dialogue 2. Our general impression of these types of dialogues is that the mentors show a large amount of empathy and strive to give the teacher control over the interaction by posing numerous questions. As already mentioned, all of the feedback was coded positive. It was also largely non-specific. This combination indicates the mentor to adopt a nurturing role and spend little or no time to learning objectives.

Pattern C; mentor initiates topics, alternates between positive and negative and between non-specific and specific feedback. In this pattern (dialogues 3, 4, and 5), the mentor frequently initiates the topic but their activities show varying degrees of directiveness. Both positive and negative feedback is provided, and feedback is equally divided across specific and non-specific, moreover. Given the frequent input and variation in type of feedback provided by the mentor in this pattern of dialogue, it appears that the mentor may often have a personal agenda when it comes to what is problematic and what the teacher needs to work on, which leaves little room for input from the teacher. Within these dialogues, the earlier described promising mentoring strategy occurred in which the mentor starts with a strategic question followed by ineffective feedback response. Often the ineffective response ignores the answer of the teacher to the question of the mentor. After ignoring the teacher's answer, the mentor provides feedback that focuses on a not earlier mentioned topic. This pattern gives the impression that the question was asked for a reason other than the teacher's answer.

Pattern D; few topics, positive and negative feedback are both specific. In this pattern (dialogue 8), fewer mentoring activities occur compared to the patterns 1 to 3, but when they do occur, the mentor plays an active and directive role. Advice is frequently given. The mentor provides both positive and negative feedback, and this feedback is often specific. The mentor in this pattern of dialogue appears to have specific points to be addressed and provides clear advice in addition to feedback with regard to these points. The specific feedback fits this pattern well especially in combination with the relative high amount of observed advice activities.

4. Discussion

Our goal was to explore mentoring dialogues in which a mentor and teacher discuss a structured classroom observation, focusing our analysis on mentoring roles and feedback. Based on the findings described above, we were able to distinguish four patterns of mentoring dialogues: (A) directive role, non-specific and briefly discussed feedback, (B) predominantly asking and active listening, positive and non-specific feedback, (C) mentor initiates topics, alternates between positive and negative and between non-specific and specific feedback, and (D) few topics, positive and negative

feedback are both specific. In the following, we compare these patterns with the literature on effective mentoring and feedback in order to better understand the learning potential of these four different patterns of dialogue.

4.1. Combination of mentors' roles and feedback

In this study, we explore the combination of a macro (mentor roles) and a micro (feedback) processes in mentoring dialogues with beginning teachers. We show that mentors with similar roles according to the MERID model can vary on the feedback they provide. Since feedback can be either more effective or more ineffective, the learning potential of directive mentoring activities can be quite different. By exploring patterns of mentoring behavior in dialogues, this study gives a more nuanced image of feedback and mentor roles in conversations with beginning teachers.

4.2. Mentoring roles

The finding that a frequently observed mentoring role was the role of imperator (see dialogues 1, 3, and 4) is in line with the findings of previous research (Hennissen et al., 2008). Dialogues 2, 3, and 6 showed the mentors to adopt more than one role during the mentoring dialogue. The mentor in dialogue 6 was the only mentor in our study to adopt all four roles during the mentoring dialogue. Researchers have argued that a mentor's ability to put several roles into practice is most effective but often requires training (Geldens, 2007; Giebelhaus & Bowman, 2002). The observed lack of mentors playing multiple roles within the mentoring dialogues is in contrast with previous studies, which emphasized the different orientations towards learning of prospective teachers (Oosterheert & Vermunt, 2001). The finding that the imperator was the most frequently observed mentoring role together with the limited flexibility observed in the roles played by the mentors during the mentoring dialogues may be the result of insufficient training since lack of flexibility could be the result of mentor viewing their own practice as desired practice (Clarke et al., 2014; Hoffman et al., 2015).

4.3. Specificity of feedback

In observing the types of feedback provided by the mentor during the mentoring dialogues, particular attention was paid to the specificity of the feedback provided. The low level of specific feedback and absence of negative feedback characterizing pattern B are in contrast with what the literature shows to be important for effective feedback (Hattie & Timperley, 2007; Kluger & DeNisi, 1996; Shute, 2008; Voerman et al., 2012). Feedback needs to be both negative and positive, with the frequency of positive feedback being higher than the frequency of negative feedback (Kluger & DeNisi, 1996). Ever more important, the feedback needs to be specific (Voerman et al., 2012). In patterns A and pattern B, comparably low levels of specific feedback were observed together with numerous feedback activities which can be defined as ineffective according to the research literature: (1) feedback was not presented in manageable units (Shute, 2008), (2) the feedback was not discussed in depth (Hattie & Timperley, 2007), and (3) numerous points were raised in the feedback as opposed to a few, carefully articulated points (Kluger & DeNisi, 1996).

In all of the mentoring dialogues, we observed multiple mentoring activities frequently involving the raising of multiple topics by the mentor within a single dialogue turn (violation of point 1 and 2). Within the dialogues, with the exception of dialogue 8. A broad range of topics was discussed and frequently feedback activities were combined with other activities (e.g., advice or questions) (violation of point 3).

The feedback provided in dialogue 8, representing pattern D of mentoring dialogue, most closely reflects the critical elements of effective feedback. Feedback activities were often followed by a comprehensive discussion between the teacher and mentor (in line with point 1 and 2) and feedback was focused on specific elements of the teachers' practice (in line with point 3). Neither progress nor discrepancy feedback were observed in this or any of the other patterns of mentoring dialogue, however, suggesting that there is still room for improvement to make for more effective feedback (Voerman et al., 2012).

Combining the mentoring roles and the feedback strategy and content provides detailed information on how the mentor acts during the interaction. For instance; in both patterns A and C, the mentor takes an active role. However, the difference in specificity of the feedback gives the impression that the mentors of the dialogues in pattern C put greater effort in presenting their feedback. Resulting in more elaborate directive activities provided by the mentor within pattern C compared to directive activities provided by mentor within pattern A. These insights show that dialogues may seem similar when looking at mentoring roles but in fact are different when also looking at feedback. This also counts for the other way around.

4.4. Study strengths and limitations

To our knowledge, our study is the first that combines the macro (mentoring roles) and micro (feedback) processes of these dialogues and combined these observations into patterns. Also, it describes the interaction between mentors and teachers within the context of an educational induction program. The patterns show that when similarities on one level are observed (e.g., mentor role), differences on another level may occur (e.g., in provided feedback) which results in unique dialogues. There are some limitations to this exploratory study of the dialogue practices of mentors. First, the recorded number of mentoring dialogues was low. We nevertheless judged the dialogues to contain a sufficient number and variety of mentoring activities for the goal of this study. Our goal was to explore the macro (roles) and micro (feedback) aspects of mentoring dialogues and to combine this information for a first step towards the establishment of a typology of mentoring dialogues.

Second, the present findings represent a broad spectrum of dialogue between a mentor and a teacher but may not be fully representative of actual practice. The mentors submitting the recordings did so voluntarily. In addition, several mentors told us that they did not send their first recording because of insecurity with regard to the quality. Mentoring dialogues reflecting a relatively high level of reactive mentoring activity were absent from our sample. It is thus plausible that some typical patterns of dialogue were not observed due to the small sample size in our study. Furthermore, it may be expected that the focus of mentoring will change during one school year. Therefore, we would like to emphasize that the recordings we studied contain variations in which mentors and teachers discuss classroom observations. However, this does not reduce the importance of our findings, which show common patterns of dialogue with nevertheless room for improvement.

5. Conclusion

We were curious if the use of the ICALT report (i.e., the outcome of a structured observation) for the conduct of a mentoring dialogue would effectively support the mentor by eliciting more specific feedback than is typically reported for such interactions but also if it would elicit more progress and discrepancy feedback (i.e., feedback comparing previous and current practice or current and target practice). Since none of the mentors nor teachers stated otherwise during the dialogues, we conclude no other format than the ICALT was used. The report was rarely used. The mentor in dialogue 1, for example, communicated the ICALT scores to the teacher but did not discuss these further with the teacher nor attempted to explain the scores together to the teacher. In the other dialogues, the mentors only mentioned the use of the ICALT during the lesson observation but not the scores. Nevertheless, we are convinced that the use of an instrument for systematic lesson observation has potential for the guidance of mentoring practice, particularly since our exploration confirms the idea that mentoring is a complex task. In addition to the socialization aspect of mentoring, mentors are expected to challenge beginning teachers and to stimulate their professional growth. Therefore, support and training for mentors is a promising way to enhance mentors' skills.

Most of the mentoring dialogues contained the necessary amount of negative feedback (with dialogues 2, 6, and 7 constituting exceptions). Teachers may have different mentoring needs, which call for differing mentoring approaches (Hennissen et al., 2008; Van Ginkel et al., 2016). Future research might consider the mentoring needs of teachers in addition to the alternative mentoring approaches that can be adopted by mentors. In our opinion, learning to provide progress and discrepancy feedback has the potential to improve the quality of mentoring dialogues to a considerable extent but this simply did not occur. An observation tool provides the information needed to do this.

In addition, increasing the sensitivity of the mentor's input to that of the teacher can help improve the quality of the mentoring dialogue. More explicit training on the incorporation of the outcomes of an observational report into a mentoring dialogue is recommended and learning to listen and ask for input from the teachers will be stimulated as well. In sum, the present research shows the promise of incorporating observational information into mentoring dialogues and the specific mentoring activities needed to do this. In such a manner, current mentoring practices can be improved and thereby teacher training and learning. In general, it is the conversation between teachers and mentors that matters. However, for induction programs the conditions remain that these conversations need to foster teacher learning.

Appendix A. illustrations of the identified patterns of conversations

Patter A; directive role, non-specific and briefly discussed feedback. Dialogue 1

Person	Content, translated from Dutch	Coded mentor activity	Topic
Mentor	Well what you could do then in such a case is to accentuate picking up a notebook. Then you do not have to actually read it but you do perform that action	Advice	(home)work check
Teacher	Just a bit of a sample yes		
M	With these kinds of assignments of course or just with your finger	Summary	(home)work check
M	For example in the back there was someone who was writing very strangely. That is something you can make a remark on. So that is what I would think about in those situations	Feedback — negative, non-specific	(home)work check
M	Classroom management let's take a look, that is point seven[1]. What was meant by that again?	Question	Classroom management
T	Makes clear which materials can be used …		
M	Oh there I gave three[2] points, that was actually four because you did it very well. I have just been looking at the wrong [item]. Sorry.	Feedback — positive, non-specific	Classroom management
T	Yes, I have trained that with them: when you enter the classroom, you put your stuff on the table and no … yes.		
M	So no, that is, yes. That is a four.	Feedback — positive, non-specific	Classroom management
M	Well learning time of students is something I cannot completely check because I have not seen the beginning and the end of the lesson, but yes, what I observed of it seems good to me.	Feedback — positive, non-specific	Learning time of students
M	So well, I do not fill it in because I cannot check it. That was how we agreed to do it.	Other	Learning time of students
T	Yes, perhaps I can do …		
M	About the learning time, so the only thing I would like to add would be the tempo. You have to be careful about that. In this classroom you can afford that very fast pace, and I think it's good too …	Feedback — positive, more non-specific than specific	High tempo
T	Yes, and then it might have to be divided into two lessons because I found the time they needed to concentrate too very long in the end.		

[1] The seven refers to the number or an item within the rapport of the observational tool (ICALT) that was used to observe the teacher.
[2] The numbers three and four are referring to the score that was given during the observation for item number eight (The teacher makes clear which materials can be used).

Pattern B; predominantly asking and active listening, positive and non-specific feedback. Dialogue 6

Person	Content, translated from Dutch	Coded mentor activity	Topic
Mentor	So that is a bit of a tricky, slick couple.	Summary	Avoiding students
Teacher	Yes a difficult slick couple. While the majority are doing very well, they are involved, they do their work, they show their work, they are interacting, so actually that is fine.		
M	And that was clearly visible in that lesson indeed. A lot of children almost like to be in front to give those answers and together … You have created it into a kind of culture, okay, what are the rules here? And I do not even know exactly what it was but it was about calculating something, and almost all of them could chant it …	Feedback — positive, more specific than non-specific	Discipline
T	Yes exactly, about the multiplication factor with statistical percentages, that is what that moment was about		
M	You got that all sewed up	Feedback — positive, more none-specific than specific	Discipline
T	Well, that is great.		
M	Then you would want those three slick.. erm	Active listening	Avoiding students
T	Slick figures, yes they have to join in		
M	Roughen up a little bit. Yes what have you tried up to now?	Question	Handling avoiding students
M	So you told me that you do check them but that it is not effective because of different reasons …	Summary	Handling avoiding students
T	Yes, one time I had, that was a success story, there was a boy who did nothing at all however he was super smart. I addressed his behavior and compared him to another boy in the class who works very hard but does not have the same ability and I say: but he is will be solving complex problems and you cannot do that because you refuse to learn about the building blocks. And I said: in the future he will be ahead of you, not yet but that is going to happen. And I said: and at some point he will be driving a bigger car than you		
M	Did you say is like that? That is the world of experience.	Active listening	Moment of success
T	That is the culture right? So I say: yes, you choose, I mean you can always keep saying I could have done it very well, but it never came out, while he is just putting in a lot of effort and he will get a job with which he can be driving a nice car so erm. And then he started working		
M	No way?	Active listening	Moment of success
T	Yes really, and then he got an eight[3]		
M	So that was the trigger	Feedback — positive, none-specific	Student motivation
T	Yes, but it was a temporary trigger because at the next chapter it was completely gone again. So for that theme, that was geometry, he worked extremely hard and it paid off because he really had an eight. But he was not very proud of it either. He was like, I knew that I could do it, such attitude. The next theme he just did nothing at all and then he got a three.		
M	And what was his response to that?	Question	Reaction moment of success
T	Well that just does not interest him. It is like it does not get to him or something. He just thinks of himself that he can do it and that he doesn't have to show it during tests.		
M	So it does not fit into his world, or his self-image, and then he does not get going	Summary	Cause of fluctuations avoiding students

[3] Within the Dutch school system tests of students are graded from one to ten with one being the lowest grade and ten the highest.

Pattern C; mentor initiates topics, alternates between positive and negative and between non-specific and specific feedback. Dialogue 3

Person	Content, translated from Dutch	Coded mentor activity	Topic
Mentor	But you were not satisfied with the way they were listening?	Question	Discipline
Teacher	Well, if they were working together and we picked it up again by doing it plenary then I sometimes thought like: okay, I still have to ask that person to turn around and that person to …		
M	And what could that mean?	Question	Discipline
M	That you have to ask it more and more each time?	Question	Discipline
T	Yes, it will take too long. Yes. That is why I divided it into pieces in that way you always have a small bit of theory and perhaps I should indicate that structure a bit more in advance: this is what you can expect. I think that would help. But I think the pieces, I do not think they were way too long. Because they could do something in between. And then something like collecting the word web took too long and that demands too much if I …		
M	You forget to say something that you are happy about but you start right away with …	Feedback − negative, more specific than non-specific	Teachers' impression of the lesson
M	Because I thought those videos were fantastic. Students were fascinated by it too, which is also wonderful. They were fascinated by how that artist had made that device, during that moment they were full of attention	Feedback − positive, specific	Focus of students
M	At the moment that they had to write briefly, you see that they, from my point of view, perhaps want to be a bit more active. So just write down a few words or name objects and you can see that they are starting to come around	Feedback − negative, more specific than non-specific	Focus of students
T	Yes, that it should have been more or that …		
M	I think perhaps you should have given them more responsibility	Advice	Focus of students
T	Okay yes		
M	In the sense that you could have done the second of that Paramarico a bit later in the lesson. That they could have done some more.	Advice	Structure of the lesson
M	They come to this lesson thinking it is a practical one ant it is but …	Feedback − negative, non-specific	Content of the lesson
T	Yes I get that. And then collecting words twice collect is then … yes.		
M	Because it was a double period. I was there during the first hour and I think it was 35 or 40 min before they actually started working. In between, they made that list of words and so on,	Summary	Content of the lesson
M	they watched and listened and they are actively involved but during that first hour they did not have to do much yet	Feedback − negative, more non-specific than specific	Activities within the lesson
M	That was undoubtedly happening during the second hour.	Question	Activities within the lesson
T	Yes, then we started making the info card and then they are free to fill it in with what they have seen that lesson. So yes they can get to work and yes doing what they like to do with the idea: which videos did you just watch and what theory did you just have. Yes, and that works very well, it went very well.		
M	And that is also a characteristic of the students ofcourse. They are coming to your lesson expecting a practical lesson and then it is only just the second part of the lesson. For them it is quite long I think or at least it seemed a little bit from how they were working like: well, it' i time we started doing something	Feedback − negative, more specific than non-specific	Activities within the lesson
M	But those videos were great fun, they also liked that	Feedback − positive, non-specific	Activities within the lesson

Pattern D; few topics, positive and negative feedback are both specific. Dialogue 8

Person	Content, translated from Dutch	Coded mentor activity	Topic
Teacher	Well I think it's a bit less quiet during my lessons compared to other teachers.		
Mentor	That's not the case.	Feedback − positive, more non-specific than specific	Absence of order
T	Oh well I'm quite positive that the majority of students are working eventually. Also I do have the feeling that they learn a lot. But that is takes more of my energy to achieve that.		
M	That is s not necessarily a negative thing, because I also keep that strong connection with students.	Feedback − positive, specific	Discipline
T	Yes, that is certainly true. No, but when I compare the second lesson to the first. Then I understand what we have concluded that in this lesson there was much more structure even though they work in small groups or independently. They need it therefore it runs well and quietly and effectively. That is new this year, because I had always set out a step-by-step plan. With several steps they had to take.		
M	Yes	Other	Discipline
T	And last year I gave them a reader, including the goal and we are going to …		
M	Yes it was different, because last year I was there too I believe. It was something different.	Other	Discipline
T	It started out more chaotic and now it is clear on its own and I could divide it more in what I wanted to say what should happen today and next week I will explain what needs to be done for the essay.		
M	Well you that is what you have hinted that this is the essay and what I really like about it you have put everything together.	Feedback − positive, specific	Communication with students
T	Yes		
M	So they can find the presentation, assignment, everything and if needed they can look it up. That is very important, so not just sheets, but	Feedback − positive, specific	Helping students
T	I know, sheets will get lost.		
M	Yes immediately	Other	Student materials
T	The moment you walk away they there will be three sheets or so staying behind		
M	And that is a good excuse for them yes I did not have it. So if they get used to it, yes it is on ELO (online learning environment) and that is their job to look it up. That's something different, right …	Other	Responsibility of students
T	Yes		
M	So focusing on the organization, efficient organization when we look at this form. Well yes, 'ensures an orderly course of the lesson.' Yes, I thought it was very orderly, because even during independent work. Students communicated normally at a normal sound level and everyone was working. I found that really fascinating. Thirty-two students yes.	Feedback − positive, specific	Discipline
T	Yes, they were all working or doing something. Some wanted to work at the computer immediately and so on.		
M	Yes, but that's no problem	Other	Discipline

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