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# Creating communicative learning spaces in initial teacher education (ITE) with observation-grounded co-mentoring practices

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## ABSTRACT

ITE has been criticised for being disconnected, with different languages being spoken in the two learning arenas of campus and schools. Bringing people together, such as through formal university-school partnerships, is not enough to open up communicative learning spaces – sites of collaborative learning that are democratic, safe and supportive. Practicum is recognised as a capstone experience in teacher education in which the mentor's role is crucial. However, there are significant variations in the types and quality of mentoring and only some supportive frameworks. This paper investigates what arrangements are needed to enable mentoring practices as communicative learning spaces. An intervention was designed that structured conversations between student teachers, school-based mentor teachers and university-based teacher educators around an observation-grounded mentoring framework (OMF). Data was gathered from completed worksheets, reflection logs, and interviews and analysed through the lens of practice architectures. We explore issues of knowledge and power in the facilitation of learning when university-based teacher educators visit the school, and classroom observations frame the mentoring conversations. Findings show that the OMF offered a shared language for tripartite mentoring conversations as communicative learning spaces. The paper contributes to knowledge about supportive mentoring practices in ITE.

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## Introduction

In teacher education worldwide, student teachers' teaching in real classrooms has for decades been seen as the capstone experience of the education (Orland-Barak and Wang 2021), in which mentoring conversations play a central role (Clarke *et al.* 2014). The practicum period during initial teacher education (ITE) offers opportunities for theoretical and practical knowledge to illuminate each other (Risan 2020). The mentoring conversations, thus, enable a co-construction of knowledge (Parsons 2021) that can contribute to professional learning and development for student teachers that goes beyond initial teacher education (Vieira *et al.* 2021).

However, teacher education programmes have been criticised for being disconnected, of being conducted according to competing paradigms, whereby university-based teacher educators talk one language, and school-based mentors talk another (Zeichner 2010, Orland-Barak 2016, Hunskaar

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and Gudmundsdottir 2023). Importantly, there is significant variation in the type and quality of the mentoring feedback student teachers receive (Hobson and Malderez 2013, Hudson 2014). In addition, many school-based mentor teachers find it challenging to use theoretical concepts introduced to student teachers on campus during mentoring (Christophersen *et al.* 2016) and reflection-provoking styles of mentoring demanding (Lejonberg *et al.* 2018). Calls have been made for mentoring frameworks that help connect theoretical and practical knowledge forms and structure mentoring conversations around collaborative pedagogical inquiry (Orland-Barak 2016, Orland-Barak and Wang 2021, Nesje and Lejonberg 2022).

This article explores the potential of co-mentoring student teachers during their practicum when teacher educators from universities visit the school and representatives from three stakeholders in teacher education (schools, ITE institutions and prospective teachers) meet to facilitate learning in tripartite mentoring conversations. Co-mentoring requires collaboration across the campus and school-based learning arenas in ITE (Murtagh 2022). Such collaborations have often been called hybrid or third spaces (Zeichner 2010, Zeichner *et al.* 2015). These spaces entail complex power relations, and tensions may arise when school-based mentors and university-based teacher educators join forces to mentor student teachers in practicum (Daza *et al.* 2021). Epistemological hierarchies, which prioritise one form of knowledge over another, can be detrimental to professional learning in hybrid spaces (Risan 2022). As much of the literature on hybrid/third spaces in teacher education suggests, negotiating social interactions to nurture professional learning and development in boundary-crossing territory can be challenging (see, for example Langelotz 2013, Beck 2020, Daza *et al.* 2021, Parsons 2021). Bringing people together in the same physical space is not enough to alter epistemological hierarchies or change which knowledge is utilised (Norton-Meier and Drake 2010).

In their study of three professional learning contexts in Australia, Norway and Sweden, Sjølie *et al.* (2019) found that bringing people together, such as through formal university-school partnerships, was insufficient to open up a 'communicative learning space' (a term they coin in the paper). The lack thereof even seemed to constrain student teachers' learning. Sjølie *et al.* (2019) acknowledged the importance of trust and recognised the complexity of asymmetric power relations. They define a communicative learning space as a site of collaborative learning that is 'a democratic, safe and supportive social space where trust is crucial' (p.3). Considering the complex power relations in tripartite mentoring conversations with two mentors and one or more mentees, this paper explores what arrangements might be needed to enable these sites as communicative learning spaces. The paper contributes to research on professional learning possibilities in hybrid spaces. In particular, it provides insights into how collaborative reflection on classroom observations can be supported such that connections between theoretical concepts and practicum experiences are strengthened.

Previous studies have indicated that collaborative reflection on classroom observations may stimulate professional learning (O'Leary 2012, 2020, Dudley *et al.* 2019, Windsor *et al.* 2020). Aiming to support student teachers' learning in practicum, an observation-grounded mentoring framework (OMF) was designed for an intervention study in ITE in Norway during a four-week practicum period. School-based mentor teachers and university-based teacher educators were asked to collaborate on mentoring student teachers, using the OMF as a guide. Data was gathered from completed OMF worksheets, student and mentor teachers' reflection logs, and interviews with school-based mentor teachers and university-based teacher educators. Data from the formative intervention study (Engeström 2011) was analysed through the lens of practice architectures (Kemmis and Grootenboer 2008, Kemmis *et al.* 2014b) in a philosophical-empirical inquiry (Kemmis 2022a) of the tripartite conversations structured by the OMF. In this paper, we explore issues of knowledge and power in the facilitation of learning (Salo *et al.* 2024) when classroom observations frame the mentoring conversations. We ask whether and how the OMF might create conditions for communicative learning spaces in tripartite mentoring conversations.

The article begins by explaining why we see the mentor's role as central to student teachers' professional learning and the challenges and affordances of involving university teacher educators

in mentoring. Next, we explain the characteristics of communicative learning spaces (Sjølief *et al.* 2019) and how collaborative reflection around classroom observations during student teachers' practicum might benefit the opening of such spaces. Thereafter follows a brief explanation of the study's practice view of professional learning (Olin *et al.* 2020) and how we went forth in our philosophical-empirical inquiry (Kemmis 2022a). There is then an introduction to the Norwegian context of the intervention study, followed by the findings from our investigation and the limitations of the paper. We conclude by discussing what we see as the implications for teacher education.

### **The central role of mentoring for professional learning**

School-based mentor teachers have a crucial role in facilitating student teachers' professional learning during their period of practicum (Orland-Barak 2016, Lejonberg *et al.* 2018, Ellis *et al.* 2020, Orland-Barak and Wang 2021). However, established mentoring procedures in student teachers' practicum have been criticised for lacking structure (Larsen *et al.* 2023), with significant variations in the quality and type of feedback student teachers receive (Hudson 2014). Akin to Kemmis *et al.* (2014a), we see mentoring as a contested practice in need of attention.

According to Edwards-Groves *et al.* (2016), a critical feature of mentoring is nourishing a culture of relational trust and mutual respect between mentor and mentee. Further, they re-characterised relational trust to include the development of a shared language, as well as a development of 'witness, togetherness, collegiality and cooperation' (p.378). Mentoring student teachers in their period of practicum involves introducing them to the work of a teacher but also checking their suitability for the profession, and thus, symmetric collegiality between the mentor and mentees is difficult to achieve, and mentoring can become judgemental (Hobson and Malderez 2013). Asymmetric power relations, where one person evaluates the other, can be detrimental to professional learning and contribute to sites of mentoring as 'performative spaces' rather than communicative learning spaces (Sjølief *et al.* 2019).

Recent studies of mentoring situations (Windsor *et al.* 2020, Goldshaft *et al.* 2022) have shown that using observational tools to structure mentoring conversations can nurture a shared language for collaborative inquiry into teaching and learning. Observational tools offer opportunities to connect contemporary learning theories with professional experiences through collaborative, reflective, observation-grounded dialogue that encourages student teachers to develop authority over their practicum experiences (Bullock 2016, O'Leary 2022). Relevant concepts, pedagogical principles and learning theories might be brought into tripartite mentoring conversations that help give insight into practical experiences (Korthagen 2011), and collaborative reflection over observed practical experiences might contribute to new insights on contemporary theoretical knowledge (Parsons 2021, O'Leary 2022). School-based mentor teachers are likely to be familiar with using systematic observation in pedagogical inquiry as it has emerged as standard practice for in-service teachers throughout their careers across a range of countries (Day 2013), often as part of continuing professional development projects where collaboration is central (Langelotz 2017). Importantly, interpreting classroom observations requires knowledge about the pupils in the classroom, highlighting school-based teachers' practitioner knowledge. Bringing descriptive observations into co-mentoring conversations can enlighten how theoretical and practitioner knowledge connects and deepen understanding of teaching practices (Dudley *et al.* 2019).

Tripartite mentoring conversations in teacher education include group mentoring practices where university-based teacher educators and school-based mentor teachers collaborate on mentoring one or more student teachers. In group mentoring settings where two co-mentors are involved, one from the university and one from the school, complex power dynamics are at play (Vanassche 2023). Traditionally, supervisory visits from ITE institutions are conducted to observe student teachers in an authentic teaching setting and provide formative and summative feedback. However, according to O'Leary (2022), this performative classroom observation can impede professional learning. Such settings can also hinder the development of a sense of 'witness, togetherness, collegiality and cooperation' (Edwards-Groves *et al.* 2016). To ensure that tripartite

mentoring conversations are conducive to mutual respect and relational trust that nurture professional learning, epistemological hierarchies must be addressed and reduced. Practitioner and theoretical knowledge should complement each other, and no one type of knowledge should be considered superior, such that meaningful professional knowledge is highlighted for all participants in the conversation (Risan 2022).

### **Working towards communicative learning spaces in ITE**

According to Sjølie *et al.* (2019), communicative learning spaces are characterised by democratic collaboration in which participants respect, challenge and learn with each other. Drawing on Bhabha's notion of Third Space (Bhabha 1994), Habermas' notion of communicative action (Habermas 1996), and Kemmis and McTaggart's notion of communicative spaces (Kemmis and McTaggart 2005), Sjølie *et al.* (2019) emphasised the importance of a common purpose, a common language, democracy, solidarity and trust in the creation of communicative learning spaces. A communicative space is a feature of Habermas' notion of 'communicative action' where people come together to reach intersubjective agreement as a basis for mutual understanding. Kemmis and McTaggart (2005) develop the concept further, seeing communicative spaces as spaces where people broaden their understanding of others' points of view to reach an unforced consensus about what to do, building solidarity around legitimate decisions. Adding 'learning' to the concept of communicative spaces, Sjølie *et al.* (2019) deliberately focus on communicative spaces that support and nurture teachers' professional learning at all stages of teachers' professional development.

In the Norwegian boundary-spanning context with university-based teacher educators, school-based mentor teachers and student teachers, Sjølie *et al.* (2019) found solidarity and trust lacking despite formal arrangements that aimed at close collaboration between universities and schools. Further, they argued that lack of solidarity and trust seemed to constrain the student teachers' professional learning (Sjølie *et al.* 2019). On a positive note, they also found the sharing of stories in the Australian and Swedish contexts to be an important contribution to developing a shared language, a cultural-discursive arrangement which they considered necessary for the enablement of communicative learning spaces (Sjølie *et al.* 2019).

Considering the complexity of power hierarchies and the importance of relational trust for professional learning (Salo *et al.* 2024), we wonder whether creating communicative learning spaces is possible in short-term, formal contexts such as student teachers' practicum periods where mentoring is necessarily asymmetric. For tripartite mentoring conversations to become communicative learning spaces, supportive cultural-discursive and social-political arrangements that address asymmetric power relations are required. The observation-grounded mentoring framework (OMF) might contribute to such support.

### **Co-mentoring practice architectures**

We recognise mentoring as a practice, a practice that aims to support professional learning. The theory of practice architectures (TPA) (Kemmis and Grootenboer 2008, Kemmis *et al.* 2014b) describes practices as being made up of bundles of sayings (utterances and forms of understanding), doings (modes of action) and relatings (ways in which people relate to each other) that hang together in characteristic ways in a distinct project (Kemmis *et al.* 2014b). Further, practices are not only formed by the participants and do not unfold in a 'vacuum'; they are embedded in and prefigured by practice architectures that mediate what happens as practices unfold in real time in real sites (Kemmis *et al.* 2014b). Practice architectures are cultural-discursive, material-economic and social-political arrangements that enable and constrain practices. Evolving traditions underpin all proposed ways of doing things in the present and the future (Schatzki 2002). However, traditions do not predetermine what can be thought, what can be done, and how people relate to each other

and the world (Kemmis 2023). Cultural-discursive arrangements shape what is said and what is appropriate thought in a practice. Material-economic arrangements shape the characteristic doings in a practice, pointing to what, when, how, and by whom something can be done. And social-political arrangements shape how people relate to each other and non-human objects in a practice (Mahon *et al.* 2017).

TPA elucidates the sociality of learning and underscores co-mentoring in student teachers' practicum as site-based, time-bound professional actions built on collaboration, dialogue, inquiry and reflection (Olin *et al.* 2020). Thus, the potential of tripartite mentoring conversations as communicative learning spaces is enabled and constrained by cultural-discursive, material-economic and social-political arrangements. We consider TPA (Kemmis *et al.* 2014b) as an appropriate lens to analyse whether and how the OMF might create conditions for communicative learning spaces in tripartite mentoring conversations as the theory elucidates the importance of relations for professional learning in and for practice (Salo *et al.* 2024).

Although it is possible to consider the cultural-discursive, material-economic and social-political arrangements individually, they are very much interrelated. Cultural-discursive arrangements prefiguring the use of pedagogical terminology and learning theories in the conversations might also affect the social-political arrangements of the mentoring practices if, for example, the mentor finds using theoretical concepts from the teacher education programmes' curricula challenging (Christophersen *et al.* 2016). Communicative learning spaces are democratic, safe spaces that nurture professional learning (Sjølief *et al.* 2019). Thus, for tripartite mentoring conversations to be communicative learning spaces, cultural-discursive and material-economic arrangements need to interrelate with social-political arrangements to enable democratic, safe spaces. Epistemological hierarchies can create tensions that affect student teachers' professional learning in the co-mentoring of student teachers (Risan 2022). Consequently, we argue that communicative learning spaces require social-political arrangements that balance domains of epistemological expertise.

In our inquiry of whether and how the OMF might create conditions for communicative learning spaces, we explore issues of knowledge and power to enquire as to the ways that material-economic and cultural-discursive arrangements interrelate with social-political arrangements.

## The OMF intervention

### The context

The teacher education programme on which this study is based is a nationally-regulated, five-year teacher education master programme in Norway (Norwegian Ministry of Education and Research 2016). Practicum at the teacher education programme where this study took place is normally organised in groups of three or four student teachers, one school-based mentor teacher, and a university-based teacher educator. Student teachers are grouped according to their chosen teaching subjects, and mentor teachers who teach that subject are assigned. School-based mentor teachers usually have a minimum of three years of experience working in schools and are encouraged to complete credited courses in pedagogical mentoring. However, most school-based mentors in this programme do not have formal mentoring training. Teacher educators are involved towards the end of the practicum period in connection with a one-day school visit. Still, it is the school-based mentor teacher who is mainly responsible for student teachers' supervision during practicum. Student teachers have 110 practicum days during the five-year programme and are introduced to systematic classroom observation in the first year. The student teachers in this study were in the programme's first year during their second practicum placement. The school-based mentors formally assess student teachers at the end of each practicum period.

The one-day 'visit' from the university-based teacher educator was previously a practical examination where the teacher educator assessed the student teachers. More recently, however, efforts have been made to de-formalise the visit and formal assessment is no longer required by

the visiting teacher educator. Guidelines specify university staff taking on a mentoring role when visiting, checking student teachers' well-being, and learning progress and supporting school-based mentors in their mentoring endeavours. However, despite the aims of de-formalisation, it can be assumed that echoes of past formal assessments may impact power arrangements, especially as there are no standard frameworks for the visit and collaboration around the planning of the visit varies (Thorsen and Michelet 2019).

### **The OMF intervention – design**

The design of the observation-grounded mentoring framework (OMF) is built on results from earlier studies on the use of mentoring tools in student teachers' practicum (Windsor *et al.* 2020, Goldshaft *et al.* 2022, Nesje and Lejonberg 2022). Systematic observation was combined with lesson planning in a reflective, collaborative framework to structure the tripartite mentoring conversations. Systematic observation is a close-to-practice research method where practitioner knowledge and theoretical knowledge can intertwine (Parsons 2021).

There were three stages in the structure of the mentoring framework: 1. Lesson and observation preparation; 2. Teaching and lesson observation, and 3. Post-lesson discussion. Mentoring conversations were structured around stage 1, preparation, and stage 3, discussion. The practicum group had an editable worksheet to share during the three phases. The worksheet was divided into two sections: lesson planning and observation foci. The foci for observations were to be based on the lesson plan. The lesson was then enacted by one or two of the student teachers. The other student teachers, the school-based mentor teacher, and the visiting university-based teacher educator observed the lesson and gathered documentation as objectively as possible. After that followed a post-lesson discussion where the observers presented their observations, and the practicum group interpreted these observations together. We have included a blank OMF worksheet with the conversation protocol as [Appendix A](#) to show how the worksheet structured the practicum group's work.

Theoretical knowledge was highlighted with requests for pedagogical-didactics explanations in point seven of the lesson-planning section of the mentoring framework: 'Reasons for subject-specific and didactic choices (link to pedagogic/didactic principles or theory)'. This request refers to the choices student teachers made after considering six core aspects of lesson planning: frame factors (including room size, equipment available, number of pupils, etc.); pupils' learning resources (including special needs, pupils' interests etc.); learning objectives (curriculum and specific lesson aims); content (including topic, subject-specific substance etc.); teaching and learning activities (using verbs to describe what pupils and teachers were to do) and evaluation/lesson assessment (how can we see if the pupils have reached the learning targets? What shall observers look for?). These six interrelating factors were familiar to all the participants as they derive from a didactic relations model (Bjørndal and Lieberg 1975) which has been used in teacher education in Norway for decades. In this way, the OMF aimed to mutually illuminate the different knowledge forms for teachers' professional learning.

The OMF required that student teachers who were not teaching the lesson gathered documentation of teaching and learning during the lesson. Then, they presented their observations in the post-lesson mentoring conversations before the mentor teacher's feedback. The student teachers were asked to specify what they had seen and heard, and how they interpreted the observations. In addition, the OMF committed participants to articulate theoretically grounded reasoning for choices made in lesson planning and to decide focus for the observations during the lesson planning stage. The OMF structured the mentoring conversations such that all the practicum group members were actively engaged, aiming at encouraging student teachers to develop authority over their practicum experiences (Bullock 2016) and supporting a shared professional language for mentored inquiry into teaching and learning (Orland-Barak and Wang 2021).

**Table 1.** Empirical data.

Sources	Form
8 Practicum groups	11 completed observation-grounded mentoring framework (OMF) worksheets
Student teachers' (ST) reflection logs	21 reflection logs (varies in length from two sentences to four pages of either handwritten or machine-written text. 4 STs handed in 2 logs each)
School-based mentor teachers' (SBMT) interviews	Transcriptions of 6 semi-structured interviews (20–40 mins each), three 'novice' (less than 2 yrs. experience) SBMT interviews and three 'experienced' (more than 2 yrs.) SBMT interviews.
School-based mentor teachers' reflective texts	Written reflective text about using the OMF between half to two pages in length (pseudonyms concur with SBMT interviews).
University-based teacher educators' interviews	Transcriptions of 4 semi-structured interviews (20–40 min each)

### **Data collection and ethical considerations**

Eight practicum groups tried out the OMF in February 2022. [Table 1](#) shows the source and forms of data for our study:

The first author was employed at the ITE institution where the study took place and was responsible for the instruction and evaluation of many of the first-year student teachers in the study. This created an ethical dilemma: on the one hand, the position of teacher educator provided access to the participants. On the other hand, the student teachers might be hesitant to voice criticism of the intervention or feel like they have to perform well in the interviews when their teacher leads it. For this reason, it was decided not to interview the student teachers but rather to gather their completed OMF worksheets and ask them to write anonymous reflection logs where they sum up their experiences using the OMF. Here, they could anonymously express both the challenges and advantages of using the OMF and explain how they worked with it in their practicum groups. It was stipulated clearly in the invitation that none of the data would be used to assess the student teachers.

School-based mentor teachers and university-based teacher educators were interviewed using a semi-structured interviewing approach (Kvale and Brinkmann 2009) such that the information they shared was relevant to the explored topic, yet could also bring insight to other ideas not considered at the outset of the study. In addition, three mentors opted to write reflective logs after the first author interviewed them. Although not part of the original data collection plan, these texts added richness to the mentors' stories.

Eleven completed OMF worksheets from the practicum groups provided information on the lesson's content, the reasoning behind the choices, the observation focus, and the observation notes from the observations. Twenty-one reflection logs from student teachers gave information about their personal experiences working with the OMF. In the semi-structured interviews, school-based mentor teachers and university-based teacher educators were asked to talk about how they had previously used systematic observation and their thoughts about the intervention. They were asked to express their challenges and suggest improvements for the observation-grounded mentoring framework. In addition, they were asked to describe their experiences of university-school collaboration and thoughts about theory and practice in teacher education.

The interview transcriptions, the completed OMF worksheets, and student teachers' and mentor teachers' reflective texts all form the empirical data in the analysis. The interviews and reflective texts are initially in Norwegian, and sections of the material used as quotes in the findings are translated into English by the first author. Ethical considerations stipulated by the Norwegian Centre for Research Data (Previously NSD, now SIKT) were adhered to, and relevant permissions were attained. Written informed consent was collected from all participants, and the voice recordings were stored so that only the authors could access them. The participants were assigned pseudonyms, the data were anonymised, and the key to original identities was hidden.



What follows is an explanation of the steps taken in the analysis and how we coded the data according to the arrangements we interpreted from the data.

### **The OMF intervention - analysis**

According to Kemmis (2022a), a ‘philosophical-empirical inquiry’ is a broad research approach within which many qualitative research approaches, methods and techniques may be located. He argues that this approach ‘emphasises the dialectical relationship between evidence and claims’ (p.148). Further, he underlines the importance of explicating the relationships between empirical data and theoretical categorising where necessary.

In our exploration of the co-mentoring conversations structured by the OMF, we elicited descriptions of practices found in the empirical data according to the sayings (what was said and by whom, the concepts and terms used – the language), such that the cultural-discursive arrangements might become explicit; the doings (what was done, when and how, and by whom), such that the material-economic arrangements might become more apparent; and relatings (how the practicum group’s relationships were expressed and the purpose of the relationships), such that the social-political arrangements of the practice are highlighted. Interpreting the practice arrangements from the descriptions we elicited from the data involved interpreting the empirical in light of the theory of practice architectures, which, according to Kemmis (2022a), can be seen as the philosophical side of philosophical-empirical inquiry. Moving further on the philosophical side, we then engaged with characteristics of communicative learning spaces – a common language, a common purpose, democracy, solidarity and trust – to help interpret the empirical circumstances we encountered (Sjølie *et al.* 2019, Kemmis 2022b).

Our research question asks: In what ways might the OMF *create conditions for tripartite mentoring conversations as communicative learning spaces*? Such learning spaces are democratic and safe with reduced epistemological hierarchies. They are intersubjective spaces where people come together to expand their perspectives and reach a mutual understanding of how to go on in the practice. There should be a common purpose and a shared language in such spaces. Thus, concentrating on issues of knowledge and power, the intersubjective and relational aspects of professional learning, we interpreted the talk, actions and ways that the people in the study related to each other in the data and made codes for the cultural-discursive, material-economic and social-political arrangements we found. These were further thematically grouped into enablers and constraints of communicative learning spaces that we interpreted as present in the data.

Although work with the analysis was not as linear as the above explanation infers (cultural-discursive, material-economic, and social-political arrangements interrelate as the explication of our findings will portray), our ‘back-and-forth’ investigation found ways in which the OMF might have created the conditions for communicative learning spaces in tripartite mentoring conversations. What follows is the presentation of what we found to be relevant in answering our research question.

### **Findings**

The philosophical-empirical analytical approach uncovered ways the material-economic, cultural-discursive and social-political arrangements interrelated to enable and constrain the tripartite mentoring conversations as communicative learning spaces. We present our findings according to the relational themes we interpreted in the data.

#### **Combining modes of knowledge in a shared language**

The OMF acted as a cultural-discursive arrangement built on discourses of pedagogy, subject-didactics and curricula from both the university and school sites, hence combining practitioner

knowledge and theoretical knowledge in its design. In interviews, school-based mentor teachers and university-based teacher educators expressed that the OMF provided a shared language for tripartite mentoring conversations. Christine, a school-based mentor teacher, explains:

The OMF was very useful because then you see which way to go. And you are given terms, a meta-language to talk about what's happening. (Christine, school-based mentor teacher, in interview)

The meta-language that Christine refers to includes theoretical terms and pedagogical principles suggested in the lesson-planning and observation sections of the OMF worksheet.

Worksheets completed by all the student teachers in a practicum group showed some use of meta-language, most notably under point seven, where they were explicitly asked to reason for their choices using pedagogical principles and theory such as the following completed worksheet exemplifies:

Kahoot quiz is a digital learning activity that the majority of the class loves. The pupils are randomly placed in groups by the algorithm in the app, meaning no one can be left out, and you have to work with whoever you get placed with. We have made a Kahoot that asks them to guess whether so-called facts are true or not and whether they are part of a conspiracy theory. In this way, they will learn about different theories in a group setting, which, according to Vygotsky, is important for learning. In the next stage of creating your own conspiracy theory, pupils will be encouraged to spin some wild ideas and then convince others that they are true. These pupils are exposed to conspiracy theories all the time, and it is our hope that they will be surprised how easy it is to both create a theory and believe another person's creation. (Practicum group worksheet completed by four student teachers)

The above quotation illustrates how these student teachers are reflecting on the lesson plan and its learning ambitions. They have learnt about Vygotsky's work on campus and implemented his theory. Points one to seven of the OMF worksheet were to be completed before the pre-lesson mentoring conversation. This indicates that the OMF's requirement of collaboratively written reflection on lesson planning probably helped student teachers connect what they learnt on campus to what they experienced in practicum.

Peter, a university-based teacher educator, talked about the improved quality of the mentoring conversations when structured by the OMF:

The feedback, the talks we could have afterwards were more constructive, I think because we had the same backdrop to base the chat on, with classroom management and leading learning, but with the didactic relations model, which we are familiar with from before (Peter, university-based teacher educator, in interview)

Peter exemplifies how theoretical knowledge taught on campus – the didactics relations model (Bjørndal and Lieberg 1975) – was used in the tripartite mentoring conversations to shed light on what was happening. The OMF worksheet referred to the didactics relations model in the preparation section. All participants were familiar with the interrelating vital teaching factors in the didactics relations model. This familiarity with the terms served as the 'backdrop to base the chat on' – a shared language to investigate examples of 'class management' and 'leading learning', which is specified in the observation section of the OMF worksheet. This shows how the design of the OMF, a material-economic arrangement, interrelates with cultural-discursive arrangements to provide a shared language for collective meaning-making during the tripartite mentoring conversations.

The cultural-discursive arrangement providing a shared language for collective meaning-making was also seen to interrelate with social-political arrangements. The structural framework of the OMF, where everybody was given an active role, the conversation protocol depicting who speaks when, and the centrality of observation descriptions for the conversations were material-economic arrangements structuring the conversations. In addition, bringing the OMF into the tripartite mentoring conversations was a social-political arrangement as these cultural-discursive and material-economic arrangements interrelated with the power relations in the practicum group.

### **Awareness of the common purpose of teaching**

The combination of lesson and observation planning, teaching and observing, and interpreting observations together was found to be important for creating awareness of the purpose of teaching. Student teachers, school-based mentor teachers and university-based teacher educators commented on how centralising observations in the tripartite mentoring conversations helped raise awareness around the point of the lesson.

In student teachers' completed worksheets, one observation point of focus in particular seemed to capture this awareness. In section 9, 'Observation: Leading Learning', student teachers were asked: 'Did you observe any signs of learning joy among the pupils? Or evidence of learning?' This was the point that was most comprehensively filled out in the completed worksheets that were handed to the researchers. For example, one practicum group wrote 'there was a lot of joy and laughter during the lesson'; and another wrote 'They [the pupils] were engaged in the task, actually talking about the maths problem we'd given them', while other groups told of pupil-activity as being indicative of learning evidence. Cheryl, a university-based teacher educator explains in an interview why she believed this observation point to be valuable for the tripartite conversations:

I was pleased that the worksheet asked for evidence of learning and asked whether you had observed any signs of learning joy among the pupils. It became a very good conversation point. Because I perceived the students as being very concerned with their role in the classroom and being demonstrative in front of the class. Their focus was inward, which is natural when it's one of their first teaching lessons. But this worksheet contains a type of clarification that it's the pupils who are the main point here. (Cheryl, university-based teacher educator, in interview)

All the observation focus points in the OMF aimed to get student teachers to look for pupils' reactions to the lesson. Sophia, an experienced school-based mentor, explains how she understood that the combination of lesson planning and systematic observation created awareness about pupils' learning:

... with this worksheet, they have to plan what they are going to observe at the same time based on what's being taught. It creates an awareness around how pupils' learn, one has to focus on how pupils' learn, not just focus on what's being taught and why, but you turn the focus to the objectives of all teaching. What have the pupils learnt and how can we see it? You create a wider and larger perspective for the student teachers. I think they might know about it, but its implicit if not put into a system. (Sophia, school-based mentor in interview)

School-based mentors and university-based teacher educators told how the OMF's structure supported improved awareness of the purpose of teaching. The material-economic arrangement of planning the lesson and planning observations simultaneously interacted with cultural-discursive arrangements such that how to notice learning or lack of learning became central to the mentoring conversations. Thus, we found that these arrangements supported tripartite mentoring conversations about indications of learning and led to an awareness in the practicum groups around the common purpose of teaching, which is to say, pupils' learning. The shift in attention from student teachers' teaching to pupils' reactions to the lesson was found to be important for school-based and university-based mentors alike. As such, the OMF showed potential as a tool for co-mentoring student teachers.

### **Student teachers used the OMF to prepare for tripartite mentoring conversations**

Participants told of how collaboratively working with the OMF worksheet prepared them for the tripartite mentoring conversations. Andrew, a student teacher, sums up in his reflection log how his practicum group worked with the OMF over time, working both in peer groups with fellow student teachers and then in the mentoring sessions:

We used a bit of time each day. We discussed our focus areas and how things improved or degraded. Then, we tried together to understand why that response was achieved. This was a very useful conversation during the everyday work, but also something that was investigated more closely in the mentoring sessions. (Andrew, student teacher, in reflection log)

Andrew shows here how this peer group had their own conversations, which did not always include the school-based mentor teacher or the teacher educator from the university. Further, he wrote in his reflection log how the group planned the lessons and observations first without the mentor; then, they would hand in the lesson-plan section of the OMF to the mentor teacher in good time before the lesson. Afterwards, Andrew's peer group used their OMF worksheets to help analyse the lesson together and tried to understand why it went as it did. They brought this worksheet to the mentoring sessions, well-prepared to contribute to closer investigations into teaching and learning issues. Andrew's practicum group's use of the OMF worksheet to prepare for pre- and post-lesson discussions exemplifies how the practicum groups worked collaboratively with the OMF, 'investigating' the lesson together in peer-group discussions (with symmetric power relations) and then bringing their discussion further in the tripartite mentoring conversations (with asymmetric power relations).

### ***Novice mentors used the OMF to prepare for tripartite mentoring conversations***

The student teachers in this study were not the only ones to express how they used the OMF worksheet to prepare for the tripartite mentoring conversations. Three school-based mentor teachers told in interviews how they used the worksheet during the entire practicum period and emphasised the need to practice, as Oliver, one of the mentors, explains:

It took time to get to know how to use the OMF. With training, one can juggle between the rows, and the notes become more effective. The conversation becomes more structured, too, I think. It got better after a while. And when we were visited by the university expert, I was really good, as we'd practised so much. (Oliver, novice school-based mentor)

Despite working for many years as a teacher, Oliver was new to mentoring. Oliver shows here how he prepared for the 'university expert' visit by practising using the OMF with his practicum group, getting used to speaking the pedagogical terminology, observing objectively, analysing observations collaboratively, and reflecting on teaching and learning with his student teachers.

Oliver was one of three mentors in the study who used the OMF for the entire practicum period. These three mentors had not completed any credited courses in pedagogical mentoring, unlike the other three school-based mentors, who had both accredited mentoring qualifications and many years of mentoring experience.

Answering questions about how they used the OMF, three less-experienced school-based mentor teachers (with less than two years' mentoring experience) and one university-based teacher educator (new to the university staff) told of how they followed the worksheet protocol stringently in the beginning, filling in all the points as thoroughly as they could. Peter, a university-based teacher educator and practicum coordinator, explains how he could see the OMF contributed to a more predictable school visit:

I think it provides reassurance for university teachers who haven't spent much time in schools previously. We hear about this a lot. University lecturers who are anxious, pretty nervous before they go out to the school because they are unsure what their role is. So, to have a common understanding of what we are to do and that it is a collaboration is reassuring. (Peter, university-based teacher educator)

Student teachers and novice mentors said that preparing for the mentoring conversations by practising using the OMF contributed to the tripartite conversations becoming predictable and 'safe'. Experienced school-based mentors and teacher educators, however, told a different story.

### ***Experienced mentors had their own observation methods***

When asked in interviews about the challenges they encountered when using the OMF to structure the tripartite mentoring conversations, experienced school-based mentors and university-based teacher educators spoke of the worksheet being 'too detailed', finding the worksheet observation points 'unnecessarily complex' and 'form-filling' difficult, as Janet, a school-based mentor teacher explains:

There's a lot to get to grips with. A lot to keep an eye on. Not only do you have to observe what the student teachers are doing, but also follow what's going on in the classroom, so if one tries to be super clever and fill out all the points in the form, well . . . , it could lead to fewer mentor teachers in the future. (Janet, experienced school-based mentor teacher)

The three more experienced school-based mentor teachers and three university-based teacher educators used the worksheet differently than the novice mentors, telling how they expected the student teachers to complete the lesson planning section before the pre-lesson conversation. They would then use the lesson plan to discuss the planned observation focus. The observation section of the worksheet was not filled in by the three experienced school-based mentors, nor two of the experienced teacher educators during the observation of the lesson, as they explained that they had their own methods for notetaking while observing. However, they did express that the observation points in the OMF were used as a starting point for the post-lesson discussion.

### **Summing up the findings**

Our study found that interrelating material-economic and cultural-discursive arrangements enabled collective meaning-making through a shared language. In addition, the material-economic arrangements of the OMF interrelated with social-political arrangements to create democratic tripartite mentoring conversations as student teachers and mentors were allocated a job to do.

Preparation may have reduced the relational power of expertise. This assumption is based on the variations in the modes of 'doings' in the data. Here, we found that experience in mentoring student teachers affected the degree of compliance with the OMF protocol. Novice mentors were found to be reassured by the OMF's structuring of the tripartite conversations, while experienced mentors used it more as a guide. Oliver and Andrews' examples of how they used the OMF to prepare for the mentoring conversations show how the OMF's structuring of the conversations was also a social-political arrangement that shaped who said what and when. In addition, the OMF gave them agency, recognising their contribution to the conversations, which encouraged them to prepare well. Their preparation most probably contributed to their feeling more secure during mentoring and may have reduced the relational power of expertise in the tripartite mentoring conversations.

Further, we found that the OMF brought forth an awareness of the purpose of teaching and a common understanding in the practicum group around this awareness. Student teachers' observation descriptions were central to the OMF conversation protocol. Observation descriptions were to focus on pupils' reactions to the lesson and observers had to look for possible indications of learning. University-based and school-based mentors underlined the OMF's importance in shifting student teachers' focus from teaching to pupils' learning. We found this mutual understanding to be representative of co-mentoring with relatively flat epistemological power relations.

Participants told of a 'common backdrop' on which to base conversations. We found the material-economic arrangements of the OMF combined with the cultural-discursive arrangements to enable a shared language. These arrangements interrelated with social-political arrangements to enable tripartite mentoring conversations as being predictable, safe spaces, not only for student teachers but also for novice mentors (both school-based mentors and visiting university-based teacher educators).

We shall now discuss how we see these interrelating arrangements as enabling tripartite mentoring conversations as communicative learning spaces and how relational trust plays a part in the enablement.

### **Discussion and conclusion**

We have explored knowledge and power issues in learning facilitation when tripartite mentoring conversations were structured by the observation-grounded mentoring framework (OMF). In the tripartite mentoring conversations, two learning arenas in teacher education – schools and universities – were represented by school-based mentor teachers and university-based teacher

educators. Both parties facilitated student teachers' learning in tripartite mentoring conversations at the end of the first-year student teachers' practicum period.

Our philosophical-empirical inquiry (Kemmis 2022b) of students', mentors' and teacher educators' experiences with tripartite mentoring conversations set out to find whether and how the arrangements shaped by the OMF might enable communicative learning spaces, spaces that promote security and democracy where individuals share a common purpose and language (Sjølief *et al.* 2019). Using the theory of practice architectures as a lens (Kemmis *et al.* 2014b), we found that systematic observation combined with lesson planning in the co-mentoring framework seemed to enable tripartite mentoring conversations as communicative learning spaces despite asymmetric power relations.

Akin to Hunskaar and Gudmundsdottir (2023), our study found that interrelating material-economic and cultural-discursive arrangements shaped by the OMF enabled collective meaning-making through a shared language. Furthermore, findings show that the OMF supported a shared understanding of the purpose of teaching (which is to say, pupils' learning).

The OMF structured tripartite mentoring conversations around lesson planning and classroom observations. Previous research on collaborative reflection on classroom observations has indicated that structuring conversations around observations can nurture professional learning (O'Leary 2012, Dudley *et al.* 2019, Warwick *et al.* 2019, Færøyvik Karlsen 2022). Although our data cannot specify what learning took place, the findings show that the OMF provided a co-mentoring tool that supported school-based and university-based mentors in their endeavours to shift student teachers' focus on teaching over to focus on pupils' learning.

O'Leary (2022) terms observation-grounded peer reflection as 'unseen observation' and a catalyst for professional learning and the development of pedagogic thinking and practice. The design of the OMF aimed to mutually illuminate practitioner and theoretical modes of knowledge. Despite the fact that the practicum groups in our study comprised both peers (3–4 student teachers) and non-peers (two mentors), we found that grounding tripartite mentoring conversations in classroom observations and structuring meaning-making conversations around the mentoring framework increased awareness of the purpose of teaching and solidarity around this purpose. There is reason to assume that this supported student teachers' pedagogic thinking and practice. Thus, we argue that the OMF acted as a boundary-crossing tool that might have reduced epistemological power relations (Risan 2020, Murtagh 2022).

Relational trust is vital for the creation of communicative learning spaces (Sjølief *et al.* 2019) and professional learning in and for practice (Salo *et al.* 2024). According to Edwards-Groves *et al.* (2016), having a shared language and a common purpose in collaborations nourishes relational trust and mutual respect. Although the relationship between mentor and mentee is necessarily asymmetric (Timperley 2001), epistemological power relations between the two mentors from two different learning arenas should be balanced if practitioner and theoretical knowledge are to mutually illuminate each other in the hybrid space of student teachers' practicum (Risan 2022).

Traditional disconnections between theory and practice, between university and schools, have led to epistemological imbalances and a lack of shared language (Zeichner *et al.* 2015, Orland-Barak and Wang 2021). However, we found that tripartite mentoring conversations structured around classroom observations provided a shared language on which to base pedagogic thinking and collaborative inquiry, and a common purpose for the co-mentoring practices. Moreover, the framework offered school-based mentors and student teachers opportunities to prepare for visits from the 'university expert'. Thus, we consider that cultural-discursive and social-political arrangements shaped by the OMF interrelated and most probably reduced epistemological power imbalances between school-based mentors and university-based teacher educators.

However, there were differences in how the mentors complied with the OMF protocol. Experienced mentors (both university-based and school-based) used the OMF as a guide, but reverted to their own way of notetaking during observations, while the novice mentor teachers stuck to the protocol stringently. Novice mentors seem to have been empowered by the predictability of the arrangements structured by the OMF, whereas experienced mentors seemed to remain in their expertise role. This could have constrained the conversations as communicative learning

spaces if the ‘experts’ knew all the answers, so to speak. Further research on the role of expertise and mentoring tools might shed more light on ways to reduce relational power imbalances to better support mentoring practices.

Bringing educators together through formal university-school partnerships to facilitate student teachers’ professional learning does not necessarily result in third/hybrid spaces that empower learning (Daza *et al.* 2021). Boundary-crossing is messy (Norton-Meier and Drake 2010), and hybrid spaces can end up being ‘performative spaces’ where learning is restricted (Sjølje *et al.* 2019). Tripartite mentoring conversations require supportive arrangements that nurture relational trust in order to open up communicative learning spaces (Edwards-Groves *et al.* 2016, Sjølje *et al.* 2019).

In conclusion, this paper has shown that tripartite mentoring conversations framed by systematic observation and collaborative reflection *can* be sites of communicative learning spaces that empower learning in and for professional practice (Salo *et al.* 2024). However, for the practicum of initial teacher education to become sites of professional learning for all, supportive arrangements that address power imbalances must be in place.

This limited context-and-time-bound study has pointed to the potential of structured observation-grounded co-mentoring practices. More research on the effects these practices might have on prospective teachers’ developing professional identities and the role of expertise in communicative learning spaces could shed further light on their potential.

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## Appendix A

### How to use the Observation-grounded Mentoring Framework (OMF)

The OMF framework evolved out of a study on preservice teachers' development of R&D competence (Goldshaft *et al.* 2022). It is based on the Didactic Relations Model (Hiim *et al.* 1989) and adapted for observation in practicum (Reier Jensen, 2019). There are three stages to this framework: 1. Prior lesson preparation, 2. Lesson observation and 3. Post lesson discussion. The practicum group (3–4 student teachers) must complete at least one OMF form during the period of practicum in accordance with their mentor teacher and teacher educator. The observation focus points may be edited, added or removed by the mentor teacher prior to the lesson.

#### 1. Prior lesson preparation

The student teachers responsible for teaching the lesson must fill out points 1–7 while planning the lesson. This is then presented to the rest of the group and the mentor teacher prior to the lesson such that everyone is clear about the lesson plan, the learning targets, the reasons for the choice of learning activities, the suggested focus for the observation and what type of learning evidence you will be looking for. The student teachers who are not responsible for teaching the lesson will be the observers during the lesson. The focus for observation must be decided by the group before the lesson commences. (Allow for 30–60 mins for group-part of the lesson planning).

#### 2. Lesson observation

During the lesson, the observers watch and listen, noting down key words needed to give feedback to the teachers on some of the questions asked in points 8, 9 and 10. Observation notes should be written up as quickly as possible after the lesson. See the 'observation protocol' for tips on how to observe and what to think about before, during and after observation in the classroom. Remember to look for evidence of learning, or misunderstandings.

#### 3. Post lesson discussion

The post lesson discussion starts with the (student) teachers' reflections about the lesson and is followed by the observers' descriptions of what they had seen and heard, and how they had interpreted it. Any evidence of learning is presented. The post lesson, observation-grounded discussion continues, now led by the mentor teacher/visiting teacher educator. (Allow 45–90 minutes for the post lesson discussion). It is advisable that student teachers write a short reflection text at the end of the day to document their own learning about teaching.

The completed OMF form and reflection text is saved by all group members for later use.

**Table A1.** The Observation-grounded Mentoring Framework Worksheet.

School:	Year/grade:	School subject:	Lesson:
<b>(1) Frame factors</b> (possibilities/ limitations) Room size, classroom layout, teaching equipment and other frame factors. . .			
Number of people in classroom:	Pupils:	Teachers:	Other adults:
<b>(2) Pupils' learning Resources</b> (special adaptations?)			
<b>(3) Learning aims and objectives</b> (Explicit. What should the pupils learn in this lesson?)			
<b>(4) Content</b> (Themes, topics, subject-specific substance. Describe using nouns)			
<b>(5) Teaching and learning activities and process – with time estimates</b> Pupils' activities (describe using verbs) Teachers' activities (describe using verbs)			
<b>(6) Evaluation Lesson Assessment</b> How can we see if the pupils have reached the learning targets? What shall the observers look for? How should feedback (feedforward) be given?			
<b>(7) Reasons for subject-specific and didactic choices</b> (link to pedagogic/didactic principles or theory)			
<b>(8) Observation: Class Management</b> How does the teacher communicate with the pupils? What type of instruction is given at the start of the lesson? What does the teacher do to keep the pupils focused on the lesson? Describe the changeover from one learning activity to another. How do the pupils react? Did you observe any situational class leadership actions? Describe one.			
<b>(9) Observation: Leading Learning</b> What type of teaching materials were used? How did the pupils react to those materials? How was the learning content explained? To what extent were the pupils active during the learning activities? Did you observe any signs of learning enjoyment among the pupils? Or evidence of learning? How did the teacher give the pupils feedback on the lesson targets? Did you notice any challenges related to large differences in learning progress and levels in the lesson. How were these catered for in the learning activities?			
<b>(10) Observation: Reflections, questions, and/or comments otherwise not covered in points 8 or 9.</b>			