

**Rehearsing for teaching**



Michel Alexandre Cabot,  
Sissel Margrethe Høisæter and Vigdis Vangsnes (Eds.)

# Rehearsing for teaching

Theoretical and empirical approaches  
to a practice-based teacher education



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## Preface

The background of the present anthology is the educational design research project *Rehearsing Teaching Professionally* (ReTPro), which was conducted at Western Norway University of Applied Sciences (HVL) and funded by the Norwegian Research Council. The aim of the anthology was to assemble researchers and practitioners who are interested in the phenomenon of rehearsing. The title *rehearsing for teaching* speaks for itself. Rehearsing plays an important role in teacher education.

Our sincere appreciation goes to Professor Knut Steinar Engelsen, whose guidance and expertise were instrumental in shaping the research direction of this anthology. The insightful feedback and contributions from our international and Norwegian collaborators in the ReTPro research group enriched the content and strengthened the arguments. Special thanks go to the international advisory board, including Ruth Leitch (Queen's University Belfast), Anna Sfard (University of Haifa), Joanne O'Flaherty (University of Limerick), Gert Biesta (Maynooth University; University of Edinburgh), Colin Christie (University of Aberdeen), Elaine Munthe (Norwegian Knowledge Center for Education), and Kari Smith (Norwegian University of Science and Technology).

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Special thanks to our families for their patience and understanding during the long hours spent immersed in academic pursuit.

Last, to all scholars who paved the way in this field, your groundbreaking work laid the foundation for this exploration.

*Michel Alexandre Cabot, Sissel Margrethe Høisæter & Vigdis Vangsnes*



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## Introduction

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and Vigdis Vangsnes<sup>1</sup>**

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## Objective and background of the anthology

The main purpose of the present anthology is to promote teacher education in which preservice teachers (PSTs) are given opportunities to rehearse the complex work of professional teaching. There is a need for PSTs to *rehearse for teaching* (see the title of the present anthology) by using knowledge in action (McDonald et al., 2013, p. 378).

Several studies give voice to PSTs' perceptions of a lack of coherence between on-campus teaching and what they experience in practicum schools (e.g. Norwegian Agency for Quality Assurance in Education, 2024; Pedagog-studentene [Pedagogy students], 2021; Resch et al., 2022; White & Forgasz, 2016). PSTs often express a strong desire for practical experience in teacher education, which requires teacher educators to consider novel, and meaningful, approaches. In fact, teacher educators must seek to help PSTs develop their skills at *doing* teaching, not only analysing it. A strengthened and systematic approach to rehearsing in teacher education, which is under scrutiny in the present anthology, may be a way to bridge this theory–practice divide (Hammerness et al., 2020).

This anthology investigates various aspects of rehearsing in different subjects, how rehearsing teaching can be included as a central factor in teacher education both in practicum schools and on campus, and what consequences this has for the teaching of subjects, subject didactics, and general didactics.

More specifically, the anthology examines rehearsals, critical observations, and analyses of rehearsals in which the goal is to develop teaching competence through actual reflective teaching practices that were developed in innovative ways. The various articles show the importance of alternating between rehearsing, practising, and reflecting on PSTs' own and others' teaching to develop rich and reflective professional teaching repertoires. This takes place in collaboration with campus teachers, practicum teachers, fellow PSTs, and students in the classroom.

The background of the initiative to the present anthology is the educational design research projects *Improvisation in Teacher Education* (Engelsen, 2012–2016) and *Rehearsing Teaching Professionally* (Vangsnes, 2021–2026), both of which were conducted at Western Norway University of Applied Sciences and funded by the Norwegian Research Council. The first research project points towards a view of teaching as dialogic performance (Sawyer,

2011, p. 8). Important questions for this research project were, inter alia, how to plan for the unexpected, and how to transform unforeseen events into productive moments. A central finding of this research (Holdhus et al., 2016) was that PSTs require more practice with ‘reflection in action’, not merely ‘reflection on action’ (Schön, 1987).

Similarly, the present anthology investigates how teacher education can provide opportunities for PSTs to reflect on *rehearsing for teaching* and, thus, build a professional repertoire of actions for teaching. Such a repertoire of actions may help PSTs make decisions in their future professional lives when they, as teachers, must find a balance between structure and improvisation (Sawyer, 2004, p. 13).

The second research project is a collaborative project between Western Norway University of Applied Sciences, the municipalities Stord and Hauge-sund, three schools (two in Stord and one in Hauge-sund), and the international advisory board including Ruth Leitch (Queen’s University Belfast), Anna Sfard (University of Haifa), Gert Biesta (Maynooth University; University of Edinburgh), Joanne O’Flaherty (University of Limerick), Colin Christie (University of Aberdeen), Elaine Munthe (Norwegian Knowledge Centre for Education), and Kari Smith (Norwegian University of Science and Technology). The entire international advisory board provided important contributions to the anthology in the form of prologues, epilogues, and one empirical article.

Furthermore, the researchers involved in ReTPro organised a digital conference entitled *Rehearsals as means of building repertoires towards improvisational teaching in teacher education* on 18 October 2023. All participants were invited to contribute to the present research anthology.

## What are rehearsals and what can we rehearse?

Rehearsal is the noun form of the verb ‘rehearse’. According to the Cambridge Dictionary (2024), it means to ‘practise a play, a piece of music, etc. in order to prepare it for public performance’ or to ‘repeat it [a story or an argument] with all the details’. According to Lampert (2010), ‘both practising and rehearsing are often done in the context of getting feedback’ (p. 27). Indeed, rehearsal is

something that is done in preparation for performance, and rehearsers may expect an evaluation of their *pre*performance. We understand this evaluation as a dialogic, analytic, and formative conversation between the participants, that is, a form of formative, not summative, assessment.

The most common understanding and definitions of rehearsals include the use of repeated practice to learn information. For example, when a student is presented with specific information to be learned, such as a poem, they will often attempt to memorise the poem by repeating it. Many readers of the present anthology may thus have negative associations with rehearsals, because repeated practices are often linked to rote memorisation.

In contrast to this example of memorisation, here, the aim of rehearsal is understood as providing opportunities for PSTs and teacher educators to discuss and reflect on their own, and others', decisions in the classroom. In other words, the present anthology understands rehearsals as specific, repeated pedagogical actions and learning experiences in teacher education that come close to the field of practice (Grossman et al., 2009b; Lampert et al., 2013).

During rehearsals, a PST or, sometimes, a pair or trio of PSTs will lead a teaching session with fellow PSTs on campus or students at the practicum schools. The PSTs take on the roles of both teacher or mentor, and student, which enables them to familiarise themselves with decision-making and many issues related to students and various subjects (e.g. mathematics, English, pedagogy). According to Kazemi et al. (2016), rehearsals simulate many relationships between students and content that may appear in real-life teaching and require that PSTs make both routine and improvisational decisions in practice.

Lampert et al. (2013, p. 226) define rehearsals as a specific pedagogy used to learn how to interact productively with each student and the subject matter at hand. The aim of rehearsals is to specify how teacher educators and PSTs can interact with teaching in a way that is rooted in practice and can also be analysed.

A question often arises in the discussion of rehearsing in teacher education: What should PSTs rehearse? In this context, the terms 'core practice', 'high-leverage practices', and/or 'ambitious practices' (henceforth called 'core practices') seem to be of particular importance, because they can link rehearsing to teachers' professional pedagogical skills.

Grossman et al. (2009a) list the following characteristics of core practices:

- Practices that occur frequently in teaching,

- Practices that novices can enact in classrooms across curricula and instructional approaches,
- Practices that novices can begin to master,
- Practices that allow novices to learn more about students and teaching,
- Practices that preserve the integrity and complexity of teaching, and
- Practices that are research-based and have the potential to improve student achievement (p. 277).

Many researchers have attempted to describe core practices. Examples of core practices in teacher education may include ‘elicit students’ thinking’ at the macrolevel and ‘leading a guided-reading lesson in elementary reading’ at the microlevel (Grossman et al., 2009b, p. 277).

As shown in the research project ReTPro (Advisory Council for Teacher Education, 2024), other examples can include dialogic teaching and performative teaching in general, or input and context-building activities using the teacher-in-role drama convention in particular.

Concerning English as a Foreign or Second Language (EFL/ESL), Pang (2019) proposes ‘a three-level framework of core practices’ (p. 266) that includes five subject practices (i.e. input, explicit teaching, interaction, output, and feedback) at level 1, diverse learning tasks and instructional activities at level 2 (e.g. focused rehearsing of forms, skills, or routines as the pre-task; interactive task engagement in target communication area as the task; feedback as the post-task), and discursive moves at level 3 (i.e. the enactment of structured instructional activities or learning tasks through classroom communication).

In contrast to Pang (2019), it is possible to describe core practices without any reference to specific subject areas, even though most practices are taught and enacted in subject-specific ways. In this regard, one example is Davis and Boerst’s (2014) research, which mentions ‘choosing and using representations, examples, and models of content; engaging students in rehearsing an organisational or managerial routine; choosing and modifying lesson plans for a specific learning goal; and conducting a meeting about a student with a parent or guardian’ (p. 7).

In the present anthology, the concept of core practices forms a productive analytical unit via which *rehearsing for teaching* can be examined. Indeed, core practices constitute a set of strategies, routines, and activities that can be

unpacked as objects of rehearsal in teacher education (cf. Matsumoto-Royo & Ramirez-Montoya, 2021).

The frequency and characteristics of core practices can vary between subjects and student groups. The main principle in practice-based teacher education is that PSTs should be given the opportunity to develop competence in core practices through guided participation and joint reflection, so that they can try these out both on campus and in practicum schools.

However, the concept of core practices is still hotly debated (e.g. Dutro & Cartun, 2016; Philip, 2019; Philip et al., 2019; O’Flaherty in Prologue 5 of the present anthology; Souto-Manning, 2019). A significant challenge for teacher education is to select and agree on the core practices that must be included in teacher preparation, and avoid reductionist approaches (O’Flaherty et al., 2024).

In other words, it is not possible to draw a sharp dividing line between core practices and other practices. In addition, the definition of certain practices as core ones is sometimes questionable because teaching occurs in both micro and macro contexts. This inevitably creates categories that position individuals and groups of teachers within or outside of what is recognised as the norm (e.g. Dutro & Cartun, 2016).

Core practices are difficult to define because there is no shared understanding of the term. According to Grossman (2024), we must distinguish between domains of practice (e.g. classroom management), practice (e.g. creating and reinforcing norms regarding positive participation), and components of practice or teacher moves (e.g. narrating positive student behaviours). Most importantly, there is a Goldilocks problem because research struggles to define the appropriate grain size for core practices (Grossman & Fraefel, 2024, p. 142). For example, creating a positive classroom environment would be too large a grain size for core practices, while the use of wait time would be too small a grain size.

In this context, different views on teaching may lead to different definitions of core practices. In fact, core practices seem to exist in various sizes, and debates over whether teachers should focus more clearly on pedagogy (e.g. classroom management), or content (e.g. inductive grammar teaching, or vocabulary instruction using morphology in EFL/ESL), may be reignited (Shulman, 1986).

Against this backdrop, the aim of the present anthology is not to define and discuss what grain size various core practices should have, but, rather,

to examine how, and the degree to which, PSTs can rehearse the practices of professional teachers.

### **How can we rehearse?**

To answer the question of how PSTs can rehearse, it may be important to distinguish between tightly and loosely constrained approximations (Kavanagh et al., 2020, p. 100), or open and pre-designed approaches to rehearsing (Grosser-Clarkson & Neel, 2020, p. 468). Grosser-Clarkson and Neel (2020, p. 468) mention *conversation rebuilding* in Italian foreign language schools as a pre-designed enactment approach because an activity is introduced by the teacher educator, the PSTs rehearse the activity, and the same or a very similar activity is then enacted and analysed. In contrast, rehearsals conducted with an open-designed approach do not necessarily involve an exact replication of a common activity or particular content. Some researchers (e.g. Sawyer, 2004) hold that open-designed approaches make it easier to promote PSTs' creativity, flexibility, and improvisational skills.

For example, PSTs must rehearse whole-class discussions and learn to spontaneously answer pupils' questions, for example, in relation to pedagogical issues (e.g. Why do we have to come to class?) or content (e.g. Why do we have to use an -ing form here?). The choice between pre-designed and open-designed approaches depends on the context and focus of rehearsing. Within either approach, rehearsing will not prevent PSTs from improvising. It can, instead, help them build a teaching repertoire they can have recourse to when they must improvise. In doing so, PSTs can gain self-confidence and self-reliance in the classroom.

To answer the question of how teacher educators can make PSTs rehearse, Grossman (2021) offers three essential concepts: representations (e.g. modelling a dialogic classroom discussion), decompositions (e.g. asking the students to code talk moves in a transcription of a classroom discussion), and approximations (e.g. asking PSTs to carry out a dialogic classroom discussion on campus before enactment at practicum schools). Focusing on representations means providing PSTs with opportunities to engage with various modes of practice and discuss choice, decision-making, and the resulting consequences. Engaging in decompositions provides PSTs with opportunities to *deconstruct* practices into their constituent parts and

examine and analyse the building blocks that serve as the foundations of these practices. Approximations refer to opportunities for PSTs to engage in practices that are more or less authentic or ‘proximal to the practices of a profession’ (Grossman et al., 2009b, p. 2058).

More specifically, teacher educators may be inspired by McDonald et al.’s (2013) ‘cycle for collectively learning’ (p. 382), which may facilitate the implementation of Grossman’s concept in four phases: (1) introducing and learning about the activity, (2) preparing for and rehearsing the activity, (3) enacting the activity with students, and (4) analysing enactment and moving forward. The ReTPro research project, which is based on McDonald et al.’s cycle and presented in prologue 2 of this anthology, draws on these various phases, both on campus and during practicums.

However, one question, perhaps the most important one, remains: Why do we rehearse?

### **Why do we rehearse?**

Some practitioners argue against rehearsing because they believe it will not help PSTs become professional teachers. Indeed, it is difficult to become a professional teacher. In addition, it seems obvious that not everything can be rehearsed. In this anthology, we want to emphasise that rehearsing is not a panacea for all problems regarding teacher education. Teachers will always have to cope with unexpected events in the classroom.

However, there are various arguments for rehearsing that are under scrutiny in this anthology. Some arguments for rehearsing consist of defining rehearsals as (1) critical thinking-promoting, (2) reflection-stimulating, or (3) routines- and improvisation-stimulating *rehearsing spaces* (in Norwegian: *Øvingsrom*) in which PSTs practise coordinating the complexities of classroom teaching, attending to the interactions between campus and practicum teachers, students in the classroom, and the disciplinary content to be learned.

First, rehearsals can be an efficient method for preparing PSTs to engage in critical thinking about the disciplinary content to be learned. For example, PSTs can rehearse debates on the pros and cons of a certain position or argument. Indeed, in many educational contexts, dilemmas are used to promote students’ critical thinking (Spencer-Oatey, 2013). We often talk about ‘critical incidents’ (Butterfield et al., 2005; Dypedahl, 2018) that are incorporated into lesson plans to promote critical thinking via exploring an argument from var-

ious perspectives. Several studies (e.g. Kılıç & Cinkara, 2020; Megawati et al., 2020; Sercu, 2004) recommend using dilemmas as a teaching method. In other words, PSTs must carry out difficult discussions that stimulate critical thinking, which may require some rehearsing in a safe space during teacher training.

Second, rehearsals can be perceived as a reflection-stimulating space in teacher education that can promote reflection-in-action and reflection-on-action (Schön, 1983). This is nicely described by Ruth Leitch in prologue 3 of the present anthology. Indeed, rapid thinking, decision making, and adjustments during an event may be of particular importance in rehearsals, but the capacity to benefit from reflection-in-action requires extensive rehearsal over time.

In contrast to this spontaneous thinking and acting on the go, reflection-on-action occurs retrospectively after a practicum, which allows PSTs to evaluate their actions and the outcomes of the practicum, and plan for future improvements. This reflective form encourages learning from experience and is commonly perceived as easier than reflection-in-action. For example, reflection-on-action in teacher education can mean that teacher educators ask PSTs to notice important moments in their video-recordings of their enactments after rehearsing. In fact, research (e.g. Van Es et al., 2017; Santagata et al., 2021) emphasises the importance of teacher noticing and teachers' reflection-on-action, which may be facilitated by rehearsal-based activities in teacher education. In sum, reflection-in-action suggests that PSTs improvise and adjust in the moment, whereas reflection-on-action may lead to adjustments in future learning and actions, which may be of particular importance in teacher education. The present anthology advocates that both forms of reflection, reflection-in-action and reflection-on-action, can be fostered through rehearsals in teacher education.

Third, rehearsals can be perceived as a routine- and improvisation-stimulating space in teacher education (e.g. Sfard in Part 4, Prologue 4 of the present anthology; Sawyer, 2011). Rehearsals are specific, repeated pedagogical actions. Repetitions create patterns of action, which can be called routines. Kazemi and Hubbard (2008) argue for the rehearsal of 'routine instructional activities' (p. 438) in teacher education, pointing out that rehearsing, and becoming proficient at, the routine aspects of teaching can help PSTs learn how to become professional teachers. Examples from mathematics include 'doing a mental math activity', 'posing, solving, and sharing solutions to word problems', or 'counting collections' (p. 438).

Similarly, in an early research article, Berliner (1985) advocated that ‘if we want someone to have a repertoire of behaviours for running a small cooperative group, we must provide them with practice opportunities, perhaps on a small scale, perhaps through simulations’ (p. 121). As stated by Sfard (see Part 4, Prologue 4 in the present anthology), ‘rehearsing may be the best way to introduce a new routine to a future teacher who does not yet have fully-fledged access to the school classroom’. For example, to help teachers carry out productive classroom discussions, Michaels and O’Connor (2015) recommend focusing on talk moves because such utterance-level tools ‘can be easy to remember and easy to pull out with a bit of practice’ (p. 336).

At the same time, it is important to emphasise, once again, that teachers will always have to improvise. The rehearsing of routines will not solve all problems. While rehearsing a core practice may help PSTs become proficient in the performance of routines, it is not at all evident that it will make PSTs fully prepared to use these routines whenever necessary. Experienced teachers use routines more often than novice teachers do. According to Sawyer (2011), expert teachers ‘are able to invoke and apply these routines in a creative, improvisational fashion’ (p. 2).

We should mention that Sawyer (2004) introduced the concept of *disciplined improvisation* – that is, improvisation within the activity structures and routines of the classroom that involves a combination of lesson planning and actual teaching. Beghetto and Kaufman (2011) elaborated on this concept and defined it as teaching for creativity involving ‘reworking the curriculum-as-planned... under the special conditions of the curriculum-as-lived’ (p. 96). More specifically, the adjective ‘disciplined’, within the concept of *disciplined improvisation*, refers to determining what aspects of teaching and learning will be more or less fixed, and the noun ‘improvisation’ refers to identifying what aspects will be more or less fluid (p. 96).

According to Philip (2019), proponents of core practices (e.g. Ball & Forzani, 2009; Ball et al., 2009) assume that successful improvisation presupposes proficiency with core practices. This ‘skills first’ approach – the subject of a relentless debate throughout teacher education – may appear to be commonly accepted, but this is not so. The ‘skills first’ approach is rather questionable. The editors of the present anthology support Sawyer (2000) in his claim that ‘there is no sharp dividing line between “improvisation” and

“not improvisation”; rather, there is a continuum, from more improvised to less improvised’ (p. 182).

Ultimately, the present anthology urges readers to pay greater attention to the above-mentioned three dimensions of teaching, that is, (1) critical-thinking-promoting, (2) reflection-stimulating, and (3) routines- and improvisation-stimulating spaces. These should not be undervalued in practice-based teacher education. This leads us to the question: What is the role of rehearsing in practice-based teaching?

## Rehearsing and practice-based teacher education

During the last decade, we have seen a shift in teacher education, which has turned away from a focus on the knowledge needed for teaching to a focus on the use and enactment of that knowledge in practice (Grossman et al., 2018). PSTs require arenas in which they can experiment, improvise, make mistakes, and deal with the unexpected (Kaldahl et al., 2023). PSTs also criticise the fact that campus education and the field of practice are largely two separate arenas.

Rehearsing teaching, on campus and in practicum schools, can help promote integrity and coherence within teacher education by expanding the experience-based repertoire of PSTs. This goal is in line with the Norwegian *Teacher Education 2025* strategy (Norwegian Ministry of Education and Research, 2024). This strategy points out that one of the remaining challenges for teacher education is ensuring practice relevance. The Advisory Council for Teacher Education (2024) points to the same dilemmas in their report to the Ministry of Education and Research. They argue for what they call ‘expanded practice’ and promote expanded access to practice arenas, and the expanded use of learning forms, as potential answers to this challenge. Using ‘expanded practice’, the gap between theory (e.g. on campus) and practice (e.g. in practicum schools) will be more bridged throughout teacher education programmes.

In line with this, the editors believe that *rehearsing for teaching* represents a potential answer to the above-mentioned dilemma because such rehearsals can function as simulations of practice and help our PSTs develop teaching

repertoires in a constrained setting. The rehearsals thus allow PSTs to approximate a teaching practice combining disciplinary topics with the unforeseen. This involves, among other things, being able to read, debrief, identify, and exploit critical moments that arise in a teaching setting, in which the teacher must confront and manoeuvre between the tensions created by the various purposes of academic, relational, and value-based topics, as Biesta highlights in the concepts of qualification, subjectification, and socialisation.

We therefore rely on both Sawyer (2004) and Philip (2019) when claiming that a fundamental prerequisite for professional and improvisational teaching competence is a strong value-based foundation, academically, pedagogically, and ethically.

The editors of the present anthology advocate that rehearsing practices must affect the core building blocks of teacher education, that is, teacher education's 'learning ecologies' (Van Lier, 2010). This could imply integrating rehearsing practices into course descriptions and assessment procedures systematically. This also presupposes, as Anna Sfard so wisely points out, creating sufficiently strong connections between training on campus, authentic practice, and critical reflection. Indeed, to come full circle and return to the title of the present anthology, *rehearsing for teaching* can make teacher education practice-based.

## **Presentation of the anthology's contributions**

Part 1 of our anthology deals with theoretical aspects of rehearsing. It is introduced by a prologue written by Gert Biesta.

In the first article, SIGRID HAUKANES examines the role of critical and reflective rehearsals in teacher education as a means to foster the democratic formation of preservice teachers. She emphasises the necessity of integrating critical reflection with practical action to prepare preservice teachers to participate in the school's democratic societal mandate.

Rehearsals in teacher education must surpass the mere dissemination and adoption of 'best practices'. Instead, they should serve as platforms for preservice teachers to engage in critical scrutiny of practice, purpose, and context.

The second article, written by SISSEL MARGRETHE HØISÆTER, explores the turn to practice-based teacher education (Grossman et al. 2018, p. 2) and different approaches to understand how teacher educators' modelling of teaching works. She examines in what ways theories can inform us about the relationship between modelling and rehearsals. The use of modelling in the research project *Rehearsing Teaching Professionally* (ReTPro) is presented as an example. One antique and two modern theoretical approaches are introduced. Differences between the ancient and the modern approaches, and relevance of the ReTPro case, are discussed.

VIGDIS VANGSNES examines, in article 3, the use of modelling as a didactic approach for teaching about teaching when campus teachers use modelling to exemplify process drama methods, including teacher-in-role, in teaching English as a Foreign Language. Lunenberg et al.'s (2007) four modelling types provide the framework for conceptualising these didactic situations. Her findings suggest that implicit performativity is as important as explicit talk in developing a teaching repertoire. Her insights lead to introducing a new category: Performative Modelling, characterised by its aesthetic approach to teaching.

Article 4 presents performativity as a theoretical framework and a practical approach for designing exercises and teaching that can link action and reflection in teacher education. FRIDE LINDSTØL identifies and explores two contrasting perspectives of performativity. One perspective originates from performative education, and the other from performative teaching. The former prioritises methods, rituals, routines, and the use of specific techniques, whilst the latter emphasises dynamic, aesthetic, and relational actions. The study is a contribution to a performative pedagogy that has significance for how we teach practical actions and skills.

The second part of the anthology is introduced by HEGE MYKLEBUST, SISSEL MARGRETHE HØISÆTER, MICHEL ALEXANDRE CABOT, and VIGDIS VANGSNES. It consists of five articles written by in-service (i.e. practicum) or preservice teachers (PSTs) who have been involved in the research project *Rehearsing Teaching Professionally*. The examples highlight how the practicum teachers and PSTs have worked to build professional teaching repertoires of embodied, reflective, and purposeful actions.

In article 5, INGEBORG GLETTE ÅSLAND has observed PSTs as they enact their prepared and rehearsed activities in the subject mathematics.

Article 6, written by LENA KIRKVOLL TRAA, reports on the enactment of teacher-in-role and talk moves in the subject English as a Foreign or Second Language.

In article 7, KRISTIN KOLØY illustrates how the principles of the ReTPro rehearsal cycle can be used in mentoring, while article 8, by LILLY-ANNE LITLABØ, examines how a focus on modelling and reflection can be utilised to carry out learning conversations about classroom management and group dynamics in each class.

In article 9, ISABELLE GRUDE CHRISTIANSEN and THEA KAROLINE SØMME present their experiences with, and reflections on, participating in the ReTPro project as preservice teachers.

In part 3 of the anthology, empirical aspects of rehearsing in the project *Rehearsing Teaching Professionally* are under scrutiny. This part of the anthology is introduced by Ruth Leitch. It consists of four articles which touch upon similar concepts, that is, teachable moments (Hyun & Marshall, 2003), critical moments (Myhill & Warren, 2005), golden opportunities (Walshaw & Anthony, 2008), or noteworthy moments (van Es et al., 2017). These moments represent meaningful decision-making moments during instruction that can further PSTs' professional development by providing them with an opportunity to reflect on both more successful (used), or less successful (lost), moments of students' learning.

In article 10, MICHEL ALEXANDRE CABOT and JON BRODAL examine PSTs' video-stimulated reflections on whole-class discussions that can be useful for vocabulary learning at elementary school. The case study highlights the PSTs' use of various talk moves and reflections in relation to used or lost moments of vocabulary learning. The study identified that using basic talk moves can lead to noticing vocabulary gaps, whilst advanced moves facilitate hypothesis-testing and metalinguistic reflection. The study emphasises the importance of dialogic whole-class discussions as a method to strengthen vocabulary learning in EFL/ESL teacher education.

In article 11, HEGE MYKLEBUST and GRY TUSET look into PSTs' ability to notice and reason about ambitious teaching practices through a video-based reflection conversation with practicum and campus teachers after practicum. The study identified that PSTs' initial noticing and pedagogical reasoning did not fully grasp the complexity and possible different instructional purposes in the teaching situations. During the conversation, the PSTs

were given the opportunity to engage in a discussion about the pedagogical dilemmas, and how different pedagogical actions might lead to different purposes. Their pedagogical reasoning developed in the direction of ambitious teaching and became more elaborate.

Article 12, written by MICHEL ALEXANDRE CABOT, suggests that focusing clearly on pre-designed (well-planned authentic dilemmas) and open-designed dimensions (improvisations), as well as the formation of a multitude of (used or lost) teachable moments, may develop the PSTs' intercultural citizenship. Indeed, the PSTs questioned attitudes and beliefs, noticed knowledge and comprehension gaps, decentred and adapted communication and behaviour. This study emphasises the importance of video-stimulated reflection after rehearsing as a method to strengthen critical intercultural citizenship in EFL/ESL teacher education.

In article 13, MARIT KULILD, MICHEL ALEXANDRE CABOT, and TONE IVERSEN investigate PSTs' reflections on the use of talk moves when conducting individual student-teacher conversations ('elevsamtaler' in Norwegian) during practicum. Reported talk moves such as saying more, and challenge, were successful and showed the supportive nature of dialogic talk. Reasons behind 'lost moments' related to uncertainty in the use of wait time, and lack of spontaneous follow-up questions, which challenged the cumulative principle of dialogic talk. The PSTs gained an increased awareness of their own dialogic skills, which may help strengthen their professional development.

Part 4 of the anthology presents empirical aspects of rehearsing across various teacher education programmes. It is introduced by ANNA SFARD and JOANNE O'FLAHERTY.

In article 14, COLIN CHRISTIE discusses the use of microteaching as a particular aspect of rehearsal in the preparation for secondary school teachers of modern languages at a university in Scotland. More specifically, this article looks at the history of microteaching, its potential advantages and drawbacks, and the adaptation of a university course for use in its own specific context, and for its own PSTs. PSTs' responses to their experiences of microteaching show a very positive evaluation of their involvement with the microteaching activities.

Article 15, by LENKA GARSHOL and SUSAN ERDMAN, explores the effectiveness of on-campus teaching rehearsals in teacher education, with a focus on grammar instruction in English teaching in Norway. This study

illustrates how rehearsals of explicit grammar instruction enhance preservice teachers' ability to integrate instructional methods. The paper argues that on-campus teaching rehearsals are particularly effective in preparing preservice teachers for grammar instruction, as they highlight the critical transition from understanding instructional methods to enacting them proficiently in the classroom.

In article 16, KRISTIN KROGH ARNESEN, KIRSTI RØ, ANITA VALENTA and REIDUN PERSDATTER ØDEGAARD examine preservice teachers' role-plays of discussions promoting students' mathematical reasoning. They observed different challenges during planning: superficiality, too demanding mathematical complexity, and unequal participation. The planning challenges clearly impacted both the teachers' moves and the structure of arguments in the enactments of the role-plays. Their results indicate a need to find a way to strengthen the planning phase, particularly when working with complex mathematical content as reasoning.

In article 17, ANITA VALENTA and OLE ENGE investigate preservice teachers' development of mathematical knowledge in the context of work on role-plays. Here, preservice teachers work in groups without continuous supervision and enact instructional activities in role-plays, assuming the roles of teachers and students. It seems somewhat arbitrary whether the PSTs discuss the mathematical content during their group work, and how they do that. Their findings suggest that new mathematical content needs to be thoroughly worked on before or during work on role-plays, and that the teacher educator needs to guide that.

In article 18, MORTEN ODDVIK, MAGNUS SANDBERG, CECILIE ENQVIST-JENSEN, and LARS OPDAL explore how groups of novice PSTs rehearse using the simulated learning resource *Breaktime*, which consists of 17 videos featuring digital bullying scenarios and socio-emotional transgressions in a ninth-grade class. This learning resource can serve as a bridge to real-world practice early in teacher education and help form a foundation for the professional development of preservice teachers.

In the epilogue, ELAINE MUNTHE and KARI SMITH highlight some tensions and conceptual variations shown in the various articles of the present anthology. Most importantly, they suggest both a 'practice turn' and a 'professions turn' that encompasses practice, research, and theory in a comprehensive way to strengthen professional knowledge and skills in teacher education.

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Part 1

# Theoretical Aspects of Rehearsing



Biesta, G. (2025). Preparing for the incalculable rehearsing the art of teaching.  
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## Prologue 1

# Preparing for the incalculable: Rehearsing the art of teaching

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**Abstract:** The assumption which underlies this prologue is that teaching is not a technique that involves intervening upon students in order to produce measurable learning outcomes, but that it is an art which involves tactful and thoughtful engagement with always unique educational situations, always aimed at equipping and encouraging students to become subjects of their own life. In this prologue I ask how teachers can best be prepared for the everyday reality of classrooms, and argue that the only way to enter the practice is through practising the practice. I explore what teaching is, highlighting that at the heart of teaching we find the work of capturing and redirecting the attention of our students and encouraging them to meet what is brought to their attention. I discuss ways in which such work can be practised, showing the multi-layered nature of attention-(re)direction. In addition I discuss the ways in which teaching is a performative art – teaching needs to be enacted in always concrete situations – and what kind of practising preparation for teaching-as-performance requires. I propose a form of teacher reflection that gets students closer to the practice rather than further away from it, and highlight the importance of the art of ending teaching. Through all this I contribute to the emerging literature on rehearsal in teacher education.

*Keywords:* teaching, teacher education, rehearsal, attention, performativity, reflection

**Sammendrag:** Antakelsen som ligger til grunn for denne prologen, er at undervisning ikke er en teknikk som innebærer å gripe inn i elevens læring for å produsere målbare læringsutbytter. I stedet er det en kunst som involverer taktfullt og gjennomtenkt engasjement med alltid unike utdanningssituasjoner, med mål om å utruste og oppmuntre studenter til å bli subjekter i sitt eget liv. I denne prologen spør jeg hvordan lærere best kan forberedes på klasserommets hverdagsrealitet, og argumenterer for at den eneste måten å tre inn i praksisen på er gjennom å praktisere praksisen. Jeg utforsker hva undervisning er, og fremhever at i kjernen av undervisning finner vi arbeidet med å fange og om dirigere studentenes oppmerksomhet, samt oppmuntre dem til å møte det som bringes til deres oppmerksomhet. Jeg diskuterer måter dette arbeidet kan praktiseres på, og viser den flerlags naturen av oppmerksomhets-(re) dirigering. I tillegg diskuterer jeg hvordan undervisning er en performativ kunst – undervisning må utføres i alltid konkrete situasjoner – og hva slags praktisk forberedelse undervisning-som-*performance* krever. Jeg foreslår en form for lærerrefleksjon som bringer studentene nærmere praksisen i stedet for lenger bort fra den, og fremhever viktigheten av kunsten å avslutte undervisning. Gjennom alt dette bidrar jeg til den fremvoksende litteraturen om øving i lærerutdanning.

**Nøkkelord:** undervisning, lærerutdanning, øving, oppmerksomhet, performativitet, refleksjon

## Introduction

In a text from 1984, republished as a journal article in 1988, the British curriculum scholar Lawrence Stenhouse wrote a sentence which, in hindsight, can only be characterised as visionary. It reads: ‘Improving education is not about improving teaching as a delivery system... crucial is the desire of the artist to improve his or her art’ (Stenhouse 1988, p. 50). The reason for calling it visionary is because, if one thing has come to dominate educational policy and research over the past decades, it is precisely the idea that the improvement of education is a matter of ‘driving’ the system, rather than supporting teachers’ professional action. Moreover, to the extent to which the teacher is ‘in focus’ in these developments, it is increasingly as an evidence-based technician, rather than as a thoughtful professional.

Interestingly, Stenhouse presents the teacher as an *artist*, not just in the artistic sense – although there is definitely an aesthetic dimension to teaching (see Biesta in press) – but also in the Greek sense of art, which might best be translated into contemporary English as craft (see also Biesta 2023a).

Whereas teaching as technique assumes that with the ‘right’ interventions teachers can produce the ‘right’ outcomes – and the language of intervention, production, and outcomes already shows the technicist thinking involved – teaching as art acknowledges that the work of teachers encompasses tactful and thoughtful engagement with the here-and-now. It acknowledges that teaching involves engagement with concrete situations that, in some respect, are always new and unpredictable. Moreover, these are situations in which teachers do not intervene ‘upon’ students-as-objects but are in communication – or, with a phrase from William Pinar: a ‘complex conversation’ (see Pinar 2012) – with their students-as-subjects.

The dynamics of teaching are therefore fundamentally ‘incalculable.’ There is no way in which we can calculate what is going to happen, how students might respond to what we present to them, and how, in return, we, as teachers, in turn respond to our students.

This then raises an important question for teacher education, namely how we can prepare new teachers for the incalculable. (The phrase ‘preparing for the incalculable’ stems from the philosopher Jacques Derrida, who had a real ‘nose’ for the complexities of human interaction; see Biesta 2001.) In the following pages, I offer some reflections on this predicament,

that is, of how to prepare teachers for what, in a fundamental sense, cannot be foreseen.

I begin by asking how one can actually ‘enter’ the art of teaching. The simple, but nonetheless important, answer to this question is that the only entry that is possible is by joining the practice of teaching, which one does by practising or rehearsing the practice. There is a practical – or, if one wishes, praxeological – dimension to this, but there is also the question of what kind of practice teaching itself is.

Here I will suggest that the basic gesture of teaching is that of pointing or, in more descriptive terms, that of redirecting the attention of students. This then raises the question of what it might mean to practise such ‘acts’ of redirecting. Next to this, I will argue that teaching always has a performative quality – the ‘doing’ of teaching communicates as much as the intentions ‘behind’ the doing. This also raises the question of how the performance – or better, performativity – of teaching might be practised or rehearsed.

I conclude with a brief ‘coda’ on reflection and the practising of it, and an observation about the importance of bringing teaching to an end.

## **Entering the art of teaching**

The question of how teachers can bring their students ‘inside’ a field, or practice, or body of knowledge, is one of the enduring, age-old questions of education.

In Plato’s dialogue ‘Meno’ the predicament is put as a ‘learning paradox’. From the perspective of the student, the question here is how we can ever search for something new, because if we do not yet know what it is, we are unable to search for it, which also means that as long as we do not know what it is, we cannot know whether we have already found it. There is a similar predicament from the side of the teacher, because if we want to teach our students something new, then how can we tell them about it, or instruct them about it, if they do not yet know what this ‘it’ is? It seems, then, that learning something new, or teaching something new, is actually impossible (on this see also Roth 2011).

One interesting and helpful answer to this problem has been given by Ludwig Wittgenstein in what has become known as his ‘language-game’ theory (see Wittgenstein 1958). Wittgenstein uses the example of teaching someone a new game. Quite often, when we begin to explain a game that we know to somebody who does not know it, we explain the rules, or explain the moves of the game, or what the different game pieces mean, but much of that information does not really mean anything to someone who does not know the game.

So, we often reach a point in our explanations when we say ‘OK, let’s just start playing, and then things will become clear!’ And that is exactly what we often do in teaching: we invite our students to just ‘come along’, join the practice, so that things slowly begin to become meaningful to them.

That, in short, is how we ‘enter’ a practice and, over time, begin to get a sense of what ‘matters’ in the practice, what the point of the practice is, what the rules and assumptions are, even what the values and concerns of the practice are, and how, through all this, the practice ‘makes sense’ for those who practise it. Over time, and of course in conversation with those who have already been practising the practice longer, we then also begin to get a sense of what it means to practise the practice well and eventually become able to come to our own judgements about this.

But all this only becomes possible once one is on the ‘inside’ of the practice, and one could say that the only way to enter up there – and to enter a practice more generally – is by practising it, by joining in.

## **What is teaching?**

I considered it important to start at the practical ‘end’, so to speak, so as not to make the mistake of starting with a definition or an explanation of the practice, precisely because those definitions and explanations do not make sense as long as one is on the ‘outside’ of the practice.

But where it concerns the practice of teaching, entering the practice also at some point raises the question what this practice *is*, that is, how we can describe what we do when we teach, why it matters, also what teaching is not, and so on.

While there is a substantial amount of literature on teaching, on what it is, and how it can be defined – for an overview see Gittomer & Bell 2016; Biesta & Stengel 2016; see also Biesta 2023b – the account of teaching I have found tremendously helpful, and which is also very appropriate for this prologue, can be found in the work of the German educational scholar Klaus Prange.

Rather than trying to define what teaching is or, as often is the case, what teaching is *for*, Prange has suggested focusing on the unique and distinctive *form* of teaching, that is, on what we do when we teach. Here, Prange has made the simple but crucial suggestion that all teaching is fundamentally a matter of pointing (see Prange 2012; see also Biesta 2022). In German, Prange uses the word ‘Zeigen’, which translates both as pointing and showing; I prefer to translate it as pointing in order to highlight the actual ‘gesture’ of teaching.

Another German scholar, Dietrich Benner, has provided a slightly more precise description of the gesture of teaching, when he refers to it as the art of redirecting someone’s gaze (in German *die Kunst der Umlenkung des Blicks*; see Benner 2020, p. 21), or, in a slightly ‘broader’ formulation: the art of redirecting someone’s *attention* (see also Rytzler 2017).

Key in this description is the ‘re’ of ‘redirecting’, because we can assume that human beings can direct their own attention, but what no one can do by themselves is to *redirect* their own attention. For this we need someone else, which also shows that in Benner’s description of the gesture of teaching we find an argument for the important distinction between ‘learning’ – which anyone can do on their own – and ‘teaching’ (and ‘being taught’), which always requires someone *else*, so to speak.

Prange holds that pointing is essential for education by arguing that without pointing, that is, without directing the student’s attention, there is no education. In German: ‘Wenn es das Zeigen nicht gibt, dann auch keine Erziehung’ (Prange 2012, p. 25). Prange also highlights that pointing has a double orientation. It is always directed *at something* and in one and the same ‘move’ *at someone*.

Pointing is never an abstract ‘Look *there!*’, but always a concrete ‘*You*, look *there!*’ (see Prange 2012, p. 68). Pointing thus calls someone to their attention or, more precisely, it calls someone to their *own* attention. In that regard, pointing is basically an evocative gesture.

While Prange highlights that pointing raises the student’s attention and even demands their attention – pointing ‘*macht aufmerksam und fordert*

Aufmerksamkeit' (Prange 2012, p. 70) – pointing can never enforce the student's attention, nor can it control what students will do with their attention. Pointing thus also points at the student's freedom, we might say, in that it raises a question for them about what they will do with their attention.

Nowadays, we may have become conditioned by Facebook and similar technologies into thinking that when something is brought to our attention, the only thing it would require from us is to push the 'like' or the 'dislike' button. That, of course, would be a travesty.

Trying to capture – we also say 'catch' – the attention of our students and redirect it onto something else is best understood as the first step of teaching, though we should not forget that it is the most crucial and essential step.

But after this first step, a 'pedagogy of attention' needs to provide students with opportunities for thoughtful, intellectual engagement with what has come to their attention; engagement which, taking inspiration from Simone Weil (see Weil 1965, p. 72), should always be conducted with a degree of humility. Such work is not an end in itself but should ultimately lead to a moment of judgement. It should lead to the question what all this that has come to my attention and understanding is asking of me, or, in 'bigger' terms: Now that I have arrived here in my life, how do I carry on from here?

## **Practising teaching is practising pointing**

On this account of teaching, then, it follows that the very first thing that needs to be practised is pointing or, in the broader formulation I have utilised in the previous section, practising how to 'capture' one's students' attention. This is, of course, no mean feat. It starts with catching one's students' attention, which can be done in all kinds of more and less direct ways. A simple, but not automatically 'effective', way is to say to students that they should pay attention, but if students do not pay attention to the invitation to pay attention, then the invitation, or demand, to pay attention will not do anything at all.

Catching one's students' attention thus has to start somewhere else, which can be by bringing something to the students' attention – a sound, an image, a text, and so on – although, of course, the presence of the teacher can itself

also be a potential object of attention. There is, therefore, much to practise in catching one's students' attention, and also in studying how others do this.

Catching one's students' attention is one thing, but then (re)directing it onto something is still quite another, particularly if one understands that from an educational point of view the gesture is never just 'outwards' – redirecting one's students' attention onto something – but also 'inwards' – redirecting one's students' attention also to themselves. Attending to their own attention would be a first step for this.

And then there is also the work that needs doing in 'holding' one's students' attention onto something – slowing down and focusing the attention so that something can be attended to, and the attention does not simply drift away to something else. Along the lines of the pedagogy of attention hinted at in the previous section, there is then the work to do to begin to 'intellectualise' the attention, that is, to make the attention thoughtful, to put it briefly. And there is the work to lead the students' attention to the point of discernment, that is, to bring the question of 'where to go from here' to their attention.

In all of that, students may have a tendency to throw their attention back to the teacher (for a detailed phenomenology of this see Biesta 2024), because most students understand that the 'game' of education is not an entirely open game, but one with constraints, and rewards. The simple question whether something needs to be known for the exam is an example of throwing the responsibility students should have for their own attention back to the teacher, on the assumption that the teacher has the authority – and is the authority figure – who ultimately can decide over the students' attention.

Up to a point, this may be true, but teachers should understand, of course, that at the end of the day students need to take responsibility for their own attention – which means that throwing the students' attention back to them is also part of what needs practising. (I use 'throwing' here metaphorically, although from my own experience as a teacher I find it quite an appropriate metaphor; see also Biesta 2014.)

In addition to all the 'interactive' dimensions of teaching, it is also important not to forget that teaching always 'takes place' somewhere, and that the staging of where teaching takes place matters as well. More concretely: teachers also have important work to do in safeguarding space and time so that attention becomes possible. That is why it is virtually impossible to teach 'on the street' – literally and metaphorically – because there are simply too many

distractions. And it is also why many educational technologies, as well as the architecture of school buildings, and the ‘choreography’ of the classroom, are all intended to make attention possible.

Part of practising teaching is therefore also about practising different staging, but the more important notion here is the idea of the ‘choreography’ of teaching, as the way in which teachers move in and through classrooms, as an important ‘tool’ for all the attention-seeking work teachers perform.

## **Practising the performance of teaching**

The idea of choreography brings me to the other point I wish to highlight about the practice of teaching, which is the fact that all teaching is *performative*. By this I do not just mean that teaching needs to be ‘performed’ (‘enacted’ is another way of putting it) and that the performance of teaching always takes place in front of an audience – which are two of the ways in which teaching is of a similar quality as performing arts such as song, dance, and music. I also mean that the way in which teaching has significance for students – the word I would not like to use here is ‘impact’ – is not just about what teachers say but also about how teaching is done, which also includes the ‘how’ of saying, as one can say the same thing in very different ways, with very different ‘effect.’

This already suggests a few important things about practising teaching and the need for practising teaching, because just as a musician can practise for a long time at home, or a dancer can practise for a long time in the studio, and even do so to a degree of perfection, the question whether they manage to perform in the same successful way in front of an audience remains entirely open until they actually are in front of an audience and ‘do’ their performance. There is, therefore, practising as *rehearsing* – which is important for teachers as well – but there is also the practising in front of an audience, which is an entirely different practising for a range of reasons. The most important reason is that any performance in front of an audience is ‘real,’ which means that what one does matters and, most importantly, cannot be undone. (Even if one were to stop and apologise to the audience and then do it again, what happens the second time will be tainted by the interruption.) There is therefore quite a lot

at stake in the actual performance of teaching, which explains the additional stress such a real performance may cause in the students rehearsing it ‘in practice.’

That the ‘how’ of teaching matters means that teachers also need to be(come) aware of one’s ‘way of teaching’ and of the way in which one’s ‘way’ communicates to students. This requires that, as teachers, we need to work with a special attention ourselves as well, not just attention to the ways in which students respond – or not – to what we say, what we ask them to do, how we instruct them, how we support them, how we provide them with feedback, and so on, but also attention to the ways in which students respond to our ‘ways’, so that we can also adjust our ‘ways’, if possible.

This begins to show that the performative character of teaching requires quite complex modes of attention from teachers, so that it is not just the performance itself that needs to be rehearsed, but also the accompanying attentiveness.

Whereas dancers, musicians, or theatre players want their performance to have some kind of ‘impact’ on their audience – at least they hope that their performances will not leave their audiences indifferent – in teaching this ‘hope’ is more explicit, more precise, and more intentional. The reason for this is that all teaching, unlike indoctrination, is always interested in, concerned about, and in a fundamental sense ‘after’ the freedom of the student. In all good teachers, therefore, there should always be an ‘appeal’ to the freedom of the student. Dietrich Benner has characterised the fundamental appeal that should occur in all teaching as ‘*Aufforderung zur Selbsttätigkeit*’, which literally translates as summoning to self-action (see Benner 2015).

This appeal is not the injunction to be *yourself*, but rather to be *a* self, that is, to be a subject of one’s own actions. In more everyday language, we could say that in teaching we (try to) knock on the ‘door’ of our students and ask if anyone is there. This is what above I have referred to as the double nature of pointing, where teacherly pointing never only points at something but also points at someone, that is, as an invitation to our students to involve themselves in what we try to bring to their attention.

How to appeal to students in such a way that we leave space for their freedom – which ultimately comes down to their judgement or discernment (see above) – is another important and not immediately ‘easy’ dimension of the performance of teaching that definitely needs practising.

## A coda on reflection

In this prologue I have tried to focus on the practice of teaching and teaching as practice, because I do think that in order to become a teacher, one should not just ‘enter’ the practice but also practise the practice, first of all because practising the practice is the one and only way to arrive on the ‘inside’ of teaching.

But practising the practice of teaching, on all the dimensions outlined above, is also critical and crucial for becoming a teacher because teaching *is* a performative art, and as with all performative arts, one can only work on one’s artistry by practising – in the studio or rehearsal room, but ultimately also in the real situation of the performance, as the latter practising is ultimately the only way in which one can work on preparing oneself for the incalculable character of the teaching situation.

At this point, many might say that preparing to become a good teacher is not just a matter of ‘doing’, but also a matter of reflecting on the doing. This is, after all, what the literature on reflective teaching says again and again.

It is true that practice without reflection – though I would prefer the word ‘thoughtfulness’ – is not enough, because one may acquire many routines but no understanding of what these routines ‘mean’, what their potential value and import may be. There is a danger that reflection becomes disconnected from the practice, and becomes something of its own, so to speak. This has been very much my experience as a teacher educator, where I found that students had become so good at writing ‘reflective essays’ that I began to wonder whether they had any significance for, or even connection with, their teaching practice and the practising of their teaching.

As I have discussed elsewhere in much detail (see Biesta 2019), it is first of all important to acknowledge that reflection can never be ‘empty’. In order to reflect, one needs something to reflect *with*, which highlights the importance of theory and language for reflecting. Reflection, to put it differently, should always be mediated by theory, and what theory provides is language – language that helps to see, language that helps to name and identify, language that helps to see differently, language that helps to generate questions, and even language to become aware of what is absent.

But for reflection to be meaningful and keep the one reflecting close to the practice rather than running the risk of moving away from it, it also needs

a helpful question. One concern I have is that reflection is often framed in terms of the question as to what the student has learned from a particular experience or situation. But the question ‘What have you learned?’ very quickly moves the one reflecting away from (attention to) the situation towards what one has (literally) ‘taken’ from the situation or experience.

It is for this reason that I have introduced a different question for my students, which is not to reflect on what they have learned, but on *how they have been* in a particular situation. The question ‘How have you been?’ bends the attention in a very different direction, namely towards the situation itself. And to carefully try to describe (rather than to judge) how one has been in a situation is a way – and perhaps even the way – to focus one’s attention onto one’s own practising.

## Conclusion: The end of teaching

In this prologue, I have shared some observations about how future teachers can be prepared for a practice that is fundamentally ‘incalculable’ – a practice, in other words, that cannot be predicted through calculated extrapolation from the past, because it always presents teachers with new, unpredictable, and often unexpected situations and experiences.

I have suggested that this requires artistry and have argued that the way to develop one’s teacherly artistry is by engaging with the practice itself – a matter of practising the practice, as I have called it. Although there is, of course, much more to say about the artistry of teaching, and about the ways in which teacherly artistry can be practised, I hope that the foregoing observations provide a sense of direction for how this might be done, and also a justification for why the practising of the practice is essential.

I would like to conclude with a fitting quotation from Bertolt Brecht, taken from his book *Me-ti: Book of interventions in the flow of things* (Brecht 2016). The quotation is fitting, because teacherly artistry not only requires that teachers are able to *begin* teaching, start a lesson, capture the attention of students, and so on.

There is also art needed in order to stop teaching – that is, to find the right ‘moment’ when teaching needs to come to an end, and we ‘allow’ students the freedom of their own attention, with the full responsibility that comes with that, of course. As Brecht beautifully puts it: ‘Every teacher must learn how to stop teaching, when the time comes. That is a difficult art. Only a few are able, when the time is right, to allow reality to take their place.’ (Brecht 2019, p. 98)

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# Cultivating democratic formation through reflective rehearsals in teacher education

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**Abstract:** This theoretical article examines the role of critical and reflective rehearsals in teacher education as a means to foster preservice teachers' democratic formation. It emphasises the necessity of integrating critical reflection with practical action. This integration prepares preservice teachers to participate in the school's democratic societal mandate. Drawing on theories from scholars and educational philosophers such as John Dewey, Paulo Freire, and Jürgen Habermas, the article argues that rehearsals in teacher education must surpass the mere dissemination and adoption of 'best practices.' Instead, they should serve as platforms for preservice teachers to engage in critical scrutiny of themselves and their surroundings. This promotes an understanding of the social, cultural, and political contexts of education. In conclusion, the article presents the rehearsal cycle implemented in teacher education by the project Rehearsing Teaching Professionally as a methodical example. It illustrates how this cycle can be used to enhance critical thinking and democratic engagement.

*Keywords:* democratic formation, critical thinking, practice, teacher education

**Sammendrag:** Denne teoretiske artikkelen undersøker korleis kritiske og refleksive øvingar i lærarutdanninga kan tene som eit middel for å fremje lærarstudentar si demokratiske danning. Det understrekar samankoplinga mellom kritisk refleksjon og praktisk handling som naudsynt for å førebu lærarstudentar til å delta i skulen sitt demokratiske samfunnsmandat. Med utgangspunkt i teoretikarar og utdanningsfilosofar som John Dewey, Paulo Freire og Jürgen Habermas, argumenterer artikkelen for at øvingar i lærarutdanninga må omfatte meir enn ei vidareformidling av effektive strategiar. Øvingane bør omfatte lærarstudentar si kritiske gransking av seg sjølve og sine omgjevnadar, for slik å fremje ei forståing av utdanning som sosialt, kulturelt og politisk situert. Artikkelen presenterer avslutningsvis øvingssyklusen implementert i lærarutdanninga av prosjektet Rehearsing Teaching Professionally som eit metodisk døme, og illustrerer korleis denne kan nyttast til å styrkje kritisk tenking og demokratisk danning.

*Nøkkelord:* demokratisk danning, kritisk tenking, øving, lærarutdanning

## Introduction

In a multicultural, globalised society marked by growing inequalities, it is imperative for preservice teachers (PSTs) to develop an understanding of how teaching relates to the societal mandate of fostering democratic competencies, values, and actions. In Norway, the aim of democracy and citizenship is emphasised across disciplines in the core curriculum (Ministry of Education and Research, 2017). At the same time, a challenge for teacher education is to cultivate forms of democratic professionalism that promote social justice (Zeichner, 2010). A condition for this objective is that teacher education is not reduced to the reproduction of traditional instructional norms; rather, it should promote possibilities for co-creating democratic practices.

Conventional approaches in teacher education have been critiqued for their limited responsiveness to the needs of PSTs and their lack of transformative impact on practice (Korthagen et al., 2006; Liston & Zeichner, 1987). In response to such challenges, practice-based teacher education has taken form and gained attention. Grossman and McDonald (2008) emphasise enacting teaching through what they term ‘pedagogies of enactment’. Drawing inspiration from Grossman’s ‘approximations of practice’ (2018; 2008) and ‘the learning cycle’ by McDonald et al. (2013), the project *Rehearsing Teaching Professionally* (ReTPro) has introduced reflective rehearsal cycles in a Norwegian teacher education programme.

Criticism of practice-based teacher education and Grossman’s (2018) definition of ‘core’ practices points out that producing narrow definitions of ‘good’ teaching or ‘effective’ strategies, disregarding teaching as situated within a social, cultural, historical, and political context, is highly problematic (Philip et al., 2019; Zeichner, 2012). However, what is considered ‘practice-based’ is understood and implemented in various ways and for different purposes in teacher education programmes (Zeichner, 2012). Fitchett and Moore (2022) find that rehearsals can provide justification for decision-making and criticism of pedagogical choices, and render visible dilemmas and growing pains inherent to teaching. The intentions, assumptions, and pedagogical framework that underpin rehearsal cycles may influence their contributions to teacher education.

This article seeks to discuss a possible theoretical framework for understanding reflective rehearsals in relation to democratic formation.

Alongside learning ‘how to teach’, PSTs should simultaneously cultivate a critically reflective stance, which is necessary for their future role in upholding the democratic mandate entrusted to schools. According to Jannicke Heldal (2023, pp. 23–43), this mandate can be delineated into two dimensions. On the one hand, it involves the qualification of future generations through the transmission of knowledge and competencies to engage in labour and participate in a democratic society. On the other hand, it encompasses human development processes, where knowledge, socialisation, and identity formation are interwoven over time (Biesta et al., 2015, 2016).

This article emphasises the latter dimension, which is often referred to as subjectification, democratic formation, or *Bildung*. Democracy is a fragile entity that demands a collective endeavour. As Flanagan elucidates, democracy is a system of thought into which individuals are socialised (2013, p. 12). The foundation of social justice, democratic power sharing, the rule of law, and governance for and by the people hinges on the cultivation of critical thinking, democratic values, and interactions.

A problem in teacher education has been the promotion of reflection as an end in itself, understood as an individual activity disconnected from a democratic or political project (Zeichner & Gore, 1995). This may be related to a misconception that educators should remain neutral, which Hellesnes (1975a) underlined is directly harmful to both democracy and a democratic upbringing.

Through rehearsals oriented towards democratic formation, PSTs should engage with critical questions inside and outside of the classroom. In this manner, their future students can be familiarised with and included as subjects in discussion and transformation of ‘the game’ and not be reduced to adaptive objects simply learning to play by its rules.

Drawing upon the works of scholars and philosophers of education such as John Dewey, Paulo Freire, Jürgen Habermas, and others, this article addresses the following question: *How can critical and reflective rehearsals in teacher education foster democratic formation amongst preservice teachers?* This question underpins the theoretical discussion in upcoming sections.

The article initially explores the challenge of integrating reflection and experience in teacher education, underscoring the preconditions for rehearsals to be relevant for PSTs’ democratic formation. Three key elements are emphasised.

Firstly, as reflective subjects, our context-specific positioning must be acknowledged and scrutinised to leverage the emancipatory potential of critical reflection.

Secondly, to comprehend our interconnectedness with others and collectively strive towards a common good, we must enhance our capacity to adopt others' perspectives.

The third aspect emphasises reflection as a means of resistance against passive compliance.

Lastly, ReTPro's rehearsal cycle is discussed as a methodical example of how rehearsals may be enacted in teacher education to foster critical reflective practice and democratic formation.

## **Reflective rehearsing and democratic formation**

Teacher education should intellectually and practically prepare future teachers for developing and enacting professional practice. A challenge mentioned initially lies in enabling PSTs to integrate reflection with practical action.

For Dewey, reflection is linked to previous experience. When we reflect, we transform what begins as an immediate intuition from our experience through ideas and conceptualisation (Dewey, 1998d). Experience, Dewey explains, consists of transformative events that influence an individual's ability to form insights, attitudes, and judgements, while also being a product of the surrounding environment (Dewey, 1997).

Education can thus be understood as the collective sum of experiences from previous generations, transformed into ideas and concepts. In this respect, Dewey has been criticised for a lack of connection between education as experience and its cultural or societal purpose (Bonde, 1970). This critique may be relevant for teacher education, as it raises the question: Is it always tenable and acceptable to reproduce our experiences (individually or collectively) through our actions?

In teacher education, PSTs bring with them previous experiences as former students in school, which affect their understanding of what constitutes 'good' or 'democratic' teaching. Often, these initial understandings

lack professional judgement and can potentially be problematic, considering a democratic purpose, if implemented without critical awareness. Certain experiences with and reflections on teaching may be harmful to reenact in a classroom, as our societal understanding of educational purposes, problems, and ideals is constantly evolving.

Therefore, teacher education must challenge and scrutinise these perceptions while simultaneously facilitating the creation of new experiences and reflections amongst PSTs. In this mission, responsibility rests on teacher education concerning PSTs' democratic formation.

Formation is used in this chapter as an English translation for the German concept of *Bildung* and the Norwegian term *danning*. It is, however, a difficult concept to translate because of its relation to tradition and historical context. One could argue that there is no direct equivalent term that captures the full depth and nuance in the English language.

The concept of formation has been interpreted and applied in various ways. Generally, it can be defined as both the process and the product of personal development, guided by reason (Gundem, 2011). Another definition points to a form of socialisation that opposes adaptation. Hellesnes (1975b) explains that adaptation is about learning the rules without seeing that the game can be discussed and changed. This reduces individuals to objects for political processes that they do not see as political. Formation is about being socialised into issues concerning the conditions for what happens around us and with us. Therefore, it emancipates individuals to political, acting, and thinking subjects (Hellesnes, 1975b).

Formation thus affirms a critical, self-reflexive, and political subjectivity with a fundamental attitude oriented towards investigation and problematisation (Koselleck, 2007, p. 43; Straume, 2013, p. 30).

Within education, reflection is integral to democratic formation. The democratic mandate of education has been defined by Martha Nussbaum (1997) as cultivating humanity or 'nurturing the human'. Here, the capacity for reflection is necessary in three areas: (1) critically reflecting on oneself and one's traditions, (2) seeing oneself as connected to a holistic social community beyond one's close relationships, and (3) developing the ability to empathise with others' situations (Nussbaum, 1997, pp. 9–10). These are aspects of democratic formation that teacher education should introduce PSTs to.

Further in the article, an interplay between critical, reflective rehearsing and democratic formation is argued for through the capacities emphasised by Nussbaum.

Returning to the connection between experience and reflection, this chapter argues that rehearsing in teacher education can be an arena for PSTs to create new experiences with teaching that can promote their democratic formation. Through rehearsing, PSTs can gain new perspectives on their previous perceptions of teaching and gain a foundation for evaluating educational goals and practices against democratic values and attitudes.

However, a prerequisite for this is that rehearsing throughout teacher education encompasses critical reflection and encourages critical judgement. PSTs must rehearse to question what they aim to achieve by teaching, where these ideals originate, and how they attempt to achieve certain goals. As underlined by Zeichner and Gore (1995), it is simultaneously essential that PSTs' reflections are not treated as an end goal in itself. Instead, reflection should foster the realisation of democratic intentions in practical action.

## **Critical self-reflection and contextual awareness**

As reflective subjects, we are situated in time and space. When do we reflect, and what do we reflect upon? Reflection is connected to disciplinary, didactic, pedagogical, and professional questions in teacher education. Such questions are also situated within a context.

Dewey (1998a) points out that context functions as a vessel, not a destination. In other words, context transports the mind beyond itself. For democracy, it is essential to maintain a critical approach to our perceptions as products of the relationship between our subjective experiences and the contexts in which they arise. Our various motives for reflecting on specific questions at certain times must be considered to realise an emancipatory potential (Swindal, 1999, p. 230).

In *Postmetaphysical Thinking* (1992, p. 188), Habermas writes that our reflective awareness in time has led to many of our systems and actions being determined by our expectations of the future. This is also evident in education

in numerous ways. In addition to painting a picture of the present, educational reforms and the shaping of school subjects and curricula can also be thought to address an imagined future. The question of what should be taught in school is linked to what future generations will face in their young and adult lives. Recently, education has been focused on what is termed *21st Century Skills* (NOU 2014, p. 7). An increased focus on qualification for democracy and citizenship is a product of current expectations of what will serve us – or our nation – in the future.

In distinction, the formational and reflective dimension of democratic citizenship involves critically examining how this process unfolds. Pertinent questions in this context include how and by whom our expectations for the future are defined, and how the future we envision affects us and our present circumstances.

Representations of future expectations are found in school content. The consequences of climate challenges, technological development, and increasing socio-economic inequalities are current topics in various subjects that shape our perceptions of the time to come. A difference between what exists and what is possible is essential here. Dewey (2000) points out that reflection involves developing in new directions because the existing only matters if it is meaningful for the possible.

Through education aimed at democratic citizenship, a crucial point is that the future is created; it is not available to us in the present. This is also central for Freire, who, in his critique of an oppressive education system, emphasises rejecting both a view of the present as ‘well-behaved’ and a pre-defined future (2005, p. 85). The emancipatory aspect lies in the notion that the (social) world is not statically constructed. It is precisely such an understanding that makes societal change and improvement possible.

The ability to understand oneself as situated in but simultaneously an active creator of context can be practised in teacher education. This can be integrated into rehearsals by reflecting analytically on our assumptions and actions as teachers and educators.

Adorno and Horkheimer (1972, p. 189) explain that reflection on an object and self-reflection are interconnected; if one does not reflect on the world, one loses the ability to reflect on oneself and the capacity to distinguish between these forms. Reflection can thus be described as an analytical distance to oneself and one’s surroundings, making it possible to gain insight into both.

In teacher education, such an analytical gaze can, on the one hand, involve critically examining what perceptions, experiences, and assumptions we as teachers bring into a situation and how these shape choices and judgments during teaching. On the other hand, it is about exploring how one's actions can change the situation in which they are performed. Incorporating this into rehearsals may foster a form of self-awareness which recognises both the influence of context and future possibilities.

## **Perspective-taking and self-understanding**

Democratic formation and education concern our coexistence with others. The social element of reflection is pertinent in this context, as democracy has been termed the 'regime of collective reflectiveness' (Castoriadis, 1997, p. 132). Reflection can be regarded as fundamentally social.

Dewey (1998b) asserts that individuals who exist alone, whether mentally or physically, have few or no opportunities to reflect on experiences and discern their true value. Democracy demands that individuals use reflection to limit the selfishness inherent in their interests, thereby achieving a broader social perspective (Habermas, 1992; Swindal, 1999, p. 3). In this way, reflection can be directly linked to democracy as a way of life and a societal form of co-existence.

A persistent challenge of democracy is thus to relate to and care for individuals who hold different opinions, interests, and needs from our own. To understand ourselves as part of a larger public and a democratic community, one must also be able to empathise with the situations and perspectives of others.

Through rehearsals in teacher education, one can address this challenge by incorporating perspective-taking. For Habermas, perspective-taking is understood as a component of discourse theory, aiming to share and coordinate perspectives across a group of individuals. Through intersubjective communication, one transcends one's viewpoint and incorporates the views of those with whom one communicates (Habermas, 1993, p. 23).

In *Justification and Application*, Habermas (1993, p. 24) writes that for perspective-taking to occur, the entire group must first be included in a pre-interpreted lifeworld to thematise a problematised norm. This could mean presenting a hypothetical example. By stepping out of one's everyday understanding of the world, one creates space to meet each other's perspectives (Habermas, 1993, p. 12).

This assertion is challenged in an educational context by Paulo Freire, who claims the opposite in *Pedagogy of the Oppressed*. Since humans do not exist apart from their context and reality, he argues that one must start from the standpoint of individuals 'here and now' through authentic problem-oriented teaching (Freire, 2005, p. 85).

Collective discussions in rehearsals, whether arising from a hypothetical or an authentic experience, may support PSTs' democratic formation.

In educational contexts, the aim of collective discussions may differ. Habermas is perhaps best known for his deliberative understanding of democracy and the possibilities for reaching consensus (Habermas, 1998). Here, perspective-taking is a premise for any form of agreement to emerge (Swindal, 1999, p. 200). Agreement should not be understood as something that arises quickly and spontaneously, because it requires reflective actions from all participants. Therefore, it is a complicated process and not always possible to achieve.

Political democracy differs from educational situations in that formal laws and regulations must be enacted through democratic processes as a form of collective 'agreement'. This does not mean that the people collectively agree on all decisions made, but that the decisions are based upon consideration of the people's diverse opinions, values and needs.

Hess (2009) has suggested that dealing with controversial issues through discussion in education may be regarded as a proxy for democracy. In education, significant societal decisions are not undertaken. Therefore, classrooms might function as a safe arena for presenting different experiences and facing disagreement (Iversen, 2014).

In line with what Iversen (2014, p. 9) names *the community of disagreement*, practising how to disagree while still being part of a community can be a prerequisite for countering an oppressive and polarised society.

A unique quality of schools and universities is that they gather students with various backgrounds, values, and political beliefs. Freire states in *Seri-*

*ousness and Happiness* (2016, p. 47) that educational practice should provide experiences of the power and value of unity within diversity. Through understanding others, we also begin to understand ourselves and our interconnect-edness. Therefore, perspective-taking plays a vital role in identity development.

For Habermas, identity is threefold. *Numerical* identity refers to our self-determination. *Generic* identity concerns who we are as speaking and acting subjects, while the *qualitative* dimension refers to something achieved through human development (Habermas, 1987, p. 105). Qualitative identity arises by answering the question, ‘Who do I wish to be?’. This question may pertain to PSTs in teacher education by specifying it to: ‘Who do I wish to be as a teacher?’.

Perspective-taking is thus not limited to a component in teaching deliberation, argumentation, agreement or disagreement in schools, but is also part of a personal and professional development process. It occurs throughout teacher education when PSTs encounter students’ and practicum teachers’ perspectives in schools, but it can also be rehearsed at the university campus. Stepping into the fictional roles of teachers and ‘students’ in rehearsals provides a foundation for collective discussion of the diverse experiences that may arise during teaching. Consequently, PSTs can become aware of how their actions as teachers may be perceived by students in ways that differ from their intentions.

## **Practising a critical democratic stance**

So far, this article has addressed how the dynamics of reflective rehearsing and democratic formation may align to cultivate humanity (Nussbaum, 1997). Here, reflection upon ourselves, our contexts, and our relation to others is highlighted. In teacher education, as mentioned, it is concurrently essential that reflection interacts with action.

Professional practice concerning democratic formation should separate education from indoctrination (Dewey, 1998c; Hellesnes, 1975b). This poses a challenge for rehearsals in teacher education as new PSTs may crave definite answers on how to teach (Haukanes, 2024) but simultaneously need to develop the ability to evaluate the answers given to them critically. Therefore,

reflective rehearsals in teacher education should not merely present solutions for educational practice but also problematise and critique practice and its surrounding structures.

Practising a critical stance might also involve problematising how education is intended to promote democracy and citizenship in schools.

Education today can, for instance, be criticised for placing the responsibility for the future too heavily on coming generations, understood as individual entities. This is debated in relation to research on youth and climate anxiety on the one hand, and the development of personal resilience through education on the other.

Straume (2023) points out the consequences of neoliberal currents in contemporary times when she writes that education has positioned the individual as the primary unit. Through teacher education, future teachers are prepared to foster democratic engagement, but for what purpose? Straume (2023, p. 109) asserts that democratic citizenship today drowns in individual rights and opportunities, while purposes that can only be conceptualised as meaningful from a collective perspective do not come to the fore.

In his critical response to *Truth and Method* (Gadamer, 2001), Habermas (2001) points out that traditions are transmitted over time as legitimate prejudices through the threat of sanctions and the prospect of rewards. This is relevant in an individualised educational system where self-control and self-improvement receive significant attention and importance. Education rewards conformity and acceptance of the system as it exists, and has the corresponding potential for punishment at the opposite end.

However, a liberating force in education can be made accessible through reflection. Habermas (2001) argues that an emancipatory potential is expressed by reflection, enabling us to reject the demands of traditions.

Through critical reflection, PSTs can develop the ability to identify and problematise forces, structures and demands that influence education. The purpose of doing so lies in understanding that reflection is connected with action. Liberation, says Freire (2005, p. 79), is a 'praxis' that human action and reflection in one's lifeworld can change and transform.

Education concerning democratic formation is not about passively adapting to a world perceived as static and unchangeable but rather, in contrast, questioning contemporary constructions and acting to enhance justice and solidarity. A prerequisite for rehearsals in teacher education to foster democratic formation is, therefore, that they encompass this critical element and do

not possess an instrumental understanding of a mission as simply transmitting 'best practices' from university to classrooms.

Suppose PSTs are not initiated into a culture where challenging existing structures, practices, or perceptions are possible or regarded as valuable. In that case, they may be less likely to do so as future teachers.

Placing rehearsing at the forefront of teacher education may give PSTs room to act by their emerging democratic reasoning. In his argument for critical and problem-oriented teaching, Freire advocates for a teacher identity that emphasises the educator as a learning subject along with the students. Teachers are thus never 'fully trained' as they reform their reflections through the students' reflections (Freire, 2005, pp. 80–81).

The value of rehearsals should thus not be reduced to demonstrating mastery of teaching practices, but rather to investigating, exploring, and enacting teaching in different contexts for further development and growth. This may familiarise PSTs with an understanding of teaching as a situated, yet continuously evolving, practice through the learning of both the teacher and the students.

## **Rehearsing as a critical reflective practice in teacher education**

The theoretical discussion in the preceding sections may serve to establish a framework for understanding reflective rehearsals in teacher education as being relevant to fostering PSTs' democratic formation.

As mentioned at the outset, the ReTPro project presents a methodical example of how rehearsal cycles can be implemented in teacher education. Drawing upon previous discussions in this article, this concluding section addresses how rehearsal cycles can be enacted to foster democratic formation. This is done by relating each of the cycle's four phases to different forms of reflection: reflection *for*, *in*, *on*, and *about* action (Grushka et al., 2005; Leitch & Day, 2000; Schön, 1983; Zeichner & Gore, 1995; Zeichner, 1993) and the tripartite division between *technical*, *practical*, and *critical* reflection (van

Manen, 1977). An elaborative presentation and discussion of different forms of reflection is presented in Ruth Leitch's prologue in the present anthology.

ReTPro's rehearsal cycle entails four phases. In the first phase, PSTs are introduced to a subject matter where a teacher educator or practicum teacher models an example of a specific teaching activity together with PSTs. Because action is linked to previous experience, Zeichner and Gore (1995) point out that when inexperienced PSTs encounter a problem in the classroom, their way of handling it is likely to be limited to certain behaviours based on their past experiences with emotionally challenging situations. Modelling can expand PSTs' experiential base through an analytical perspective on possible actions involved in complex teaching practices.

Following Dewey's (1998d) definition, this creates opportunities for new reflections, as PSTs shape their ideas based on experiences with an example of teaching. Reflection *for* action is crucial in this phase, as PSTs are expected to develop a lesson and rehearse teaching in groups afterwards.

Modelling can also be understood as a technical reflection (van Manen, 1977), focusing on examining concrete actions, strategies, or methods that effectively achieve a specific goal. Grossman's (2018) 'core practices' can be a starting point. These include practices that, amongst other characteristics, occur frequently in teaching, can be applied across different contexts, are research-based, and are effective for student learning (Grossman et al., 2018).

A critique of such terminology is that it risks putting forth narrow and pre-defined descriptions of 'good' teaching that emphasise technical skills in favour of a pedagogical rationale (Philip et al., 2019). Approached instrumentally and technically, a danger is that this could undermine teachers' ability to exercise judgement in the interest of their students when enacted across different classrooms.

To achieve what van Manen (1977) terms critical reflection and to support democratic formation in teacher education, it is necessary to examine the ideals promoted through different examples of teaching in the modelling phase. What is the educator trying to achieve through such a practice, how and why do they attempt to do it, and can or should this be justified as a goal of education? Modelling an example of teaching should open such critical discussions, not merely present unquestionable ideals for practice. Approached with an emphasis on critical reflection, rehearsal cycles can thus support the justification of decision-making, critique pedagogical choices, and render visible dilemmas inherent to teaching.

The second phase of the cycle builds upon Grossman et al.'s (2009) concept of 'approximation of practice'. In this phase, PSTs develop their lessons and rehearse them in groups with peers. This provides PSTs with experiences of practising specific aspects of teaching in a less complex setting than authentic ones. While gaining experience with an example of teaching as 'students' and learners in the first phase (i.e. modelling phase), they can finally transform their viewpoint into a teacher's perspective in the second phase.

Phase two can be seen as connected to practical reflection (van Manen, 1977), where learning is extended by applying knowledge in our surroundings. A precondition for fostering democratic formation and pedagogical reasoning is that PSTs are not instructed to copy what has been modelled in the first phase but are rather encouraged to construct their lessons upon their own reasoning. This serves as a gradual step into phase three, where PSTs rehearse teaching in a more complex setting.

In the rehearsal cycle's third phase, PSTs rehearse teaching with real students in an authentic school setting. This phase is often more demanding for PSTs because they must consider the students' identities. Students are often unknown to PSTs entering new schools and classrooms, and it will take time before they gain insight into students' experiences, knowledge, and values.

Here, PSTs are learning subjects on an equal footing with the students, experiencing how their teaching practices are challenged, contested, and reformed through authentic interactions with students.

In phases two and three, reflection *in* and *on* action (Schön, 1983) is crucial for understanding oneself and one's interactions with peers and school students. With concern for democratic formation, self-reflexive and contextual questions are here of relevance. What unexpected events occurred in the situation? Why did I attend to it in a specific manner, what was the original intention of my actions, and what did they contribute to? As van Manen (1977) emphasises, a premise for practical reflection is to make explicit the expectations and perceptions that underpin the teaching activity and to judge how these contributed to an intended goal.

The fourth phase in the rehearsal cycle involves reflective dialogues, where PSTs, teacher educators, and practicum teachers attempt to articulate and discuss lessons and experiences. To avoid reducing reflection to 'mindless self-exploration' (Leitch & Day, 2000) or prioritising reflection over actual

classroom practice (Zeichner & Gore, 1995), a clear direction and purpose are needed in the conversation.

A problem with Schön's conceptualisation of reflection is that PSTs may be left with detailed and interesting accounts of educational practice but with relatively little knowledge about this practice's social and political context (Liston & Zeichner, 1987). In addition to understanding what has been done, what has been learned, and what one wants to develop further, reflective dialogues are also an opportunity for reflection *about* action (Zeichner & Gore, 1995). This pertains, among other things, to examining the structures and forces that control education.

In this manner, PSTs may gradually develop an awareness of the political dimension of, and the different stakeholders in, the question of what students should learn and why.

In conclusion, it is essential to emphasise that different forms of reflection do not exclude each other but should be interconnected with practice throughout rehearsal cycles. In other words, in all phases of the cycle, it is possible and tenable to link technical, practical, and critical dimensions.

As one completed cycle initiates the beginning of a new one, it provides an opportunity to place action at the forefront of teacher education, ensuring that reflection is not primarily the end product but is instead acted upon. However, it remains unclear to what extent such cycles can be implemented on a large scale within the current constraints and national regulations of teacher education programmes. A reasonable concern is whether the time and resources demanded by rehearsal cycles compromise other valuable aspects of teacher education.

If rehearsal cycles are to foster PSTs' democratic formation, this article argues that critical reflection, informed by moral and ethical considerations, should be integrated into the discourse surrounding practical action. Throughout teacher education, PSTs should critically examine the extent to which current educational structures, goals, practices, and experiences lead towards ways of life characterised by critical reasoning, justice, equality, consideration, and open-mindedness.

In light of Habermas's (1987, p. 105) notion of qualitative identity, such a connection between critical reflection and action can not only put forth the question 'Who do I wish to be as a teacher?' but also provide PSTs with an opportunity to rehearse, develop, and enact their provisional answers in practice.

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## **'Natura, ars, exercitatio' in a new frame**

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**Abstract:** Norway's teacher education was reformed and received new guidelines in 2016. The reform in Norway was in line with an international trend for reforming teacher education by changing goal formulations for the preservice teachers (PSTs) from mostly focusing on subject content to also introducing learning outcome formulations focusing on learning how to teach. This trend is called a turn to practice-based teacher education. One of the suggested ways to obtain this goal in teacher education has been to invite teacher educators to use modelling and subsequent rehearsals carried out by PSTs. This theoretical article discusses different approaches to understand how teacher educators' modelling of teaching works by asking the following research question: In what ways can theories inform us about the relationship between modelling and rehearsals? The use of modelling in the research project Rehearsing Teaching Professionally (ReTPro) is presented as an example from a reform project. Existing research in relation to modelling and rehearsals is presented as a background. One antique and two modern approaches on how to learn from modelling are presented. The article thereafter discusses the differences between the ancient and the modern approaches and looks at their relevance for the ReTPro-case.

*Keywords:* modelling, rehearsal, *imitatio*, teacher education, teacher educators

**Samandrag:** Lærarutdanning i Noreg blei reformert og fekk nye nasjonale retningslinjer i 2016. Reforma i Noreg var i tråd med ein internasjonal trend der ein reformerte lærarutdanninga ved å endre målformuleringar for lærarstudentane si læring frå å ha mest fokus på faginnhald til også å innføre læringsutbytteformuleringar som fokuserer på å lære å undervise. Ein av dei foreslegne måtane å oppnå dette målet i lærarutdanninga på har vore å invitere lærarutdannarar til å bruke modellering og så ha påfølgande øvingar utført av lærarstudentane. Denne teoretiske artikkelen diskuterer ulike tilnærmingar for å forstå korleis lærarutdannarar si modellering av undervisning kan fungera. Artikkelen stiller følgjande forskningsspørsmål: På kva måtar kan teoriar informere oss om forholdet mellom modellering og øvingar? Bruk av modellering i forskingsprosjektet Rehearsing Teaching Professionally (ReTPro) blir presentert som eit eksempel frå eit reformprosjekt. Deretter blir eksisterande forskning på modellering og øving presentert som bakgrunn for reformene i lærarutdanninga. Ein antikk og to moderne teoretiske tilnærmingar som handlar om korleis ein kan lære av modellering blir presentert. Artikkelen diskuterer deretter kva som er likt og ulikt mellom dei antikke og dei moderne tilnærmingar, og ser på relevansen desse har for eksempelet ReTPro.

*Nøkkelord:* modellering, øving, imitering, lærarutdanning, lærarutdannarar

## Introduction

Norway's teacher education has recently been reformed. In 2016, learning outcome formulations in national guidelines for teacher education in Norway changed from mainly describing the subject content of learning to also focusing on how preservice teachers (PSTs) can be taught to teach (Kosnik et al., 2016; Karseth, 2020). The reform of Norwegian teacher education is part of an international trend called 'the turn to practice-based teacher education' (Grossman et al., 2018, p. 2).

One approach to promoting practice-based teacher education has thus been to find novel ways to teach how to teach and to develop new theories on teaching. McGrew et al. (2018) write: '... with the turn toward a practice-based teacher education, there is a need to investigate the pedagogies that teacher educators might use to support candidates to developing ambitious and equitable teaching practices' (p. 37).

Forzani (2014) described the turn to practice-based teacher education in the following words:

Teacher educators are experimenting, for example, with the practices of modelling (e.g. McDonald et al., 2013) and rehearsals and other 'approximations' of practice (Grossman et al., 2009; Lampert et al., 2013), and with the use of video and other artifacts of teaching for representing and decomposing practice (e.g. Ball, 2013; Ghouseini & Sleep, 2011). (p. 357)

In this reformed teacher education, teacher educators experiment *inter alia* with modelling teaching for PSTs in different ways at campus and in practicum. As stated by McGrew et al. (2018), modelling is a complex process: 'Modelling requires the teacher educator to select a complex practice or cognitive skill and decompose, enact, and meta-cognitively mark the work so that TCs [teacher candidates] can understand the teacher educator's decision making involved in connecting its component parts' (p. 36).

As we can see from this definition, modelling is a conscious act of the teacher educators, which aims to inform the PSTs of a way to act in a given similar situation. This act is meant to help the PSTs become better teachers. One way to help them learn this is by rehearsing what has been modelled.

In the described process, it seems to be taken for granted that the relationship between the modelling conducted by the teacher educators and the PSTs’ possible uptake is a positive one, especially through the meta-cognitive marks made by the teacher educators. Although a positive relationship between modelling and learning is a prerequisite for the mentioned way of organising teacher education, little effort has lately been put into discussing the relationship between modelling and rehearsal.

This theoretical article investigates what the rationale behind modelling teaching is and how the modelled prototype may affect the PSTs’ learning process. These questions are going to be thematised, not by examining empirical data but by looking into different theories that try to explain ongoing developments. The research question in this article is: In what ways can theories inform us about the relationship between modelling and rehearsals?

In modern theories, we find two research strands on modelling in teacher education: (1) empirical articles arguing for the benefits of modelling; (2) more general theories on learning from practice that can be applied to explain how PSTs can learn from modelling. This article examines some research from the first strand as a background to understanding the interest in using modelling and rehearsals in practice-based teacher education, as well as research from the second strand to understand the connection between modelling and rehearsals based on modelling.

Still, the claim that educators should be modelling performative skills is not new. Learning from models has, from antiquity to the 18th century, been a highly appreciated pedagogical move in educational contexts, expressed as a broader pedagogical idea to learn from good examples (Høisæter, 2012). We also find this principle discussed in ancient rhetorical theories on how to become a skilled orator, which can be regarded as the last phase of educational programmes at that time. This leads to the question of whether the ancient theories are different from the modern ones and if they could bring something to the modern discussion, especially regarding decisions on what to learn and how to do it.

The use of modelling and rehearsals in a research project named *Rehearsing Teaching Professionally* (ReTPro) will be shortly presented as an example of working within a reform project. Then former research in relation to modelling and rehearsals is presented as a background. After this, three theoretical approaches suggesting ways to understand how PSTs can learn from modelling

are presented, that is, one theory from antiquity and two modern theories. The article thereafter discusses the differences between the ancient and the modern approaches and looks at their relevance for the ReTPro-case.

As a first step in this theoretical investigation of how theories can inform us about the relationship between modelling and rehearsals, I will briefly present the practice of modelling and rehearsals as it has been developed by ReTPro. The ReTPro approach will be used as an example, or a case, in the theoretical discussion on how the connection between modelling and rehearsals can be understood.

## **A case: Modelling and rehearsal in the ReTPro project**

McDonald et al. (2013, p. 378) stated that there is a need for PSTs to be trained in ways to use knowledge in action. They thereafter launched a model that they called the ‘cycle for collectively learning to engage in an authentic and ambitious instructional activity’ (p. 382), with four stages containing core practices in learning how to teach. They suggest the learning cycle as a common framework teacher educators can relate to when participating in discussions about teacher education. The learning cycle is built upon the research contributions made by many teacher educators with different backgrounds. McDonald et al. (2013, p. 382) mention, for example, Grossman (2013) and Kazemi et al. (2009). McDonald et al.’s (2013) learning cycle has been an inspiration for many practice-based teacher education programmes, including the ReTPro project. The first two phases of the learning cycle include studying models and rehearsing teaching on campus with fellow students.

In the educational design research project ReTPro at Western Norway University of Applied Sciences (2021–2025), mathematics and English as a foreign or second language (EFL/ESL) were chosen as the subjects the PSTs were going to have a special focus on. All subjects were supposed to focus on either dialogic talk (i.e. rehearsing how to formulate questions and responses to promote productive in-class or group discussions with students) or teacher-in-role (i.e. rehearsing how to arrange different situations challenging the students to enter a role in a fictive world that makes them talk). The subject

pedagogy chose to link dialogic talk to a new perspective, namely giving feedback in individual student–teacher conversations. Before modelling, the first step was to identify activities that were going to be modelled and rehearsed.

**Table 2.1**

*Chosen activities for modelling and rehearsals in ReTPro*

| Subject                                 | Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maths                                   | <ul style="list-style-type: none"> <li>• Teaching ‘quick images’ to engage students in mathematical talk and using talk moves as resources to increase their talk (Lampert et al., 2013; Chapin et al., 2009)</li> <li>• ‘Leading a whole-classroom discussion’ to promote students’ mathematical understanding (Stein et al., 2008)</li> <li>• ‘Using task-based interviews’ to unwrap students’ mathematical ideas (Clarke &amp; Roche, 2009)</li> <li>• Teaching ‘three-act tasks activities’ to engage students in asking mathematical questions and mathematical modelling (Lomax et al., 2017)</li> </ul> |
| English as a foreign or second language | <ul style="list-style-type: none"> <li>• The use of teacher-in-role when teaching intercultural citizenship (Rosler, 2008; Stinson &amp; Winston, 2011).</li> <li>• The use of talk moves in dialogic teaching (Hardman, 2020; Chapin et al., 2009).</li> <li>• ‘Leading picture-stimulated whole-class discussions’ to foster students’ vocabulary acquisition (Hardman, 2020; Swain, 2005)</li> </ul>                                                                                                                                                                                                         |
| Pedagogy                                | <ul style="list-style-type: none"> <li>• The use of talk moves in individual student-teacher conversations (O’Connor &amp; Michaels, 2019; Kazemi &amp; Hinz, 2014)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                  |

The chosen activities in ReTPro meet the criteria in the definition of modelling that require teacher educators to select a complex practice or cognitive skills. The activities can be seen as core practices. McDonalds et al. (2013) mention Grossman et al.’s (2009) criteria for identifying core practices:

- Practices that occur with high frequency in teaching,
- Practices that novices can enact in classrooms across different curricula or instructional approaches,
- Practices that novices can actually begin to master,
- Practices that allow novices to learn more about students and about teaching,
- Practices that preserve the integrity and complexity of teaching, and

- Practices that are research-based and have the potential to improve student achievement. (p. 277)

Still, the ReTPro activities represent three different grain sizes (Grossman & Fraefel, 2024, p. 142).

Talk moves are the core practice with the smallest grain size in ReTPro. In fact, talk moves are specific speech acts teachers need to acquire as a repertoire to choose from when conducting dialogic teaching. Examples of talk moves are to explain, revoice, repeat, press for reasoning, challenge, agree or disagree, add on or use wait time (Chapin et al., 2009, p. 13). Talk moves are aspects of conversations that have been developed in research studies on how to give the best kind of feedback, such as *Accountable Talk* (Michaels et al., 2008) and *Academic productive talk* (O'Connor & Michaels, 2019).

Conversely, leading whole class discussions and teaching 'three-act task activities' (Lomax et al., 2017) are activities with a larger grain size because they have a plethora of different activities baked into them.

The use of teacher-in-role, however, could relate to a medium grain size of core practices. Common to all activities is that they are useful routines for prospective teachers.

## Table 2.2

### *ReTPro's types of modelling*

| Subjects                    | Modelling PSTs were exposed to                                      |
|-----------------------------|---------------------------------------------------------------------|
| Maths and EFL/ESL           | Free accessible educational videos on teachers' modelling           |
| Pedagogy                    | Use of the game simulator 'snakke med barn' (talking with children) |
| Maths, EFL/ESL and pedagogy | ReTPro campus teachers' modelling                                   |
| Maths, EFL/ESL and pedagogy | ReTPro practicum teachers' modelling                                |
| Maths and EFL/ESL           | Peers' modelling through rehearsals on campus                       |

The PSTs have probably been exposed to teaching long before they started their teacher education, namely for as long as they have been attending school. The largest group of teachers that might influence their view of teaching is,

of course, the teachers that the PSTs have met through their own years as students in school. Kennedy (2019) states that

all of us – those who become teachers, those who become education researchers, and everyone else – have spent roughly 12,000 hours watching teachers through our child-eyes, developing our own conceptions about what the job entails and what makes some teachers better than others. (p. 139).

Furthermore, Kennedy comments that this observation and the ideas we form about teaching in this way are naïve. In 1971 Blume (Blume in Lunenberg et al., 2007, p. 586) expressed that ‘teachers teach as they are taught’, indicating that the teaching we all have been exposed to is an important factor in our own view on teaching.

Former experiences with teaching will allegedly constitute the backdrop of the observations we make and experiences we have later. Still, this kind of experience with teaching does not fit into the definition of modelling as a conscious activity carried out by the modelling person.

On the other hand, reforming teacher education by introducing modelling is necessarily motivated by a wish to change teaching and to introduce *new* ways of teaching. Otherwise, there would be less need for modelling. The years of observing teachers’ teaching are thus supposed to be replaced by new ways of teaching in the subjects.

The case ReTPro provides examples of new ways of teaching by applying the concept of ambitious teaching in mathematics (Lampert et al., 2013), by introducing the use of the teacher-in-role method to teachers (Galante & Thomson, 2017), and by seeking to reduce the use of the IRE (initiative–response–evaluation) structure in classroom conversations (Sinclair & Coulthard, 1975; Mehan, 1979).

As we see in the overview of the types of modelling the PSTs are exposed to in Table 2.2, the different roles of the modelling agents suggest that some of them will be more eager and able to introduce the changed way of teaching than others. We can suppose that the teachers in the videos the PSTs watch are good examples of new ways of teaching, as they are recorded in controlled situations.

Furthermore, the fact that campus teachers who are engaged in the reform project consciously chose to model certain activities might suggest that their modelling will be examples of new ways of teaching (see the empirical data in the present anthology: Cabot, 2025; Cabot & Brodal, 2025; Myklebust & Tuset, 2025; Kulild et al., 2025). As they have a group of PSTs as their own students, they are likely to succeed in teaching in accordance with what they want the PSTs to learn.

However, the practicum teachers have a slightly different challenge in their modelling. They are in real classroom situations with all the additional challenges that follow. Compared to on-campus teaching, the classroom situations during practicum can be more complex. More unforeseen things may happen that the practicum teachers will have to attend to. It is therefore possible that practicum teachers may be less influenced by new ways of teaching, particularly in cases when they are not a part of or not recruited by the research project but are practicum teachers for other practical reasons.

The idea that teacher educators should model new ways of teaching is described poignantly by Kennedy (2019), who writes that ‘the central premise underlying all PD [professional development] is that there is something the researcher knows about teaching that teachers don’t know’ (p. 144). In other words, research takes precedence over experience and tradition in these cases.

This constitutes a field of tension in most research projects attempting to reform teaching, especially when the campus teacher educators are supposed to be the experts on teaching.

## **Modelling in the reform process of teacher education**

McDonald et al. mention three possible ways of representing teaching: modelling by the teacher educator, watching videos of teachers enacting the activity, or reading about a case where a teacher enacts the activity. These are all representations of practice to help the PSTs develop an image of the activity.

In this context, McDonald et al. (2013) suggest the use of an ‘enact-able activity’ (p. 382), which could be labelled as an *enacting-enabling* activity because it must be possible to enact the activity and the PSTs must be enabled

to carry out the activity. Such an enacting-enabling activity must be decided before modelling. The activity should be a practice that ‘someone habitually and consistently does’ (p. 382).

McDonald et al. (2013) write that one can deal with core practices by looking for ‘specific, routine aspects of teaching that demand the exercise of professional judgment and the creation of a meaningful intellectual and social community for teachers, teacher educators, and students’ (p. 378).

McDonald et al. (2013) state that their ‘framework is intended to push against the tendency in teacher education to default to an acquisition model of learning’ (p. 381). Here, the term acquisition refers to different models of learning in teacher education. It suggests a superficial way of learning, as in a transmission-reception (behaviourist) model of teacher education.

By using the phrase ‘the exercise of professional judgment’, McDonald et al. (2013, p. 378) suggest that teacher education must be concerned with more than the acquisition of knowledge. Indeed, teacher education must demonstrate a commitment to using *knowledge in action*.

Concerning McDonald et al.’s (2013) learning cycle, the modelling activity has been promoted by several researchers. For example, Loughran and Berry (2005) presented a double-degree teacher preparation subject they had developed and titled *Developing Pedagogy*. In this broader programme, they highlight two important aspects of teacher educators’ explicit modelling. First, they argue that it is *per se* a good thing that teacher educators do themselves what they expect their students to do in their teaching.

Secondly, they stress the need to teach PSTs how to reflect on teaching, that is, to help them develop a meta-perspective on teaching. They therefore suggest that one co-teacher educator should model how to carry out a session of joint debriefing after the modelling of teaching in order to offer the PSTs access to ‘the pedagogical reasoning, feelings, thoughts and actions that accompany our practice across a range of teaching and learning experiences’ (Loughran & Berry, 2004, p. 194).

In 2006, Loughran was part of Korthagen et al.’s (2006) research group analysing effective features of teaching programmes in Australia, Canada and the Netherlands. Korthagen et al. (2006) suggested seven fundamental principles to guide the development of teacher education programmes. One of these principles (number 7) was: ‘Learning about teaching is enhanced when the teaching and learning approaches advocated in the programme are

modelled by the teacher educators in their own practice' (Korthagen et al., 2006, p. 1036).

In 2007, Lunenberg et al. (2007) thoroughly addressed the question of how modelling should be carried out in teacher education. They begin the article by citing Blume (1971), stating that 'teachers teach as they are taught' (Blume in Lunenberg et al., 2007, p. 586). Lunenberg et al. (2007) define modelling as 'the practice of intentionally displaying certain teaching behaviour with the aim of promoting student teachers' professional learning' (p. 589).

In a literature study, they identify three important goals of teacher educators' modelling: (1) Modelling can contribute to the professional development of PSTs; (2) Modelling is a way to change education; (3) Modelling can improve the teaching of teacher educators. More specifically, Lunenberg et al. (2007) distinguish between implicit and explicit modelling, but they only provide an in-depth analysis of explicit modelling.

Based on Loughran (1996), they explain explicit modelling as situations in which teacher educators communicate to PSTs which choices they make while teaching. This can be done through simultaneous journal writing and thinking aloud, or – as mentioned by Loughran and Berry (2005) – through the use of a co-teacher commenting on the modelling instantly after it has happened in the classroom. Lunenberg et al. (2007) found that the research literature claims that explicit modelling facilitates the translation of pedagogical choices to the PSTs' own practice and that explicit modelling may connect exemplary behaviour with theory.

Lunenberg et al. (2007) also carried out an empirical research study into the practice of ten teacher educators in four Dutch institutions for teacher education, asking 'Do teacher educators model new visions of learning into their own practice?'. They distinguished between four forms of modelling in their study: (1) implicit modelling, which seemingly has a low impact, (2) explicit modelling, (3) explicit modelling facilitating the translation into the students' own practice, and (4) connecting exemplary behaviour to theory. They found that explicit modelling was not common among teacher educators. Their main conclusion was that there was 'little or no recognition of modelling as a teaching method in teacher education' (Lunenberg et al. 2007, p. 597). In line with this, Lunenberg et al. (2007) conclude that 'when it comes to using modelling new learning in teaching education, teacher educators are apparently still at the beginning of a long and challenging path' (p. 599).

Rust (2010) starts her article in a very critical way, stating that American teacher education at that time is ‘stuck in an unproductive and dysfunctional pattern’ (p. 5). After providing an analysis of what is wrong and what the challenges for teacher educators may be, she points to several ways of improving teacher education and states the following: ‘In essence, we need to model the practice we want our students to incorporate into theirs’ (Rust, 2010, p. 14).

Critical voices on modelling have also been raised. Forzani (2014) mentions an obvious problem with having teacher educators modelling teaching. Indeed, ‘many teacher educators have not taught children or worked intensively in classrooms in many years (Levine, 2006), and may lack the skill required to implement practice-based approaches effectively were they even to try it’ (Forzani, 2014, p. 366).

Looking at these examples of argumentation for the use of modelling by teacher educators, we see that they are first and foremost grounded in problems related to teacher education and in teacher educators’ needs for learning PSTs to teach. They aim to a lesser degree at meeting problems connected to students in schools.

The interest in describing teacher educators’ modelling leads us to focus on the modellers and what characterises the way they model. In the next two parts of this article, I will present theories on how modelling works, which theories represent an ancient perspective on learning from models, and on how to learn from modelling.

## Ancient perspectives on learning from models

The prerequisite for learning any skill according to ancient theories was first launched by Aristotle as a combination of three factors that had to be present: in Greek *physis*, *techné* and *usus*. The corresponding Latin concepts were *natura*, *ars* and *exercitatio*. *Natura* refers to the personal abilities you must have to be able to be educated at all. The antique meaning of *ars* is related to the modern noun *art*, but has a much broader meaning, as in crafts or techniques. Examples of *ars* are speaking, writing, arithmetic or construction art, in short everything that you must learn and that requires systematic

training and practice (Eide, 2015). *Exercitatio* is this required training, for example rehearsal.

We shall now take a closer look at the Latin concepts *natura*, *ars* and *exercitatio* as presented by the Roman rhetorician Quintilian (35–100 AC) in the book entitled *Institutio Oratoria* (*The Orator's Education*) from 95 AC. *Institutio Oratoria* is a textbook aimed at teaching young men in the Roman Empire to become skilled orators, men with oral skills that were needed in politics or when working as lawyers. In his book, Quintilian discusses his theories with predecessors such as Aristotle and the other Latin rhetorician Cicero (106–43 BC), with whom he was partially in disagreement.

Transferred to modern terms, *ars* is the craft, the techniques that are being modelled, whereas *exercitatio* is the rehearsal. Unlike modern theories, the ancient theories have a well-known concept for the relationship between modelling and rehearsal: in Greek *mimesis*, in Latin *imitatio*. The terms ‘modelling’ and ‘rehearsal’ and the connection between the two are not clarified in modern terms, nor do we have a term like *mimesis* or *imitatio* to express the connection.

In a modern interpretation, the term *imitatio* has negative connotations as someone copying someone. ‘Imitation’ is today viewed as something instrumentalistic, even though it is recognised as a very central aspect of learning in many theories about language and learning. In our post-romantic world, *imitation* is the opposite of innovation. In this context, it is necessary to think of the word *imitatio* in the way it was used in antiquity, as a more positive concept or a neutral expression for what happens when a person wants to learn from a model. ‘*Mimesis*, says Aristotle, is a natural part of the learning process (*Poetics*, 1447a-b) but the degree of adhesion to the original source varies considerably’ (Mendelson, 2001, p. 289).

The disagreement between Cicero and Quintilian relates to issues of knowing whether *imitatio* is mostly connected to *ars* or to *exercitatio* – that is to say, to the modelling or the rehearsal. Cicero places *imitatio* as part of *ars*, which means that the key to success is connected to the modelling and, consequently, to the modelling person. Quintilian sees it to a greater degree as part of *exercitatio*. He sees *imitatio* as something occurring in the rehearsal. In doing so, it becomes first and foremost the responsibility of the rehearsing person.

Quintilian (2001) elaborates on his views in book 10.2 in *Institutio Oratoria* (*The Orator’s Education*). He starts by arguing for *imitatio* as a way of learning in general when writing the following:

*Imitatio* is a principle of life in general that we want to do for ourselves what we approve in others. Children follow the outlines of letters so as to become accustomed to writing, singers find their model in their teacher’s voice, painters in the work of their predecessors, and farmers in methods of cultivation which have been tested by experience. (Quintilian 2001, p. 323)

Thereafter, he discusses *imitatio* as part of education in seven points that I quote here in a slightly abbreviated and simplified manner:

1. Imitation is not sufficient on its own. Only lazy minds are content with what others have discovered. Nothing grows by imitation alone.
2. The greatest qualities of an orator are inimitable: his talent, invention, force, fluency, everything in fact that is not taught in a textbook.
3. Careful judgement is necessary: a) Whom should we imitate? b) What is it in our chosen model that we should prepare ourselves to reproduce?
4. The first step for the student is to understand what it is that he is going to imitate and to know why it is good.
5. Next, he must consider his own strengths. There are some objects of imitation for which his natural capacity may be too weak or with which his very different temperament may be at odds.
6. It is best to keep the excellence of a number of models before our eyes and use each in the appropriate place.
7. Imitation should not be restricted to words. We must fix our minds on the way the models handle circumstances and people, their strategy, their arrangement, the way in which everything is aimed at victory. (Quintilian, 2001, pp. 323–337)

As we can see from these points, Quintilian has a relaxed and balanced view of *imitatio*. *Imitatio* is just a step on the way to becoming a good orator, and some of the things we admire in others are not possible to imitate.

He also writes about the job the young oratory student has to do in his imitation. Requirements are, for example, judging *who* he wants to imitate, not forgetting to consider the effect of the model's body language and the model's strategies, knowing his own strengths, and considering when it is appropriate to use imitation to accomplish something.

Quintilian was a practically oriented teacher, who is known for his point of view on how to teach orator students to argue. He represents the approach to argumentation known as *controversia* (in English: controversy). In other words, he wanted to teach the orator students to always find two standpoints in every case – that means pros and cons. Mendelson (2001) explains this in the following words:

*Controversia* may be said to place its priority on the exchange among interlocutors rather than on the formal development of one's own claim, on personal hypotheses rather than universal theses, on arguing with others rather than arguing that such and such is the case. (p. 278)

This way of arguing is, according to Mendelson (2001), also noticeable in Quintilian's way of arguing in the book *Institutio Oratoria*. Instead of finding a range of evidence for his point of view, he explores the point of view by discussing it back and forth. This form of discussion – that is to say, the development and elaboration of pros and cons – may be the origin of the adversarial principle in legal systems.

According to Quintilian, 'careful consideration should always be paid to the arguments of the opponent' (Mendelson, 2001, p. 286). As part of these practical views on arguing, Mendelson (2001, p. 289) mentions that Quintilian developed the method of role-plays for his orator students. In fact, these role-plays, rehearsals and modelling practices may be the roots of modern approaches to practice-based teacher education.

## Modern perspectives on learning from models

The Latin concept for how to learn from models, *imitatio*, or in English *imitation*, is, for the reasons mentioned above, no longer possible to use. The modern term imitation is in line with what McDonald et al. (2013) label acquisition. Sfard (1998) elaborates on this when making the poignant statement: ‘Since the dawn of civilization, human learning is conceived of as an acquisition of something’... She suggests consolidating the *acquisition metaphor* with the *participation metaphor*. According to the *participation metaphor*, learning to teach is ‘becoming a participant’ of something, and the knowledge one wants to take part in is an ‘aspect of practice, discourse or activity’ (Sfard, 1998, p. 7) in a given context. A combination of the two metaphors as a way of understanding learning in teacher education is preferable.

Sfard put these thoughts in the following words:

It seems that the most powerful research is the one that stands on more than one metaphorical leg (cf. Sfard, 1997). An adequate combination of the *acquisition* and *participation metaphors* would bring to the fore the advantages of each of them, while keeping their respective drawbacks at bay. (Sfard, 1998, p. 11)

In line with these perspectives on learning, I will shortly comment on two other concepts that are of particular interest when examining learning from models. The concepts are *routines* as a concept for what is going to be learned, and *appropriation* for how the core practices are going to be learned.

I have chosen two modern theories that can be used to understand the processes involved in learning from models: Anna Sfard’s description of *participation* and *thoughtful individualisation* linked to the development of teaching routines, and Wertsch’s (1998) distinction between mastery and *appropriation*.

*Routines* have to do with defining what should be modelled and rehearsed. As mentioned, McDonald et al. (2013) point out that an enact-enable activity must be decided on, and this should be ‘something that someone habitually and consistently does’ (p. 382). Routines explained as ‘repetition-generated patterns of our actions’ (Lavie et al., 2019, p. 153) are a concept that fits well into the idea of core practices.

In this context, Sfard states the following:

*Routines come in different sizes.* The smallest, simplest routines, those that cannot be decomposed and are performed in a single step, are called *atomic*. Large ones... or those for coordinating whole-class discussions and monitoring students' group work, are often referred to as *practices*. (Sfard, 2025)

In Sfard's (2025) opinion, 'a rich repertoire of well-developed professional routines is the basis of the expert teacher's smooth functioning' (p. 314). Vocabulary learning from models is a form of *individualisation*. Sfard (2008) explains that 'the tendency for individualisation – for gradually overtaking the roles of others, accompanied by an increase of one's agency over the given activity – seems to be one of the hallmarks of humanness' (p. 79). She calls this view of human learning a participation version of human development. This is, according to Sfard, how we learn practices.

In his theories on language and dialogue, Bakhtin saw the need for a concept expressing that we use the words of others as we learn to speak. He chose to use the concept *appropriation* (Bakhtin, 1981, p. 294). In line with this, Wertsch (1998) distinguishes between appropriation and mastery. In the chapter 'Internalisation as Appropriation' he states that the word appropriation is a translation of Michail Bakhtin's Russian concept *prisvoit*, meaning '... something like to bring something into one self, or to make something one's own' (Wertsch, 1998, p. 53). He adds 'I use "appropriate" and "appropriation" to translate these Russian terms, with the understanding that the process is one of taking something that belongs to others and make it one's own' (Wertsch, 1998, p. 53). This meaning fits, in my opinion, well with the process of learning how to teach from models by rehearsing the modelled routines or core practices.

## Discussion

Conspicuously, the ancient and modern approaches to modelling are quite different in a number of ways. Here, I will discuss the different approaches and some of the similarities and differences between them, in addition to taking a quick glance at what they add to our understanding of the ReTPro case.

The discussion will mostly revolve around differences between the modern and the ancient approaches. This is, of course, not entirely fair. Quintilian addresses the learner in a textbook that explains directly how the learner should think and act, whereas I have presented modern approaches by reviewing articles written by teacher educators to other teacher educators, arguing in a metalanguage. This must be taken into account in the discussion. If the modern educators were to rewrite their texts as direct advice to the PSTs, the differences might not be so apparent. Still, there is a basic difference in attitude that can be found.

Both ancient and modern approaches agree that there is a number of ways to model teaching. As we have seen, McDonald et al. (2013) distinguish between three types of representing teaching: modelling by teacher educators (modelling), watching and analysing videos of teachers enacting the activity (video analysis), or reading texts about a teacher enacting a specific activity (case analysis). The first two are in use in the ReTPro case.

Loughran and Berry (2005) and Lunenberg et al. (2007) distinguish between implicit and explicit modelling, stating that implicit modelling is less promising as a way to teach PSTs to teach. It is unclear what characterises implicit modelling in Lunenberg et al. (2007)’s views. However, explicit modelling is defined as ‘the practice of intentionally displaying certain teaching behaviour with the aim of promoting student teachers’ professional learning’ (Lunenberg et al. 2007, p. 589). Considering that explicit modelling requires a metalanguage, we can assume that if the teaching behaviour is not intentional and/or if it does not include a meta perspective, modelling becomes implicit. Yet, this is somewhat difficult.

As we can see from Table 2.2, both implicit and explicit models are used in the ReTPro project. Implicit modelling is done by showing video films. Video recordings used as models may not have the required intention by the teachers. They are, however, still valuable models to be studied by the PSTs involved in the ReTPro project because they are analysed so that the PSTs can develop a metalanguage on the activities. In doing so, the PSTs learn not only by observing and reflecting on models, but also from participating in explicit modelling carried out by their campus teachers and peer PSTs.

The other claim from Lunenberg et al. (2007) is that explicit modelling is divided into three subcategories of explicit learning: (1) explicit modelling with metalanguage connected to it, (2) explicit modelling facilitating the

translation into the students' own practice, or (3) explicit modelling that connects exemplary behaviour to theory. This is probably not the case every time modelling happens in ReTPro, especially if teaching is modelled by PSTs.

What is most noticeable in Lunenberg et al. (2007)'s and the other modern approaches is that the difference between implicit and explicit modelling in both cases has to do with the behaviour of the modellers. Compared to the ancient views of how modelling works, we see that this corresponds with Cicero's point of view in the ancient tradition. Indeed, Cicero sees the modelling process as part of *ars*, knowledge about and focus on the techniques that can be used. According to this, the person most responsible for success in using models is the teacher educator. Explicit modelling with metalanguage is in every case a question of how the teacher educator organises the modelling of teaching.

In contrast, Quintilian sees modelling as a part of *exercitatio*, and in that way as the responsibility of the learners, in our example case, the PSTs. We can also note that Quintilian's points underline that many aspects of modelling should be considered in relation to the PSTs' personal characteristics, his or her *natura*, so to speak.

Furthermore, according to Quintilian, the PSTs should be exposed to many different models and decide for themselves which model they wish to follow. This engages the PSTs' responsibility for learning in a way that is perhaps more in line with modern pedagogy than the idea that PSTs should follow a template of good teaching created by the teacher educator. Quintilian's view can be seen as a counterpart to the two modern explanations of how to learn from models. The *acquisition* and *participation* aspects of how to process the knowledge acquired from models give the PSTs the main role in the learning process.

On the other hand, this problematises the idea that modelling should function as an introduction of new ways to teach in a reform project. A change in ways of teaching is the ultimate goal in an interventionist research project such as ReTPro. When PSTs are left to make a choice on how to teach, there is a chance that a project would not succeed in this endeavour. There is a risk of creating a situation in which PSTs fall back on following well-known routines based on their own school experiences, instead of striving to achieve the teaching that has been modelled to them.

The example project ReTPro is a reform project aiming to change teacher education. The focus on teacher educators as models is therefore a natural consequence.

Yet, in this context, Quintilian’s approach is a good reminder of what ideally should be the situation when the reform process has ended and the new status quo is that PSTs learn to teach from models. In that case, they could gradually be given the opportunity to decide for themselves whom to have as models and preferably be presented with many different explicit modelling activities and to reflect on their strengths and weaknesses.

In sum, PSTs should be able to learn how their own *natura* and understanding of the purpose in a specific teaching situation can lay the foundations for developing their teaching style.

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3

## Modelling teaching practices: A performative perspective

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**Abstract:** This case study examines the use of modelling as a didactic approach for teaching about teaching. It focuses particularly on campus teachers using modelling to exemplify process drama methods, including teacher-in-role, in teaching English as a Foreign or Second Language. Lunenberg et al.'s (2007) four modelling types provide the framework for conceptualising these didactic situations, combined with performative theory, which states that content is both deliberately designed and staged. This highlights the importance of embodied, verbal, and spatial actions, which are central to the analysis. The findings indicate that by participating in the performative enactment of teaching, bodily and verbally, the preservice teachers were able to gain a broadened understanding of teaching beyond mere verbal reflection, suggesting that implicit performativity is as important as explicit talk in developing a teaching repertoire. This insight led to an adjustment of Lunenberg et al.'s model, introducing a new category: performative modelling, characterised by its aesthetic approach to teaching.

*Keywords:* modelling teaching, performative teaching practices, representation of practice, process drama, aesthetic approach to teaching

**Sammendrag:** Denne kasus-studien undersøker campuslærere som bruker modellering når de underviser om å undervise. Her modellerer de prosessdrama, inkludert lærer-i-rolle, i undervisning av engelsk som fremmedspråk. I analysen av materialet ble Lunenberg et al.'s (2007) fire modelleringstyper brukt som rammeverk for å konseptualisere de didaktisk modellerte situasjonene. Analysen bygger også på teori om performativitet, som indikerer at det didaktiske innholdet både er designet og iscenesatt. Dette betyr at kroppsliggjorte, verbale og romlige handlinger er sentrale og fungerer som analyseobjekter. Analysen viste at deltakelse i den implisitte performative undervisningen, kroppslig og verbalt, ga lærerstudentene en opplevelse som tillot en annen forståelse av undervisningen enn den verbale refleksjonen alene, og at implisitte performative handlinger er like viktig som eksplisitt samtale når en bygger et undervisningsrepertoar. Erkjennelsen av denne viktige distinksjonen førte til en rekonstruksjon av Lunenberg et al.'s modell som spesifiserer en konkret form for implisitt modellering: Performativ modellering. I denne studien kjennetegnes performativ modellering ved at den også omfatter en estetisk dimensjon i undervisningen.

**Nøkkelord:** modelleringsundervisning, performativt undervisningsdesign, representasjon av praksis, prosessdrama, estetisk tilnærming til undervisning

## Introduction

Recent studies on the ways in which preservice teachers (PSTs) learn to practise and build a teaching repertoire (Ball & Forzani, 2009; Forzani, 2014; Grossman, 2021; McDonald et al., 2013; Zeichner, 2012) have highlighted the need for more research on the strategies and methods for this process. Modelling and rehearsing specific aspects of teaching have been suggested as possible approaches.

One of the key objectives of modelling in teacher education is to make complex teaching practices visible so that PSTs can engage with, analyse, understand, and ultimately perform similar strategies themselves, which are integral to the discipline.

The study presented in this article is part of a project funded by the Norwegian Research Council called *Rehearsing Teaching Professionally in Teacher Education* (ReTPro, see Vangsnes, 2021–2026), in which modelling teaching is the first of four phases in McDonald et al.'s (2013) 'cycle for collectively learning' (p. 382), presented in prologue 2 of this anthology. ReTPro focuses on English and Mathematics curricula, exploring the teaching methods of process drama (PD) and dialogic teaching (see part 2 of this anthology).

For this study, I observed the modelling phase on two occasions, during which campus teachers used modelling to exemplify PD, including teacher-in-role (TiR), in teaching English as a Foreign or Second Language (EFL/ESL).

To analyse these didactic situations, I employ Lunenberg et al.'s (2007) typology, which differentiates between implicit and explicit modelling. Implicit modelling is when teacher educators (TEs) 'walk the talk,' demonstrating strategies and teaching methods through their actions, thus serving as role models for their PSTs. Explicit modelling includes any instance of meta-commentary, where TEs explain the choices they make while teaching and why, as illustrated in Table 3.1.

**Table 3.1***Modelling types (Lunenberg et al., 2007)*

| Modelling types                                                                                          | Descriptions                                                                                                                                |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Modelling type 1: Implicit modelling                                                                     | Any instance where teacher educators 'walk the talk' and act as examples for their students.                                                |
| Modelling type 2: Explicit modelling                                                                     | Any instance of 'meta-commentary' or comments wherein educators make explicit the choices they make while teaching and explain why.         |
| Modelling type 3: Explicit modelling and facilitating translation to the student teachers' own practices | Any instance wherein the educators connect modelled behaviour in the teacher education classroom to the prospective teachers' own practices |
| Modelling type 4: Connecting exemplary behaviour with theory                                             | Any instance wherein the educators establish links between their practice and public or educational theory.                                 |

The model, however, does not mention which teaching strategies might be used as examples. Types 2, 3 and 4 in the typology focus on discussing the modelling process, thereby providing a 'meta-commentary' for the PSTs. *Talking* about modelling, more generally *oracy*, being a main expressive form in most teaching strategies, is an important aspect of learning to teach as well as a valuable medium for reflecting both in and on teaching (Schön, 2017; Leitch & Day, 2000). Nevertheless, teaching and reflection also involve other expressive forms of interaction between the educator and the student (see Biesta, 2010).

This study, therefore, examines instances where TEs model specific *aesthetic teaching strategies* as a didactic approach. It also discusses how TEs and PSTs work together to develop *teaching repertoires* (Holdhus et al., 2016) and *reflect in and on teaching* (Schön, 2017; Leitch & Day, 2000) while participating in the modelling process. Following the TEs as they implicitly model aesthetic teaching practices also involves using performativity as a theoretical and analytical lens.

The approximation of practising teaching (Grossman et al., 2009a; Grossman et al., 2009b) through PD here means that campus teachers act as teachers while the PSTs assume the roles of lower secondary school students. This is

understood as being part of a performative teaching approach, by which I mean to focus on *the act* of modelling – on what is done as well as what is said. In this study, it also implies that the teachers incorporate aesthetic approaches, emphasising collaborative creative teaching processes where role-taking is central.

Thus, performative teaching is seen as based in art, embodied, situated and material (Piazzoli & Schewe, 2023), as well as discursive and open to critique (Langellier & Peterson, 2004).

I observed Mark (English teacher) and Anna (drama teacher) while they were modelling with Mark's PSTs, who were preparing to become lower secondary English teachers. The topic for the modelling session was the civil rights movement in the United States during the 1950s. Mark and Anna alternated between being in and out of fictional roles – sometimes stepping out of fictional roles to just be the teachers who organise classroom activities, and sometimes stepping into roles, such as portraying Rosa Parks, a key figure in the civil rights movement. The PSTs also alternated between being in and out of a fictional role, while also being encouraged to consider how this way of teaching might be applied to their own future classroom teaching.

This study addresses the following research questions:

1. How do TEs reflect in and on modelling when using process drama, including teacher-in-role, as a teaching about teaching approach?
2. What characterises the PSTs perception of the modelling?

## **Theoretical framework and existing research**

### **Modelling as representation of practice**

While the extant research is limited, it suggests that TEs do not model as explicitly or as extensively as scholars recommend (Lunenberget al., 2007; Ritter, 2012; Ruys et al., 2013; Santagelo & Tomlinson, 2012).. Other scholars, such as Kennedy (2016), have expressed concerns about practice-based teacher education programmes that foreground specific teaching practices, potentially leading to an overly instrumental approach.

Several researchers (Bullock & Christou, 2009; Loughran & Berry, 2005; McGrew et al., 2018; White, 2011) argue that TE modelling must be explicit for preservice teacher learning to occur. By modelling explicitly, TEs can offer metacognitive insight into the work of teaching through several methods, such as thinking aloud, journaling, pre- and post-class discussions, and co-teaching (Loughran & Berry, 2005).

Building on this understanding of explicit modelling, some scholars discuss how TE modelling can be connected to PSTs' field experiences or educational theory (Lunenberg et al., 2007; Swennen et al., 2008). Connecting explicit modelling to PSTs' field experiences is important because, as Lunenberg et al. (2007) point out, 'teacher educators may discuss their pedagogical choices with their student teachers,... this does not necessarily mean that the students can make the translation to their own teaching' (p. 591).

Biesta (2010) asserts that education is an interaction between the activities of the educator and those of the learner. As such, education is situated in the interaction between the two, and it is the gap between teacher and PST that makes communication, and thus education, possible (Biesta, 2010, pp. 12–13).

Owing to this, an important part of the modelling phase involves TEs' unpacking and deconstructing of teaching strategies (Grossman et al., 2009a) together with the PSTs, with the purpose of reflecting in and on and discussing the educational choices through what can be described as a professional critique of practice.

Biesta also emphasises that teaching is purposeful action and might be thought of as an art. Thus, one objective in teacher education is to develop the pedagogic artistry of PSTs.

Grossman et al. (2009b) state that explicit representations of teaching are artefacts or illustrations of practice, including TEs' modelling of teaching practice. The representations can be used to expose PSTs to various examples of teaching or to help them notice specific aspects of teaching, with the aim of improving their content knowledge of teaching.

In recent years, many scholars have described and researched core practices of teaching in teacher education (Grossman, 2021). Grosser-Clarkson and Neel (2019) identified two distinct approaches that TEs use to prepare PSTs for core practices: a predesigned enactment approach and an open-designed approach. They explain that in a predesigned teaching approach, the TE provides a rehearsable classroom activity that addresses a set of core prac-

tices, whereas in the open-designed approach, the TE introduces specific core practices through various representations of practice without expecting PSTs to replicate a particular activity. In other words, the open-designed approach allows for a less constrained enactment (Grosser-Clarkson & Neel, 2019).

In line with Sawyer (2004), I think that open-designed approaches make it easier to promote PSTs' creativity, flexibility, and improvisational skills.

### **Performative teaching designs**

In this study, process drama (PD), including teacher-in-role (TiR), was employed as a design for learning (Selander, 2021), that is, a design for learning to teach on campus to facilitate the curriculum. PD is a teaching structure or methodology used to explore a theme, problem, situation, or idea using the artistic medium of unscripted drama (O'Neill, 1995; Vangsnes, 2021).

PD focuses on communicative and artistic processes, incorporating different perspectives through role-taking. TiR, as a method within process drama, is a teaching approach where the teacher assumes a role and improvises within a fictional framework to explore a topic alongside the students. The students can either participate in role or as themselves (Bolton, 1982).

The term 'performative' was first introduced by Austin (1975) in his concept of *how to do things with words*. The idea that speech is a form of action, and that the classroom is a space for communicative action, has since gained popularity (Schewe, 2020).

Another performative perspective can be traced to Sauter's (2000) description of art as a communicative *event* where 'both the presentation of actions and the reactions of the spectators, who are present at the very moment of the creation, are central' (p. 11). PD is an arts-based approach to teaching, viewing the process as an aesthetic event that incorporates role-taking and active participation. 'It means that the event can be an arena for the constant process of negotiating experiences and meanings that constitute culture' (Carlson, 2008, p. 6).

The term 'performative' has its roots in 'form' (*performance*) and 'formative' (*performative*), with the Latin prefix *per* meaning 'through' and 'by means of'. According to Piazzoli and Schewe (2023), the word implies education through form, with form understood as art, language, and the body. In this

sense, a 'performative' approach to teaching can be defined as an embodied approach, bypassing the dualism of mind and body.

Böhnisch (2010) suggests that the arts share a common notion of performativity that distinguishes it from a sign system, a text or a representation. They see performativity as concerned with action and doing rather than sign and being. In this study, 'performative' refers to teaching shaped by aesthetic means of action.

When emphasis is placed on the action or event aspect of teaching, various theories rooted in performativity, aesthetics and dramaturgy can be applied, viewing constructing meaning as a process that is social, bodily, verbal, affective, and cognitive. Bodily learning puts action in focus (Merlau-Ponty, 2010).

A dramaturgical perspective on teaching relates to *the narrative the teachers wish to convey* and how they shape and communicate this narrative to engage with their students (Deleuze, 1994; Szatkowski, 1989; Østern, 2014). PD, with its focus on role-taking, highlights the doubling of reality created by fictionality, meaning that the participants act both as themselves as well as examining the topic as if being someone else.

Drawing from Langellier and Peterson (2004), teaching is here understood as an embodied and situated activity, open to critique. Conclusively, the study explores the theoretical considerations of a performative approach and the practical applications for a performance-based pedagogy, intended as an opportunity to consider what it means to prepare PSTs to become reflective and critical performers of teaching.

## Design and methods

This is a qualitative case study used to explore a particular teaching situation in detail. My research on the pedagogical applications of process drama as a strategy for modelling in teacher education follows Haseman's (2006) understanding of 'practice-led research', as it is both initiated in and carried out through practice.

I am also inspired by Seitz' (2016) proposed theory of a new 'performative research' paradigm, which aims not 'to capture reality in graphs or to test existing hypotheses, but to aspire to be one with practise, to activate tacit knowledge, and generate new insights while processing, dealing with, and handling practice' (Bellezza, 2020, p. 307).

## Data collection

To answer the research questions, I collected data during two modelling phases. The data sources included classroom video observations of the modelling, field notes, and one video-stimulated recall interview with the TEs, as well as one with the PSTs.

In the interview with the TEs, we watched the video together and they were asked to describe the main purpose of their modelling, and the possibilities and challenges they faced when doing the actual modelling.

In the interview with the PSTs, we also watched the video of the modelling together. I examined whether their perspectives on what they experienced during the modelling itself and observed in the video aligned with the intentions and purposes of the TEs.

I used a nearly identical interview guide for both the TEs and PSTs, with a particular focus on how the PSTs viewed the TEs' reflections *in* and *on* practice. The PSTs were asked to focus on the enactment as it took place and analyse how the TEs taught and prepared them for teaching.

They were asked to describe the modelling as part of teacher education itself, to expand on how, what, and why they valued the modelling of the teaching activities and to explain how, if at all, their own teaching was influenced by the modelling.

## Data analysis

The videos from the observations and interviews were transcribed and analysed using HyperRESEARCH. These data formed the basis for developing sub-categories (see Table 3.2). During the analysis process, I used open coding as described by Corbin and Strauss (2008) within the constant comparative analysis method, writing codes or labels next to the transcriptions.

The results from the thematic content analysis of the modelling and interviews identified certain perspectives on modelling (Krippendorff, 2018). The enactment of modelling, and how it was described by the TEs and perceived by the PSTs, became the thematic unit examined through an interplay of theory and data. The main categories were further divided into sub-categories. This process involved defining and exemplifying central concepts through extracts from the data that resonated with the chosen theories on modelling and performativity.

Consequently, the study primarily examines modelling as forms of representations of practice (Mc Grew et al., 2018) and what might be termed the educational performance of teaching. The findings were categorised into: i) modelling as representation of practice; ii) modelling and translation to theory; iii) modelling as a trigger for rehearsing and facilitating transfer to one's own teaching. Given my theoretical focus on modelling as a purposeful aesthetic act, an additional sub-category was derived from the data, namely iv) modelling performative teaching. The codes and their explanations are presented in Table 3.2.

The main categories were derived from the research questions as well as from theory. In the following section, I will demonstrate how the sub-codes were developed and from which data sources they were derived.

**Table 3.2**

*Categories, explanation of codes, and data sources*

| Research questions<br>main category                                                                                                                                           | Sub-category                                                      | Explaining the code                                                                                                                                 | Dataset             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| How do TEs reflect in and on modelling as a teaching about teaching approach when using process drama in EFL?<br><br>What characterises the PSTs perception of the modelling? | Modelling as                                                      | The TEs demonstrate teaching by involving the PSTs as if being students.                                                                            | Video observation   |
|                                                                                                                                                                               | Representation of practice (construct/ form of the theme/ lesson) | The TEs construct/deconstruct the theme/lesson into episodes.                                                                                       | Interview with TEs  |
|                                                                                                                                                                               |                                                                   | The TEs use direct/indirect forms of teaching.                                                                                                      | Interview with PSTs |
|                                                                                                                                                                               |                                                                   | The TEs use predesigned vs open-designed approaches.                                                                                                |                     |
|                                                                                                                                                                               |                                                                   | The TEs are concerned with the risk of instrumentality (interview).<br>The PSTs perceived this as variation, engagement, thinking, talking, acting. |                     |
|                                                                                                                                                                               | Modelling as                                                      | The TEs guide/do not guide and focus on transfer to PSTs' own teaching, facilitating rehearsal. The PSTs perceived this as learning by doing.       | Interview with TEs  |
|                                                                                                                                                                               | Transfer to own teaching                                          |                                                                                                                                                     | Interview with PSTs |
|                                                                                                                                                                               | Modelling as                                                      | The TEs use/do not use meta-talk. The TEs theorise/do not theorise (e.g. The Art of Teaching).                                                      | Video observation   |
|                                                                                                                                                                               | Linking theory to practice                                        | The TEs are concerned about spoiling the magic of the moment.                                                                                       | Interview with TEs  |
|                                                                                                                                                                               |                                                                   | The PSTs perceived this as embodied understanding.                                                                                                  | Interview with PSTs |

| Research questions<br>main category | Sub-category                                    | Explaining the code                                                                                                                                                                                                                    | Dataset                                   |
|-------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|                                     | Modelling                                       | The TEs use performative and aesthetic investigation in teacher education didactics (improvisation).                                                                                                                                   | Video observation                         |
|                                     | Performative (and aesthetic) teaching practices | The TEs use fiction, in and out of role, body and mind.<br>The TEs explain, challenge, perform, include, stimulate, and motivate the affective and the cognitive.<br>The PSTs perceived this as varied, improvisational, and artistic. | Interview with TEs<br>Interview with PSTs |

## Findings and discussion

As mentioned previously, the TEs aimed to exemplify performative teaching designs. In the following, I will summarise and discuss my findings in line with the model of Lunenberg et al. (2007).

### Modelling as representation of practice

The starting point of the analysis, and what was noticed first when observing the modelling, was that the TEs were enacting the teaching together with their PSTs *as if* the PSTs were students. This performative representation of practice – doing teaching together – transformed teaching into a communicative event (Sauter, 2000), a shared presence that can serve as an arena for the ongoing negotiation of experiences and meanings (Carlson, 2008).

The process of negotiating meaning was evident when the PSTs, in their roles as prosecutors and defenders in the trial against Rosa Parks, discussed and made arguments from both sides of the court hearing at length. Those who were assigned the role of prosecutors mentioned in the interview how challenging it had been for them to adopt and argue for a perspective that was far from their own beliefs (interview with PSTs, 07.02.2023).

In the enactment of teaching itself, the TEs represented practice by intertwining predesigned and open-designed approaches to teaching, demonstrating a shift from predesigned and scripted methods to more improvisational

and open-designed ones. Process drama and TiR have some predesigned characteristics and predefined framings. For instance, the topic and the episodic structure involving role-taking and TiR were predesigned. However, they were also open-designed, meaning there was no scripted plan. What happened within the framings relied heavily on the here and now, and on how the TEs and PSTs collaboratively explored the chosen topic, demonstrating their reflections during the learning–teaching experience.

Nevertheless, the TEs remained in charge and had the authority to decide and frame the next episodes. This presents, somehow, a dilemma for TEs. When asked in the interview to describe the main purpose of using modelling in teacher education, one of the TEs described it as showing the PSTs a toolbox – not meant for replication, but for providing and exemplifying teaching ideas.

*I do not want my teaching to be monologic; I see my modelling as suggestions and want the PSTs/students to be critical and participate in an open-designed and improvisational teaching structure...*

(Interview with TE, 02.12.2022)

The same TE expressed a desire to stimulate the PSTs' professional judgement. He was therefore sceptical of the term 'modelling' because he felt it connotes teaching as instrumental and risks being too predesigned. However, he also acknowledged that, in many ways, he was modelling every time he was in class with his PSTs. This perspective aligns with Lunenberg et al. (2007), who refer to this as implicit modelling, where the TEs 'walk the talk' and act as examples while teaching.

Both TEs explained that the main reason for modelling was to create an opportunity for PSTs to participate in performance-based teaching, thus making the modelling a trigger for the PSTs' subsequent rehearsals. In the end, one of the TEs suggested the term 'participatory modelling' to avoid any misunderstanding of the concept. The PSTs reflected on the modelling, saying:

*We experienced how varied a lesson might be structured and that we could teach the same topic from many different angles. By taking physical part in the simulated lesson on the floor, we learned how to involve and engage students, both in ways of thinking, talking and acting.* (Interview with PSTs, 7.2.2023)

They also commented on specific parts:

*The different parts of the lesson were linked together, but in the beginning, we did not understand how COVID and not being allowed to enter the bus if we were not vaccinated had anything to do with the topic for the lesson.* (Interview with PSTs, 7.2.2023)

COVID refers to the TEs starting the modelling in an indirect manner, where, in the role of a bus driver, one of the TEs invited the PSTs onto a bus, telling those with only one vaccine dose to sit at the back. The quote shows that the PSTs were indirectly considering the composition and decomposition of the modelling.

Later, they discussed whether this indirect approach was an effective teaching strategy or if it was too removed from the original theme – the civil rights movement. The shift between present and past opened up opportunities for linking current topics to historical themes, with the intention, as explained by the campus teachers, of making the theme more relevant to the daily life of the PSTs. This is explored further in the section on modelling as linking theory to practice.

The PSTs emphasised that the PD modelling provided rich opportunities to practise and develop the four skills in EFL – reading, speaking, writing and listening – and that they were inspired to facilitate similar drama activities in their own teaching.

However, both the TEs and the PSTs acknowledged that this form of practice representation is time-consuming, and they expressed doubts about the feasibility of frequently implementing process drama in this way.

In conclusion, both the video observations and the interviews show that the modelling served as a representation of practice with purposes that aligned, albeit with slightly different perspectives in the data. The video observations showed reflection in practice and how a combination of pre-designed and open-designed approaches was enacted.

In the interviews, the TEs explained that the purpose of modelling was to use it as a toolbox – not for replication, but to stimulate the PSTs' own professional judgement and to encourage participation in performance-based teaching. The interviews with the PSTs revealed that they perceived the mod-

elling as demonstrating a variety of teaching methods, illustrating that a topic can be taught from many different angles.

### **Modelling as linking theory to practice**

In the first year (2021), the TEs did not make their teaching choices explicit, nor were these choices translated much to the PSTs' own practice or connected to theory. Instead, the TEs explained in the interview that they chose to address this after the PD. Not explicitly talking about and explaining their teaching seemed to be a dilemma for the TEs, which was also indirectly noted by the PSTs in the focus group interview.

The PSTs referred to TiR as a 'play' rather than a teaching and learning strategy, indicating that the TEs had not explicated their approach.

The following year (2022), the TEs adjusted their strategy. Although they still did not explain or link their methods to theory during the modelling phase, they explained that they did it more thoroughly afterwards. When this was discussed in the video-stimulated interview, one of the TEs explained:

*If we were to stop in the middle of the teacher-in-role to deconstruct, it would have spoiled the magic of the teaching... Teaching using the process drama method, and especially teacher-in-role, opens up a magical space because it brings teaching to life, motivating and highlighting critical incidents that involve emotions and engagement. (Interview with TEs, 02.12.22).*

However, it is clear that the TEs did facilitate and link theory to practice to some extent. For instance, as observed at the end of the process drama, there was a significant discussion between the TEs and the PSTs about whether the indirect framing of the topic was a good teaching strategy. This was also problematised by the PSTs in the subsequent interview, where they discussed whether the disconnect between the two themes was too great to make the link meaningful.

When the PSTs who were not vaccinated had to move to the back of the bus, they retrospectively described this as giving them an uncomfortable feeling of being less valuable. However, they did not consider disobeying the bus driver's order. When asked why, one PST explained, 'I felt that he (the

bus driver) was in charge and that he had the power to decide over the bus' (interview with PSTs, 07.02.2023). As a result, they did not protest. This experience facilitated an important discussion about power relations, as well as the significance and responsibility of involving emotions in educational situations.

The bus episode also serves as an example that can illustrate the difference between a core practice and a teaching activity. The teaching activity can be categorised as *teacher-in-role*, containing certain characteristics such as the teacher being in role and the students either being themselves (as in this case) or in role. A core practice might be identified as *involving emotions in teaching* because it demonstrates what teachers do while they are in the midst of teaching and is used because it is believed to have the potential to improve student achievement (Grossman, 2021).

Dorothy Heathcote developed a frame for TiR, known as 'We are in the brotherhood of all those who...' (Wagner, 1976, p. 48), to convey the idea of pretending to be in companionship with all who are in similar situations. This provides a wider angle of approach to the situations which an action seeks to address. From my point of view it is through these emotional responses that students can begin to understand the differences and similarities between the people they explore in the drama and themselves. Their emotional reactions can provide insights into situations they would not have understood without acting them out.

Incorporating the COVID-topic into the process drama contributed to raising the PSTs' affective level because they were themselves, and not in role, and so could not hide behind a role distanced from their own identities. Although it remained a fictional framing, a contract was established beforehand between the TEs and the PSTs, stating that they were exploring the dual theme within a fictional frame. The COVID-topic became a performative agent that produced feelings, discussion and ethical considerations, and was intended as a strategy to start the lesson with a current topic that affected them all.

The findings of this study align with those in the literature. For example, the TEs did not extensively link their teaching to educational theory or research. However, they mentioned that they addressed this in the lessons that followed.

Interestingly, in the interviews, the PSTs expressed themselves in ways that demonstrated a deep understanding of what they had participated in.

It is noteworthy that the PSTs understood the connection to theory, even though the TEs did not explicitly pause to include meta-commentaries. As one PST stated:

*I really understood how important it is to teach topics like this in ways that open up possibilities for the student to become completely involved, both emotionally and cognitively. (Interview with PSTs, 07.02.2023)*

This suggests that the PSTs perceived the modelling as a demonstration of the art of teaching, recognising that teaching can come in various forms. Indirectly, it also indicates that they became aware of the importance of dialogic teaching.

Another PST went on to say:

*Of course, it is important to plan our teaching and have a proper framing of the theme, but the modelling showed us that teaching also involves improvisation and the ability to listen to the students and take their perspective. (Interview with PSTs, 07.02.2023)*

It appears that the PSTs were able to reflect on and make the connection to relevant theories about teaching, even though the TEs did not explicitly connect the modelling to theory or to the prospective teachers' own practices. There may be different explanations for this, such as the TEs making more of these connections in subsequent lessons.

However, it can also be attributed to the PSTs' direct, bodily, and physical participation in the modelling. By engaging in performative teaching, where teaching is understood as an explorative and creative process, they were able to experience teaching from multiple angles. Although the PSTs did not explicitly mention it, the video recordings of the teaching events show that they experienced teaching in a bodily, relational, creative, affective, and cognitive manner simultaneously. This experience appears to have prompted reflections in and on education that might have been difficult to grasp through discussions or reading alone.

### **Modelling as transfer to own teaching**

The TEs did not want their PSTs to simply copy their modelling, but instead aimed to provide them with various routines or structures of teaching as a toolbox to choose from. They were also aware that the teaching experience on campus might be challenging to translate into new contexts. Nevertheless, the TEs focused on transferring these experiences to the PSTs' own teaching by involving them in the process drama. This was expressed as follows:

*The campus teachers modelled a teaching process which made us take part as if we were students. In a way, we learned teaching by doing teaching – they (the TEs) took on roles, and we became students while simultaneously learning different teaching methods. It became meta-like. (Interview with PSTs, 07.02.2023)*

The transfer occurred indirectly through the assignment given to the PSTs, which encouraged them to create their own teaching plan inspired by the modelling. Following ReTPro's learning-to-teach cycle (McDonald et al., 2013), the PSTs were guided through the subsequent phases of the cycle, beginning with the rehearsal phase on campus and followed by the enactment in practice.

In the interview (07.02.2023), the PSTs explained that they were supposed to first create, then rehearse on campus, and finally enact their own teaching plan, which included a short version of a PD incorporating TiR. Although they did not engage in teaching themselves during the modelling phase, they participated in the TEs' teaching as if they were students. They were then expected to develop and rehearse their own teaching during the next phase of the cycle.

*...they (the TEs) showed us so many interesting ways we could engage students in a topic, and so it was hard to make our own plan... we really needed to rehearse on campus... the TEs guided us to some extent, but it would have been even better if the practicum teachers had come to campus to help us rehearse and prepare. (Interview with PSTs, 07.02.2023)*

This is an interesting perspective that needs to be further developed in teacher education.

The PSTs also described the transference to their classrooms, emphasising the actions they had undertaken with their students. Their focus on actions suggests an awareness of the performance aspect of teaching, even though they did not specifically describe teaching as performance.

In the interview, when discussing process drama, they mentioned how they framed the chosen topic, which fictional role they had chosen for themselves, whether their students were invited into fictional roles, and how they managed to involve their students both emotionally and cognitively.

*We wanted to involve the students and create an atmosphere where they felt compelled to participate... I felt that the teacher-in-role was, in a way, an initiating episode that inspired further participation in the discussion that followed.* (Interview with PSTs, 07.02.2023)

This indicates their awareness and focus on collaborative, artistic, and spatially creative teaching, even though the TEs did not explicitly link their actions to relevant educational theory. The way they described their actions in the interview shows an understanding of the physical, symbolic, and reflective characteristics of those actions.

The PSTs emphasised that they had previously participated in similar teaching when they attended junior college, but only as students. The new experience was participating simultaneously as students and as future teachers.

In the interview, they reflected on how this dual perspective made them evaluate the experience in a different way, now seeing it as a possible teaching strategy. They also discussed the challenges and opportunities when teaching in practicum:

*Sometimes we used words in English that were too difficult, and the students did not understand; we struggled to find simpler expressions.* (Interview with PSTs, 07.02.2023)

In summary, modelling as transfer to one's own practice can be seen as a trigger for rehearsing on campus to construct an individual teaching repertoire.

## Modelling performative teaching practices

In this case, Selander and Kress' (2010, pp. 20–21) concept design *for learning* means creating *designs for learning teaching* that include performative elements, as they aim for implicit modelling to occur in a performative form.

The TEs planned and conducted the process drama about Rosa Parks, dividing it into episodes that were interconnected despite shifting in time and space. This approach is known as montage-inspired dramaturgy (Szatkowski, 1989), where different layers of meaning are layered on top of each other within an episodic structure.

The video observation shows the TEs reflecting *in* teaching as they linked all the layers or episodes together into a cohesive unit, while ensuring that each episode made sense on its own. The benefit of choosing such a closely linked structure is the sense of coherence it provides for the participants. This coherence was also noted by the PSTs:

*... it (the teaching) had many parts, but they belonged together; all the parts were about segregation in the US at that time – it was engaging.* (Interview with PSTs 07.02.2023)

Performative actions carried out in a montage-dramaturgy have no fixed start or end; the different episodes can change order, and the pauses between episodes allow for personal associations and interpretations. The modelling had a predesigned framing, as the topic and teaching structures were decided in advance. However, there was room for improvisation within each episode. This means that the modelling moved along a continuum between predesigned and open-designed approaches.

When analysing teaching from a performative perspective, the focus is on the action or event, examining the physical and bodily enactment of teaching (Merleau-Ponty, 2010). The TEs deliberately employed performative and aesthetic teaching strategies because they wanted their PSTs to experience new teaching methods they believed the PSTs were unfamiliar with (interview with TEs, 02.12.2022).

The video observation revealed how the TEs reflected *in* teaching as they used strategies that engaged the PSTs' bodies (the space was constantly shifting, and the participants moved from scene to scene), verbal language (the PSTs argued in the court hearing and discussed the benefits of direct vs

indirect teaching approaches), collaboration (two groups, where each had to prepare and act as either prosecutors or defenders), exploration (the topic was explored from different perspectives in each episode) and creativity (while the topic was decided, each episode allowed for improvisation and creative shaping of artistic form). This suggests that the TEs aimed to involve their PSTs in an aesthetic learning-to-teach process.

However, when it came to shaping aesthetic forms, this aspect was less developed. The TEs could have provided the PSTs with tasks such as, ‘Can you, in groups, create a depiction showing Rosa’s family the day they heard about the dramatic bus ride?’ Tasks like this would encourage working in a form- and arts-based manner within the actual topic.

Despite the aforementioned, within a fictional framing (where they explored roles as if they were citizens of the US at that time), the participants explored a historical topic, pretending to be someone else, across time and space. This was observed by the researcher and mentioned by the PSTs in the interviews.

When asked about the teaching perspectives demonstrated by the modelling, one PST reflected:

*... the methods showed us how we can make our students talk, read, write, listen, and argue in English. We became emotionally engaged in the topic, for instance, when we suddenly heard Martin Luther King’s speech over the classroom monitor. We could not have learned how to teach this way without experiencing it ourselves, physically on the floor. (Interview with PSTs, 07.02.2023)*

Another PST specifically reflected on the importance of the multimodal impulses and media that functioned performatively and were incorporated into the modelling:

*The song (‘Blackbird’ by Beatles), the TV-recording of Rosa Parks, and the written material contributed to curiosity and excitement – I felt motivated when these new impulses were introduced. (Interview with PSTs, 07.02.2023)*

## Conclusion

### **Modelling a performative didactic design: Body and mind in action**

When the term ‘performative’ is placed before ‘didactic design’ (Selander & Kress, 2010), the focus is turned from social semiotics and signs towards actions and events. Movement, thinking, oracy, affects and emotions are understood as parallel activities which engage the whole human being when they participate in embodied and kinaesthetic performative teaching and learning activities.

In this study, both the TEs and PSTs emphasise the importance of embodied and affective experiences, both in the enactment itself and through their reflections in and on teaching. The concept of performativity can be viewed as a practice theory suitable for planning, performing and analysing teaching, where TEs and PSTs collaboratively engage in purposeful teaching strategies that involve emotions and creativity, highlighting that implicit performativity is as vital as explicit talk.

Recognising this distinction led to a revision of Lunenberg et al.’s model, specifying a concrete form of implicit modelling: Performative Modelling. *Implicit performative modelling* may be employed when TEs wish to emphasise the communicative and interactional aspects of teaching, including both embodied and verbal communicative acts. In this study, the term ‘performative’ also includes aesthetic actions at work.

*Implicit performative modelling* can be described as any instance where TEs model teaching by acting, living through and reflecting in and on performative aesthetic teaching forms alongside their PSTs. These forms include embodied, verbal, material and improvisational dialogic encounters, aimed at stimulating the whole person – both affectively and cognitively.

For modelling to be meaningful as a design for *teaching about teaching*, this study suggests that implicit performative modelling can highlight and illuminate performative aspects of teaching that are often overlooked in teaching analysis. The intertwining of body and mind is evident in the video observations and in the way the informants described their experiences during the interviews.

In line with Østern et al. (2019) and Piazzoli et al. (2023), I suggest referring to this approach to teaching about teaching as ‘performative didactic design’. I define performative didactics as teaching strategies where teachers

use aesthetic and form-creating methods, challenging the bodies and minds of students to be participatory, creative, explorative, relational and thoughtful.

In conclusion, the study reveals that combining implicit with explicit modelling provides opportunities to explore, rehearse, deconstruct, and theorise about teaching.

However, it was particularly emphasised by the PSTs that participating in the common performative modelling phase facilitated translation to their own practice just as much as the deconstruction and the discussion did. Engaging in the implicit enactment of teaching, both physically and bodily, offered the PSTs an understanding of teaching that verbal reflection alone could not provide.

I therefore argue that offering PSTs access to not only explicit discussions but also the performative aspects of teaching fosters both metacognitive thinking and the involvement of emotions and creativity. Participation in these practices can support PSTs in constructing their purposeful teaching repertoires.

Both the TEs and PSTs stress that combining implicit performative modelling with explicit meta-commentaries helped expand their teaching repertoires.

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4

## Talking about doing – towards a performative pedagogy in teacher education

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**Abstract:** In this article, I present performativity as a theoretical framework for linking practical action and reflection in teacher education. Performativity, in essence, is a theoretical concept signifying staging, design and co-creation of social and pedagogical actions. Through systematic analyses of a selection of research literature I identify and connect two contrasting performative perspectives with distinct understandings of how pedagogical actions can best be explored and reflected upon. One perspective originates from what I call *performative education* and prioritises identification and development of collective and articulated practices within a profession, such as methods, routines and the use of specific techniques or resources. The other perspective stems from what I call *performative teaching*. Here, the emphasis is placed on dynamic, aesthetic, and relational actions that are produced by all agents involved in the learning processes. The study is a theoretical contribution to teaching and research on practical actions and skills in teacher education.

**Keywords:** performative, performativity, teaching, teacher education, performative pedagogy

**Sammendrag:** I denne artikkelen presenterer jeg performativitet som et teoretisk rammeverk for å utforske undervisning som kan bidra til å kople handling og refleksjon i lærerutdanningen. Performativitet er et teoretisk konsept som dreier seg om å beskrive eller forklare hvordan handlinger formgis og samskapes i sosiale og pedagogiske kontekster. Gjennom systematiske analyser av et utvalg forskningslitteratur identifiserer og sammenstiller jeg to performative perspektiver som uttrykker ulike forståelser av hvordan pedagogiske handlinger best kan utforskes og reflekteres over. Ett perspektiv stammer fra det jeg kaller *performativ utdanning* og handler om kollektive og artikulerte praksiser innenfor en profesjon, som for eksempel metoder, rutiner og bruk av spesifikke teknikker eller ressurser. Det andre perspektivet stammer fra det jeg kaller *performativ undervisning*. Her legges det vekt på dynamiske, estetiske og relasjonelle handlinger som samskapes i lokale utdanningskontekster. Studien er et teoretisk bidrag til undervisning og forskning på praktiske handlinger og ferdigheter i lærerutdanningen.

**Nøkkelord:** performativ, performativitet, undervisning, lærerutdanning, performativ pedagogikk

## Introduction

Let me start with a brief description of a situation from teacher education: *A teacher educator is standing in the middle of the classroom. She rests her gaze briefly on each preservice teacher, makes contact, smiles and waits. 'It's nice to see everyone', she says.* This is how the teacher educator starts a lesson. It is an everyday situation. Even though the teacher educator intends to use space, body, voice, and language in specific ways, it is uncertain whether her actions are carried out as expected. What we do know is that the way actions are designed and staged, and how they work together with social and pedagogical norms and classroom rules, has great significance for how they influence, involve and impact the preservice teacher (Gasparatou, 2017).

This study examines how the performative perspective can be used as a practical and reflective framework for exploring and expressing pedagogical actions in teacher education.

Previous (performatively oriented) studies have, to a limited extent, adopted performative perspectives to connect actions with aesthetic qualities to more strategic and collective actions within the teaching profession. In this study, I make a systematic analysis of a selection of research literature to explore performativity as a potential theoretical reflection framework to explore practical actions in the teaching profession. I synthesise recent performative research articles to derive new theory that can be used to explore a wide range of forms of actions, such as leading whole-class discussions, starting a teaching session, or framing exploratory and creative teaching activities. By synthesising different performative research, I am working towards a performative pedagogy that can be used to explore tensions and connections between actions, language and ontology within the teaching profession.

In teacher education, performativity is linked to the level of action and practice in training (Møller-Skau & Lindstøl, 2022; Schewe, 2020). Legislation and course curricula in and across subjects describe learning outcomes that deal with practical skills, such as *how to start a maths lesson* and *how to give feedback that facilitates learning*. Although actions and skills are described in governance documents, it is still up to every teacher training programme to determine how teaching is taught (Grossman et al., 2018; Smith, 2021).

In research on teacher educators' teaching, it is recommended that practical training is linked to theoretical reflection, where preservice teachers

practise using professional language to reflect on practical examples (Lindstøl, 2018).

To develop new knowledge about a profession is a matter of exploring bases of knowledge, professional identities and that which is executed – and done – by way of different practices (Molander & Terum, 2008, p. 19). The term ‘profession’ comes from the Greek *prophaino*, meaning ‘to declare publicly’ (Eriksen & Molander, 2008, p. 161). To describe an occupation as a ‘profession’ expresses expectations of a collective and articulated identity rooted in practices and actions.

In order to investigate tensions between local and more collective strategies for professional development, there is a need for a flexible and nuanced language that is closely connected to the practices that are executed. In this study, I explore performative theory, which can be used both to develop, explore and analyse empirical practices. I take Janek Szatkowski’s (2011, p. 3) definition as my starting point: ‘Performativity is a method of observation that brings into focus phenomena as things that come into being and have meaning at one and the same time’ (my translation).

That an action ‘comes into being and has meaning at one and the same time’ does not indicate that I am looking to interpret actions as *signs* that represent a *single meaning*, but that I am exploring what actions *do* and how they gain different meanings through different forms of collaborative processes. I ask: *How can different performative perspectives be used as a theoretical reflection framework to explore and strengthen teaching and research on practical skills and actions in teacher education?*

I begin by introducing the term ‘performativity’, a term that is not easily defined.

## Co-creating meaning through action

The terms *performative* and *performativity* stem from linguistic and philosophical theory; they are about how language not only describes a condition but also performs an action and creates meaning when interacting with participants in social situations and contexts (Austin, 1975; Searle, 1969).

The adjective *performative* is used to describe specific and often empirically generated actions and language that perform or co-create meaning. The noun *performativity* refers to the concept or the phenomenon of performing actions through language. It can, for example, be a matter of constructing and staging identities and roles in social contexts.

Judith Butler's (1988) concept of performativity is often used as a theoretical framework in pedagogical studies to understand how identities, social roles, and power structures are constructed and staged in the classroom. While the adjective 'performative' is used primarily to explore the influence and impact of specific and empirical utterances and actions, 'performativity' is used to describe and explore broader social and pedagogical processes that are created and sustained through repetition, systematisation and progression in the execution, development and exploration of actions and skills.

Performative theory has its origin in John Langshaw Austin's (1962) speech act theory. Austin is interested in how philosophers and linguists have become fixated on language's descriptive and demonstrative function (constatives), for example, the notion that linguistic utterances can be validated as either true or false (Austin, 1962, pp. 92–98, 101, 102).

Austin believes we often use language in ways that do not merely describe the world, but which *do* something to it. Austin calls these 'performative utterances' (Austin, 1962). He divides these into three types of actions: locutionary, illocutionary and perlocutionary.

Locutionary actions (*from English* locution, 'utterance') are about the information conveyed, that is, what is expressed (Austin, 1962, pp. 92–98, 101, 102). The philosopher Renia Gasparatou (2016, 2017), who has adapted Austin's speech act theory for education and teaching, writes that *locutionary* actions can be understood as the professional content and resources the teacher chooses (and leaves out) before teaching is put into action (Gasparatou, 2016, p. 320; 2017, p. 511).

*Illocutionary* actions are the speech acts that are executed (here and now). They can, for example, be actions such as asking, apologising, correcting or encouraging. The interaction between locutionary and illocutionary actions expresses the pedagogical and emotional intentions and purpose of the action.

*Perlocutionary* actions concern how locutionary and illocutionary actions are understood and perceived by recipients and participants: for example, how speech acts influence interactions between a teacher educator and a preservice

teacher, and the ways in which actions leave an impression and contribute to the desire and willingness to co-create meaning. In the short term, and in local contexts, perlocutionary actions focus on the students' experiences of the specific teaching session: for example, are they inspired, motivated or provoked, and do they experience meaning and learning (Gasparatou, 2016, pp. 324–327, 2018)? On a longer timescale, perlocutionary actions deal with how teacher education contributes to training professional teachers who are equipped to work together to develop, explore and reflect on pedagogical actions (Gasparatou, 2017).

Austin emphasises that the three forms of action cannot be clearly separated from each other; we need to understand 'the total speech situation' to understand what has been said and how the action operates (Austin, 1962, p. 147; Gasparatou, 2017, p. 512).

Mark Warren Liew (2013) takes Austin's theory as his starting point when he describes teaching as a composite of performative actions such as convincing others, challenging preconceptions, inviting objections, creating reflections or provoking questions. Liew writes that all teaching consists of pedagogical perlocutions, and that teaching's performativity is first and foremost about interaction and co-creation between teacher and students.

In order for actions to be characterised as performative, it is not enough that the utterance is understood (p. 266); it must bring about some form of cognitive, affective or behavioural change. The actions cannot be understood exclusively in terms of their characteristics; they are also conveyed by the pedagogical participants. Consequently, it is the performative aspect that expresses the action's power to influence and impact these participants.

Austin's understanding of performativity has been further developed in many directions within the fields of sociology (Butler, 1988), dramaturgy (Fischer-Lichte, 2008), philosophy (Gasparatou, 2016) and art-based educational research (Østern & Knudsen, 2019).

In order to show how I have proceeded to identify and analyse studies using performativity as an analytical approach, I present the materials and methods of the study.

## Materials and methods

This paper is the result of a literature review based on a research question. My intention was to explore how selected research literature uses and understands performative perspectives in pedagogical and didactic contexts. I started by identifying the relevant research literature.

Two databases were selected: Idunn (research primarily in Norwegian) and Eric. Initially, database searches of peer-reviewed literature were conducted interactively. Texts were identified through searches for primary keywords that combined ‘teaching’ or ‘teacher education’ with ‘performativity’ or ‘performative’. Except for Ball’s (2003) article, which conveys an important turning point in the understanding of performativity, the search was limited to work done between 2016 and 2024.

The criteria for inclusion were that the empirical examples and data concerned teaching and teacher education. I disregarded articles that did not explicitly link performative/performativity to actions and skills in the teaching profession.

I then analysed 16 articles, asking three questions:

- How are performativity/performative actions defined and exemplified?
- How is performativity/performative used to describe, explain and/or explore practical actions in teaching?
- Which possibilities and potential problems are identified and discussed?

The analysis generated two perspectives: *performative education* and *performative teaching*. The most important difference between these two is that *performative education* is about identifying and describing practices that are relevant and effective across local educational contexts and institutions, while *performative teaching* is more about how teachers, preservice teachers and teacher educators explore and develop their own local practices independently of external demands.

### **Performative education (8 articles)**

Research is conducted on processes, methods and language that can function across local practices and strengthen and unite the teaching profession from within in order to counteract performative management and outside control.

### **Performative teaching (8 articles)**

Research is conducted on arenas, processes, aesthetic teaching methods and actions that can contribute to teachers'/preservice teachers' development and exploration of their own repertoire of expression and action through interaction with colleagues and fellow preservice teachers.

## **Performative education**

The articles I have categorised under the perspective of *performative education* deal with how the teaching profession can agree on developing one (or several) collective and articulated professional identities rooted in practices and actions. Emphasis is placed on identifying and describing actions that can be developed and sustained through repetition, systematisation and specific techniques such as methods, procedures, observation manuals, and tests (Darling-Hammond, 2015). This research is often used to regulate what is taught (curriculum) and how it is taught (pedagogy) (Sing, 2018, p. 491).

There can also be more open and flexible actions linked to the teachers' repertoire of expression. All of the studies within this category criticise structures, processes and instruments that are used to regulate and control teachers' opportunities to choose and explore their own practices in interaction with colleagues and fellow students.

### **The terrors of performativity**

One of the first to criticise what he called a performative regime was the sociologist Stephen Ball (2003). In his seminal text, 'The teacher's soul and the terrors of performativity' (2003), he explains performativity as such:

Performativity is a technology, a culture and a mode of regulation that employs judgements, comparisons and displays as means of incentive, control, attrition and change based on rewards and sanctions (both material and symbolic). The performances (of individual subjects or organizations) serve as measures of productivity or output, or displays of ‘quality’, or ‘moments’ of promotion or inspection. As such they stand for, encapsulate or represent the worth, quality or value of an individual or organization within a field of judgement. (Ball 2003, p. 216)

Taking Ball’s criticism as their starting point, Jessica Holloway and Jory Brass (2016) have researched how teachers’ acceptance of the performative culture changed between 2003 and 2013. The study shows that, by 2013, teachers no longer viewed objectification, quantification, and measurement as antithetical to teacher professionalism. On the contrary, they believed collective performative standards were precisely what they needed to know and monitor to improve and fashion themselves as professionals (Holloway & Brass, 2018, p. 20).

These teachers had become blind to the power structures they themselves were a part of. Additionally, Holloway and Brass write that this leads to teachers being less equipped to identify and understand power and knowledge that shape their imagining of schools and teachers. Holloway and Brass argue that teachers should reflect more deeply on how their own practices, values and subjectivities are influenced by and consolidate ‘the terror’ from outside.

Twenty years after Ball’s first critical article, performative counterforces are expressed even more clearly in research literature. Pennie L. Gray and Seiki Sumer (2020) have researched the pressures and struggles that teachers face when they are subjected to external systems of reporting and evaluation. One of their findings is that performative pressure particularly affects newly qualified teachers. These individuals experienced having fewer opportunities to develop and explore their own teaching. They felt powerless and several experienced crises linked to their own professional identity: ‘At times, these external expectations created a crisis in values, with the starting teachers feeling they had to abandon what they knew to be effective practices and instead adopt the school norms or approaches that would meet these external demands’ (p. 1).

Evaluation and reporting with no connection to practical classroom teaching led to their loss of motivation to continue in the profession.

In another article, Holloway (2021) concludes by saying that the technology of performativity (along with the technologies of the market and managerialism) operates as a new frame of power/knowledge that structures what is 'true' about teachers and teaching (p. 35). She goes on to write that within this performative regime, the 'good' teacher is the one who responds precisely and 'correctly' to external performance targets.

Closed performative structures limit the teacher's opportunity to resist and create alternatives to the demands and expectations of governments and policymakers for change and innovation. Holloway states that performative action demands are a threat to teachers' autonomy and lessen opportunities to develop the teaching profession from within.

Nonetheless, there are several researchers who propose alternatives to how the teaching profession's action practices can be further developed. These are linked to what is called a *performative turn*.

### **Performative turn**

The performative turn is a matter of strengthening performative teachers' knowledge of how to explore and develop their own practices, in interaction with colleagues and fellow students. Qualities and language that unite and function collectively, across local contexts and institutions, are sought out. The studies make several suggestions.

Raymond (2018) suggests that preservice teachers work systematically over time with *creativity* as a practical approach to exploring and experimenting. He recommends that preservice teachers exercise and explore their creative capacities and creative practice. Through practical training, the preservice teachers will become better equipped to facilitate and develop the life-enhancing capacities of creative expression (cf. Ball's 'soul').

Raymond is not concerned with reproducing established practices, but with exploring and creating something new (for the students). Furthermore, Raymond writes that in this way the students will become equipped to challenge the logic of performativity (terror) in a way 'that allows them to be true to themselves' (p. 144). An overriding goal of Raymond's research is to develop a new generation of teachers empowered with the professional confidence to live out their own definitions and expressions of pedagogical creativity (p. 144).

In this way, preservice teachers can both resist and propose alternatives to performative demands imposed from the outside.

A second strategy from several researchers proposes ways to create correlations between collective values, professional language, and more situational actions.

Appel (2020) proposes a rebalancing framework that establishes a balance between control and collaboration. Here he suggests what he calls inter-connecting elements of leadership, professional learning and responsible, informed accountability. Systematic work to link learning, teaching, and leadership more closely will make it possible to adjust performative structures across local contexts.

Frostenson Englund (2020) suggest processes whereby teachers work together to explore tensions between humanistic values and performative techniques. They recommend that teachers re-imagine ‘the field of judgement’ through professional development.

Holloway (2021) is also concerned with educating teachers who have the knowledge and experience that can explore and create new actions and teaching practices. Like Frostenson and Englund (2020), she suggests teachers must develop mechanisms and processes that allow for and enable interplay between performative techniques and professional humanistic values.

In order to resist performative action demands, it is encouraged that teachers develop and creatively explore their repertoire of action and expression.

Collectively, the research literature identifies several tensions.

In summary, the studies specify to a limited extent how teacher training can contribute to preservice teachers developing the confidence and competence to challenge narrow beliefs and standards and ‘live out their active definitions and expressions of creativity, approaching teaching and learning creatively’ (Raymond, 2018, p. 146). It is not clearly expressed *how* this creativity is supposed to be explored and developed.

## **Discussion: Performative tensions 1**

The most prominent tension within *performative education* is between performative demands (imposed from the outside) and teachers’ autonomy to practise their vocation. The researchers are interested in creating a counterforce to what is called ‘performative terror’ by reformulating and criticising the basis of knowledge control, what is executed and done in the form of different

practices. They are also interested in developing a professional language that can be used to create closer correlation between more primary values and concrete teaching practices.

Several studies explore tensions between standardised or collective actions and those that are more creative and innovative. These studies investigate processes that give teachers and students more space to develop their own repertoire of expression. Although all the researchers argue that there is a need for more knowledge about innovative processes and forms of interaction, few empirical examples are given of how these are concretely facilitated and executed.

A more implicit form of tension exists between the teachers' practical actions and the language that is used. The language is rather general and basic; there are few terms used to describe the qualities and nuances of empirical actions and practices.

Even within a performative turn – where the concern is with developing actions and language with several nuances and more power – there are few empirical examples in which the action data is analysed.

Overall, *performative education* expresses tensions between what I have previously explained as locutionary, illocutionary and perlocutionary actions. It can be said that the researchers are more concerned with identifying the purpose of the action, the locutionary and illocutionary qualities, than with how the action influences, is co-created and has perlocutionary power. Nor do any of the selected studies take as their starting point the adjective *performative* to explore how and why (empirical) processes and actions have the power to impact and influence the perlocutionary potential of the actions.

I have also analysed studies that I have linked to the perspective of *performative teaching*.

## Performative teaching

The articles I have categorised under the perspective *performative teaching* deal with processes, forms of expression, and language that can revive and vitalise teaching in schools and teacher education. Like the studies presented in the previous category, the researchers want to make a break with what Ball

calls ‘the terror of performativity’. The researchers go even further when it comes to challenging established practices.

Erica Piazzoli and Manfred Schewe (2023) state that the word ‘performative’, when being linked to teaching, implies a reference to the FORMative. This means that teaching presents a transformative experience with a potential for personal development. In addition, emphasis is placed on the transFORMative, that is, the potentially behavioural and attitude-changing dimension of teaching and learning (p. 53).

A practical approach to performative teaching deals with researching the interaction created in the ‘here and now’ of teaching. The researchers use the adjective *performative* to explore how and why teaching can have the power to impact and influence, that is, its perlocutionary power in the teaching encounter.

### **Teaching as the art of the moment**

Andrew Hickey and Stewart Riddle’s study (2023) takes as its starting point the fact that the work of teachers has been increasingly prescribed and standardised. This is due to the aforementioned performative restrictions of what they call ‘neoliberal education managerialism’ (p. 1).

They have observed teachers who challenge normative teaching methods through what they call ‘imaginative inquiry’ (p. 14). This means that teachers engage with students using open and flexible lesson plans, and the professional content is explored and co-created ‘here and now’. A central finding is that improvised, situational, and explorative classroom management strengthens the relationship with pupils (p. 14).

Hickey and Riddle argue that being able to improvise and co-create content with pupils is an important part of the teacher’s professionalism. In order to educate teachers who can practise performative teaching, training in practical teaching management, improvisation, and explorative teaching methods is recommended. Drama and theatre pedagogical methods, called performative strategies, are seen as a practical approach.

### **Performative strategies**

Bärbel Jogschies, Manfred Schewe, and Anke Stöver-Blahak (2018) and Schewe (2020) have collaborated with educators in higher education to explore and

define performative teaching, learning, and research culture across disciplines. Their goal is to develop performative concepts grounded both in theory and practice for teacher education. Key characteristics include the inspiration educators derive from the performative arts, and theatre in particular.

This research emphasises the importance of using the rich sensory repertoire of the arts. Educators and students are encouraged to communicate not only verbally, but also through other expressive and visual means, engaging in the creative process with their 'head, heart, hands, and feet'. Art – theatre in particular – contributes to new thinking about how actions can be designed to appeal to emotions, impressions, and ideas. Empathy through role-playing is central.

Educators facilitate democratic and participative learning processes, with students as autonomous co-creators. Competence is achieved through practical application, and performative approaches simulate authentic contexts. Knowledge acquisition requires an inspiring and flexible environment that views experimentation and mistakes as learning opportunities.

Understanding and interacting with different media and art forms promotes democratic participation and intercultural engagement through 'performative literacy'. This shifts the focus from outcomes to activities that generate lesson content.

Annamaria Belezza (2020) is also interested in analysing teaching and learning through what she calls a 'performative lens'. Her starting point is that although many teachers do not wish to teach in performative ways ('I'm here to teach, I'm not a clown'), all teachers are creative practitioners and mediators who produce and stage manuscripts in the classroom every day.

Belezza indicates that 'the missing link' is that teachers and preservice teachers lack what she calls performative competence, something she explains as the design and expression of actions, skills, and methods involving the artistic, personal, emotional, physical and aesthetic sides of teaching and learning. In order to develop performative competence, preservice teachers must have systematic and practical training.

Like several of the researchers who write about performative teaching, she also believes that methods from drama and theatre are particularly well suited to prepare future teachers for a performative profession. The drama and theatre professions offer both physical and mental exercises that provide preservice teachers with training in staging and improvising roles, using multiple senses, and mediating and narrating in varied and interesting ways.

Performative training, in interaction with pedagogical reflection, can contribute to teachers' and preservice teachers' breaking with 'the obvious' and exploring and challenging their own practice. Performative competence can create a kind of pedagogical reorientation that makes the preservice teacher more critical of performative structures that are externally imposed.

Jaume Barrera, Sandra Saura-Mas and Asunción Blanco-Romero (2019) have developed what they call a performative strategy and model (transperformative education) that is also inspired by methods and forms of expression from the drama and theatre professions. The goal is for the experiences and narratives of preservice teachers to be expressed and integrated into their teaching through open and flexible dramaturgy.

The preservice teachers express themselves through body and voice; they perform roles and stage their own experiences and ideas. The teacher educator functions as a performance actor.

Such performative strategies represent a radical shift from a concept of knowledge as something fixed, stable, predetermined and measurable, to a demand for the professional teacher to possess other knowledge and skills. In other words, performative teaching can create performative knowledge.

### **Performative knowledge**

Anja Kraus (2016) writes that performative knowledge cannot be dictated or prescribed, but is produced by all agents involved in the learning processes. Such an understanding of knowledge creation and learning expresses a break from a linear and causal understanding of meaning formation and learning (Kraus, 2016; Piazzoli & Mansfred, 2023).

It also marks a break from the view of professional knowledge as something fixed, stable and tangible that can be limited, listed and regulated through predetermined criteria and qualities.

Karen van den Berg and Stephan Schmidt-Wulffen (2023) state that the term 'performative knowledge' involves two discourses: performativity and epistemology. In contrast to propositional knowledge, which is often true or false, right or wrong, *performative knowledge* is always related to co-creative actions and aesthetic practices. Performative knowledge also presupposes that knowledge creation takes place in a professional community where teacher

educator and preservice teachers can observe, compare, act, repeat, and correct whatever arises and is co-created.

Van den Berg and Schmidt-Wulffen (2023) go on to point out that a performative understanding of knowledge and knowledge production has some pedagogical challenges. While propositional knowledge deals with proposing solutions, methods, and actions that can serve specific purposes, performative knowledge requires practical demonstration, modelling, and staging to be expressed. This means that if performative knowledge is to be learned, it requires a teaching format that enables active participation and interaction.

Barrera, Saura-Mas and Blanco-Romero (2019) also explain that performative knowledge forges connections between different forms of knowledge: practical knowledge (knowing how), propositional knowledge (knowing what), and political knowledge (knowing who, when, and where).

As mentioned above, the most prominent tension within *performative education* is that between performative demands (imposed from the outside) and standardised actions, and teachers' autonomy to practise and explore their vocation (performative tension 1).

The studies in this category provide few empirical examples of innovative processes and concrete, creative teaching, and their language is rather general with few nuances. Although the connection between knowing what, how and why is portrayed as more unproblematic in the category *performative teaching*, several tensions are expressed.

## **Discussion: Performative tensions 2**

The most prominent tension identified by research is between the skills teachers should have in order to practise performative teaching, and the training that is provided. Preservice teachers are recommended to work on practical class management, improvisation, and co-creating professional content with pupils. They also have to work on using art as an inspiration for designing teaching involving the body, the emotions, and cognition (Van den Berg & Schmidt-Wulffen, 2023; Østern et al., 2023).

In order to achieve this, several obstacles need to be overcome. One practical obstacle is the lack of suitable teaching arenas, where there is room for movement and co-creation. Another problem is the time it takes to develop practical skills, compared to other subjects in teacher education. It will be

a great challenge – and take a long time – for both teacher educators and preservice teachers to break with known practices and undertake behaviour-changing activities – and hopefully create something original.

The selected research literature provides limited empirical knowledge of how instruction and training in performative teaching can be planned and carried out systematically in and across subjects. The studies mostly use self-reporting interview data and concentrate on short-lived, single-case studies (Møller-Skau & Lindstøl, 2021, p. 10). As a potential solution, several researchers turn to the long tradition of performative teaching found in the drama and theatre professions, which have methods, forms of expression, theory and dramaturgy that are extremely suitable for teachers (Bakke & Lindstøl, 2023). However, there are few empirical studies that thematise and explore how drama and theatre pedagogy is used to teach and train practical skills and actions.

A more implicit form of tension exists between the concrete practices that are executed and the abstract language used to describe them. The researchers offer terms and models that describe performative teaching and explain performative knowledge. These terms are not always simple to grasp, particularly for teachers and preservice teachers without aesthetic experience and knowledge. There is a danger that performative language may render performative teaching commonplace or be inadequate to describe its potential.

Like the perspective *performative education*, *performative teaching* expresses tensions between locutionary, illocutionary and perlocutionary actions. It can be said that the researchers are more concerned with how the action influences and co-creates ‘in the here and now’ than with focusing on the teachers’ intentions and goals. In other words, the teacher is more concerned with the perlocutionary powers than the locutionary and illocutionary qualities.

In summary, the two performative perspectives explore different dimensions that are relevant for teaching about actions in teacher education. One dimension concerns identifying actions to be taught, for example: How is the action regulated in policy documents and course descriptions (laws, plans...)? Which kinds of performative actions are to be explored, and what is the possible and imagined purpose of the actions (core-practice or other actions)? Which (professional/performative) theory and languages can be used to describe and reflect on the actions in nuanced and precise ways?

Another dimension is more concerned with how teaching is to be facilitated and framed, for example: Which skills and content knowledge are required to carry out the action? How can actions be designed and transformed in different ways, and how does this influence the interaction between participants? How can the preservice teachers exercise and explore their creative capacities (improvise, simulate, experiment...)?

In short, the two perspectives connect and express nuances and links between locutionary, illocutionary and perlocutionary actions. We also see that there is a need for empirical studies in which performative qualities and visions are explored and expressed in concrete teaching. This will require a reorientation in terms of what counts as valid knowledge in teacher education.

In what follows, I propose an ontological position that provides greater space for teacher educators, teachers, and preservice teachers to explore, develop and legitimise professional teaching practices in, and across, institutions.

### **Connecting performative actions, language and knowledge**

In this study, I seek new knowledge about how a performative perspective can be used as both a practical approach and a theoretical framework to explore practical skills and actions in teacher education. All the selected articles argue that pedagogical actions must be developed from within, through co-creative processes that pave the way for collective and creative practices. However, we find different strategies and objectives.

As far as *performative education* is concerned, it is primarily a matter of identifying and describing techniques and actions that can be co-created and maintained through repetition and adaptation to different pedagogical contexts. The researchers describe different processes – from the known and established to the less familiar and creative.

When it comes to *performative teaching*, it is primarily a matter of renewing, breaking and challenging what is done, of moving further and further into the unknown.

Even though both groups of researchers argue there is a need for more knowledge about teaching in teacher education, they provide few empirical examples, and those given are largely isolated ones. There is a need for more knowledge about how practical professional development, teaching and

practical training can be facilitated, structured, and connected over time and across local contexts. Since it is clear that the drama and theatre professions can provide practical approaches, there is a need for more teacher educators (and teachers) with specialist competence in drama and theatre.

Researchers concerned with *performative education* propose a rebalancing framework to link performative techniques and performative values. The terms are influenced by a policy discourse designed to regulate and control the teaching profession from the outside.

When it comes to *performative teaching*, researchers adapt terms from art and aesthetics. Some of these terms are experienced as abstract and diffuse, and can be difficult to connect to practical teaching. There is a danger that abstract aesthetic language can seem just as terrorising and controlling as the external regulation that is criticised.

In this study, I am working towards a performative pedagogy that can explore how different actions may stage meaning and subject content in different forms of teaching. A performative pedagogy includes various modalities and aesthetic forms of expression, such as body, voice, space, text, and time.

In order to include performative pedagogy in teacher education, there is a need for arenas and working methods where preservice teachers can practise, explore, and reflect on alternative actions and courses of action (read more about arenas and teaching methods suitable for exploring a performative pedagogy in Lindstøl 2017, 2018, 2021). This is not about identifying ready-made solutions, exemplary practices and fixed routines, but about exploring patterns of action and language that can be transformed and adapted to different educational contexts.

A performative pedagogy offers both a practical opening and a theoretical framework that can facilitate professional reflection and development, more free from the pressures of external control.

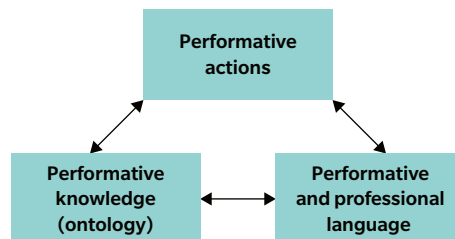
A performative pedagogy sees teaching as a momentary, situational, and context-dependent art. This has implications for how we demarcate and encircle objects of study in performative research, and how we understand knowledge creation in educational contexts.

If researchers want to expand the teacher's professional scope, it is important to explore and develop slightly wobbly bridges and paths, which can connect actions, language, and knowledge (ontology) in performative research.

A performative concept of knowledge expresses a break from a more propositional concept of knowledge, where knowledge creation is controlled by specific learning outcomes descriptions and specialised evaluation criteria. Performative knowledge expresses an ontological shift from knowledge as something that *is* to knowledge as something that *becomes* – a circular process that can be illustrated in this model:

**Figure 4.1**

*Connections and tensions between performative actions, performative and professional language, and performative knowledge (ontology)*



Let me end with a brief description of a teaching session: ‘Imagine that someone who is not a teacher, such as a politician, tries to decide how you teach in your classroom. What can you do to protect your teaching practice? How can the teaching profession be developed from within?’

This is how the teacher educator ends a lesson.

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## Part 2

# **Illustrative Examples of Rehearsing from the Project Rehearsing Teaching Professionally**



Myklebust, H., Høisæter, S. M., Cabot, M. A. & Vangsnes, V. (2025). Practicum teachers' and preservice teachers' experiences. In M. A. Cabot, S. M. Høisæter & V. Vangsnes (Eds.), *Rehearsing for teaching: Theoretical and empirical approaches to a practice-based teacher education* (pp. 147–153). Fagbokforlaget. DOI: <https://doi.org/10.55669/oa6005P2>

## Prologue 2

# Practicum teachers' and preservice teachers' experiences

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Part 2 of the present anthology highlights and provides illustrations of the subjects and activities, as well as the perspectives and experiences of the practicum teachers and preservice teachers involved in the project *Rehearsing Teaching Professionally* (ReTPro).

On the one hand, the term *teacher educator* is used for both practicum teachers in schools and campus teachers at university to stress the common responsibility of both participants in teacher education. On the other hand, we favour the term preservice teachers (PSTs) to avoid confusion between the term student teachers and students (i.e. pupils) in schools.

The research project ReTPro is a collaborative project between Western Norway University of Applied Sciences, the municipalities Haugesund and Stord, three schools (one in Haugesund and two in Stord), and the international advisory board, including Ruth Leitch (Queen's University Belfast), Anna Sfard (University of Haifa), Gert Biesta (Maynooth University; University of Edinburgh), Joanne O'Flaherty (University of Limerick), Colin Christie (University of Aberdeen), Elaine Munthe (Norwegian Knowledge Center for Education), and Kari Smith (Norwegian University of Science and Technology). The partnership with the schools is a constituting feature of ReTPro. In fact, one of the project's aims has been to bridge the so-called 'theory practice gap' (e.g. Phillips & Condry, 2023), which also leads to a gap between teacher education on campus and teacher education in practicum schools.

The Norwegian regulations relating to national guidelines for primary and lower secondary teacher education (UHR, 2025) emphasise integrity and coherence between theory and practice. However, there are different opinions on what characterises the regulations and guidelines, and how coherence is best ensured. Since antiquity, researchers have struggled to understand the relationship between theory and practice – that is, either as two opposing positions or two different positions that must interact with each other. Some researchers (e.g. Unneland, 2009; Trøhaugen, 2010) examine the connection between theory and practice, and what this connection has to say for the professional qualification of teachers. Others examine the theory–practice challenge as a bridge builder problem, where theory must convince of its potential usefulness for practice (Finne et al., 2017).

Traditionally, the theoretical aspects of teacher education are taught at university before PSTs start their practicum, normally three weeks every semester in Norway. They then come back to university to continue their

studies. Numerous attempts have been made to ensure that what they learn on campus is relevant to what they learn during practicum, and to check on whether what they learn during practicum is taken up and built upon when they return to campus. Even so, the impression of a gap between the two learning arenas seems to live on. This may be due to different cultures and languages. PSTs often complain about their education not really preparing them for their profession. This is known as 'the practice shock' (Delamarter, 2015) or 'problem of enactment' (Kennedy, 1999).

Within the context of teacher education, the relationship between theory and practice could be seen as interdependent or as a continuum. Practical teaching in the classroom is at least to some degree based on theory. Theory and research on teaching are seldom only theoretical, but usually related to practice. There is also a theory of practice built into the practice that the practicum teachers demonstrate to the PSTs.

The ReTPro project advocates that it is important to increase collaboration across what is often seen as a gap between separate arenas. Our approach aligns with the strand of research known as practice-based teacher education (e.g. Jensen & Klette, 2023). We suggest that teacher education increases its focus on practising teaching on campus by rehearsing, trying out, and reflecting *in* and *on* practice before, during, and after the practicum periods (see also the prologue by Ruth Leitch in this anthology).

During the entire ReTPro project, the partners have collaborated and exchanged experiences, resulting in learning and development for all participants.

Part 2 of this anthology shows that most aims of the project have been realised, for example, the objective to 'structurally, conceptually, and practically enable teacher educators, PSTs, and practicum schools to work collaboratively to develop purposeful and effective repertoires'. Indeed, the project studies 'PSTs', teacher educators' and mentor teachers' thoughts, beliefs, and attitudes regarding rehearsing teaching, creating understandings of how to build teaching repertoires effectively to meet the New Curriculum for Primary and Secondary Education's Ambitions for Democratic Citizenship' (application to the Norwegian Research Council).

The project was conducted and examined around two main structures: i) Leading classroom conversations and facilitating dialogues, and ii) leading process drama as a whole-class educational process.

After discussions in the collaborative project meetings, on-campus and practicum teachers operationalised a set of rehearsable activities in three different subjects in teacher education.

First, in mathematics, the activities were specifically designed to elicit students' mathematical thinking through dialogue (dialogic teaching).

Second, in English as a foreign or second language (EFL/ESL), the focus was on developing intercultural citizenship using teacher-in-role and later talk moves to elicit vocabulary acquisition during whole-class discussions (dialogic teaching).

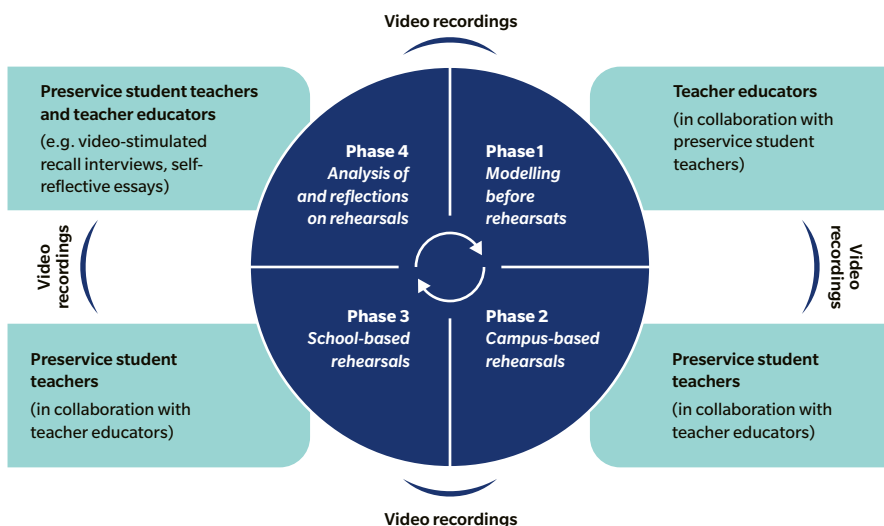
Third, the subject pedagogy investigated PSTs' reflections on the use of talk moves when conducting individual student-teacher conversations ('*elevsamtaler*' in Norwegian) in practicum.

Mathematics, EFL/ESL, and pedagogy were chosen as subjects for interventions during the project, involving researchers from these disciplines and practicum teachers who were teaching at school. The participants collaborated on identifying and specifying target and focus for the rehearsals. They developed and planned the activities to be rehearsed and participated in the rehearsals and reflections before sharing the experiences. A core concept in the ReTPro project is *rehearsing for teaching* (the title of the present anthology), and the idea that by rehearsing different aspects of teaching, the PSTs can become better prepared for their professional life.

Focusing on rehearsing on campus, and not only during the practicum periods, is seen as a way of bridging the theory–practice gap. When designing the rehearsal activities in the project, ReTPro was inspired by McDonald et al. (2013), and developed the following ReTPro rehearsal cycle:

**Figur P2.1**

*The ReTPro rehearsal cycle (inspired by Mc Donald et al., 2013)*



As shown in Figure P2.1, all four phases were video recorded and focused on rehearsals from different perspectives. The teacher educators (i.e. practicum and campus teachers), and PSTs were involved in all four phases.

The articles written by the practicum teachers in this part of the anthology are structured from the particular to the universal, that is, from subject-related issues in mathematics and EFL/ESL to pedagogical issues. The contributions show how the practicum teachers and PSTs involved in ReTPro have worked to strengthen the research on both action and reflection, to make reflection more active and action more reflective (Schön, 1983). The examples highlight how the practicum teachers built professional teaching repertoires of embodied, reflective, and purposeful action.

During one of the collaboration meetings, the concept of practice events was introduced and discussed. Ivanič (2009) claims that practice consists of a series of events. When you know a practice, you will recognise events belonging to this practice. Events are specific and observable, while the concept of practice refers to underlying patterns which partly regulate events (Ivanič, 2009, pp. 114–115).

In this part of the anthology, the practicum teachers present snippets from practicum in the form of three types of events: 1) practicum narratives, that is, a story about a ReTPro event from practicum involving all participants, 2) close-up snapshots, that is, the description of one event as detailed as possible, and/or 3) reflections on action after the event took place. The following four articles represent such glimpses of practicum events. In addition, two of the PSTs who took part in the project present their experiences and reflections in a separate article.

Article 5 is from the practicum teacher Ingeborg Glette Åsland. She has observed PSTs as they enact their prepared and rehearsed activities in the subject mathematics through several rounds of the rehearsal cycle. She highlights the importance of the partnership between the different teacher educators in the project.

Article 6 provides examples from the subject EFL/ESL. It is written by practicum teacher Lena Kirkvoll Traa. It contains the enactment of two different activities. The first one uses teacher-in-role as a tool to encourage pupils' thinking and reflecting on adopting others' perspectives. The second one describes the use of talk moves to elicit vocabulary acquisition. Both examples underline the importance of the rehearsal phase, and how thorough preparation before enactment is a success factor.

Article 7 illustrates how the principles of the ReTPro rehearsal cycle can be used in mentoring PSTs in other aspects of the teaching profession than the traditional classroom situation. In this case, the focus is on individual teacher-student conversations (in Norwegian *elevsamtaler*) designed to build strong relationships with the students and investigate how they cope, both academically and socially. This article is written by practicum teacher Kristin Koløy.

Article 8 focuses on another central and more general feature of the teaching profession: the management of complex classroom situations, including group dynamics in each class. This article is written by practicum teacher Lilly Anne Litlabø. It focuses on how she, as a practicum teacher, models such situations for the PSTs, and reflects with them afterwards. This article highlights phases 1 (i.e. modelling) and 4 (i.e. reflection), and how these phases can be utilised.

In Article 9, Isabelle Grude Christiansen and Thea Karoline Sømme report on their experiences with, and reflections on, participating in the ReTPro project as preservice teachers. More specifically, they examine the drama convention teacher-in-role by delving into the four phases of the ReTPro rehearsal cycle.

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5

## Open and reflective preservice-teachers in mathematics

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Through both theoretical work and rehearsals on campus, PSTs become accustomed to employing conversational traits in their teaching. As a ReT-Pro practicum teacher, I have participated in the PSTs' implementations and reflections during their practicum sessions. Below are some examples of how PSTs apply talk moves in their enactment during practicum.

I am interested in observing how PSTs utilise this conversational tool during practicum.

The PSTs observed in this article carried out two activities in the subject mathematics during their first year. The first was a quick image activity, and the second involved a sorting task. In year 2, the PSTs performed a 'three-act-task activity'.

It is winter, and the PSTs will soon be ready for their second practicum period. Prior to the practicum, the PSTs have rehearsed their prepared activities. These rehearsals form the second phase of the ReTPro rehearsing cycle, which has already been completed with fellow PSTs on campus.

The objective of the activity, derived from LK20, is for students to arrange numbers, quantities, and shapes based on their characteristics, compare them, and consider whether the task can be approached from varying perspectives. The activity is carried out in a group of four students. They sit around a group table, with the PST leading the session seated at the end.

The PST explains that they will be working on an assignment called 'quick image'. She asks the group if they know what that is. Everyone shakes their heads. She then elaborates, explaining that they will be shown a picture and that the students then need to determine how many symbols it contains. She emphasises that they will not have time to count the symbols, so they will need to use other strategies to find the answer. The PST adds that it might be helpful to use addition to solve the problem. She asks if anyone remembers what addition is. One student responds, explaining that it involves combining several numbers to find the total. She then asks everyone to show the addition symbol with their fingers. The students form a cross with their fingers, and the PST confirms by showing the equal sign.

Once she is confident that the students understand addition, she instructs them to get ready. The students are shown the picture for three seconds. She gives them time to think about what they saw before showing the image again for another three seconds. After the second viewing, the students are instructed to discuss their observations with their partner. The talk move used here is

‘turn around and talk.’ Ample time is provided for discussion, and the PST carefully monitors when to move on to the next step.

With only four students in the group, the PST is keen to ensure that everyone has a chance to share their thoughts and explain how they arrived at their conclusions. The students are actively involved during this phase, listening to each other’s responses. The focus is on how they arrived at their answers, and whether anyone had a different way of approaching the task. There is also space for students to build on each other’s ideas when contributions are made. By concentrating on conversational techniques (i.e. talk moves), the PST remains focused on the mathematical aspects, and has a clear direction for guiding the group.

There is no opportunity to elaborate further or expand on ideas. Upon completion, the PST remarks that she would have preferred a quick image with multiple symbols, as the students quickly arrived at the solution.

After the activity, all PSTs meet to reflect on their teaching session. The PSTs conclude that concentrating on talk moves increases their awareness, enriches the academic discussion, and makes the dialogue more cohesive. They note that they can build upon questions and the conversation itself, and that talk moves are an effective tool.

As a practicum teacher, I observe that even in their first year of practicum, PSTs are already more conscious of whole-class conversations, which help them view solutions from different perspectives.

The second activity involves sorting cards. We are in a 2nd grade classroom with 18 students. The PST leading the activity is a year-one PST currently in week 5 of a 6-week practicum period. The PST has already completed the quick image activity and will now carry out the second enactment. This activity has also been rehearsed with fellow PSTs on campus.

The aim of the exercise is to give students the chance to collaborate and develop their ideas. By working in pairs, they will be able to discuss and reason with one another. Students will sort cards featuring one- and two-digit subtraction problems. They will focus on the competence aim: ‘arrange numbers, quantities and shapes based on characteristics, compare them, and reflect on whether it can be done in several ways.’

The lesson begins with a whole-class discussion about subtraction. Students are instructed to sort the cards by the answers they get. The PST asks if they understand what it means to sort the cards. It is then clearly explained how

the task will be performed. The students are told to sort the cards according to the answers, distinguishing between round numbers, non-round numbers, and problems they are not sure of.

During this assessment, it becomes clear that students are unsure, particularly regarding the concept of 'round numbers', which may be unfamiliar to them. The PST explains the task a second time and uses modelling to help the students grasp how to approach the activity. While the students gain some understanding, the concept of 'round numbers' remains unclear. This is a missed opportunity that the PST does not fully address. Following this, a student is asked to explain the task to the class.

The students then work in pairs, with each pair being given a set of cards to sort. They are allowed approximately 10 minutes to complete the task before a class summary takes place. The students are asked to explain how they arrived at their answers and are encouraged to demonstrate different methods of thinking. Various solution strategies are shared. They imagine a line of numbers in their heads, subtracting the tens and then the ones. The PST illustrates this by drawing money on the blackboard, performing the reverse of a previous calculation, or counting on his fingers. They notice, in good humour, that you do not have 50 fingers, and therefore tens should be used.

Despite the time it takes, the PST ensures that everyone has the chance to participate and expand on their ideas. The students in this session are patient. When a solution does not match, the PST uses additional questions to raise students' awareness, rather than correcting them or focusing on wrong answers. One such question is: 'Can we get a higher answer than the starting point using subtraction?'

The third example to be presented here is from the PSTs' second year of teacher education. Seventeen first graders are all sat together, with the PST conducting the enactment of the 'three-act-task activity', seated in the middle. As the name suggests, the task is divided into three acts, starting with an introduction, followed by an act where students, either with the teacher's assistance or independently, gather the necessary information, culminating in the final act, which is the discussion session.

In Act 1, a real-world situation is used as a starting point, in this case, a short film excerpt. The focus of the exercise is a conversation, in which students are expected to identify the mathematical elements within the scenario and use them to create mathematical tasks. The task form is new and exciting

for the students. The class begins with an introduction, where students are told they will watch a short film and must pay close attention. Their task is to identify quantities.

In the first film, the students see a single balloon floating on a string. After watching the film, the students are encouraged to discuss what they saw. The discussion is led by open-ended questions, with the aim of not influencing their thoughts. The focus of this conversation is to identify the mathematical elements. The first conversation session is brief, and the students prepare to move on to the second act.

Act 2, which focuses on gathering information, begins with another short film excerpt. This time, no introduction is provided before the film is shown. In the film, there are 10 balloons floating, and by the end, several of them burst. After the film, the students are asked, 'What are you wondering about?'. As the students offer suggestions, their questions are written on the blackboard: 'What is it all about?', 'Why are they outside?', 'Who is holding the balloons?', 'Why is it getting dark?', 'How many balloons are there?', 'Why are there so many trees?', 'Why did the balloons burst?'. The PST asks whether it is possible to find answers to these questions. After sorting through the queries, the students are left with one question: 'How many balloons are there?'.

The discussion continues between the students, and they eventually conclude that there are between 0 and 6 balloons. To encourage more solutions, the act concludes with a question about whether any changes to the number range are necessary. When there are no further objections, they move on to the final act.

The third act, which involves finding solutions, also begins with a film snippet. The students are shown the film again and respond with comments such as, 'I think there were 8', 'There were 3 left', 'You could count while they burst', '9', 'I think there were 9', 'I think there were 3', and 'I think there were 10.' To ensure each student has a chance to contribute, sheets are distributed, and they are asked to draw what happened in the film. After completing their drawings, the students are instructed to share and explain their thinking to the class. Throughout the session, the PST focuses on talk moves, encouraging open-ended questions that require the class to think and justify their choices. They also use talk moves such as 'turn and talk', frequently asking if anyone has thought differently. Wrong answers are treated as valuable as correct ones, with plenty of time dedicated to the process. All students are given the opportunity to carefully consider their responses throughout the session.

As a practicum teacher, I find that the PSTs are more reflective, and open to trying out new solutions in practical settings. The PSTs have been able to test the feasibility of the tasks they intended to use. In mathematics, talk moves have been central. Through rehearsing with their peers, PSTs have developed a familiarity with these talk moves, which they subsequently apply in practice.

This increased awareness and reflection also creates a bridge between the practicum school and campus, which we can further develop during mentoring conversations. We share common ideas on how to enhance teaching, leading to more productive discussions for both PSTs and practicum teachers. PSTs know what is expected, making it easier for them to engage, and provide their own reflections.

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## Teacher-in-role and talk moves in the subject English

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Three first-year PSTs have rehearsed a teacher-in-role activity at university college together with English and drama campus teachers. The rehearsals are part of the ReTPro rehearsing cycle. The preparation has been thorough, with the PSTs first observing their campus teachers model teacher-in-role. Good modelling consists of showing good examples. This provides visual support for theory, inspiration, and a safe environment. Teachers utilise drama as a powerful educational tool. In this context, dramatisation involves the teacher getting into a role and performing scenes or situations as a way of teaching. The audience can shift between being passive observers and active participants in the event.

After that, the PSTs have planned and rehearsed their teacher-in-role activities together with their classmates.

They are now entering their first practicum with third graders and will perform an excerpt inspired by the book *Matilda* by Roald Dahl. The objective of the lesson is to improve the students' English vocabulary. The plan is to employ the teaching methods *teacher-in-role* and *classroom dialogue*. Meeting the new group of students, the drama activities, and going into roles in teaching make the PSTs tense and nervous. However, the effective modelling, preparation, and rehearsals have provided them with a sense of security and self-confidence.

As the learning session is about to start, there is complete silence in the classroom. The students sit expectantly at their desks, ready to learn. Simple but effective props are used to represent roles and settings.

After a brief introduction in both English and Norwegian, the students become immersed in the story and the conflict between the kind teacher and the cruel headmaster. They actively participate in the roleplay, engaging through dialogue. They provide input when prompted with questions, or when they wish to contribute. The student group is easy to guide, empathy flourishes, and, obviously, they collectively unite against the antagonist in the story.

The PSTs must deal with numerous and conflicting emotions. The PSTs' sensitivity and identification with their role boost the students' confidence. The students are encouraged to speak in English. The teaching situation fosters a dynamic process that encourages students to think in new ways. There is a high level of engagement, and the learning dialogue in the classroom alternates between Norwegian and English. Those students who are confident in English respond impressively with well-formed phrases. Anxious students are

encouraged to reply with single English words, or in Norwegian, so that they can participate. Everything is allowed, and everything feels safe.

Through the drama session, the students gradually grow in confidence. An engaged and enthusiastic group fosters the courage and motivation to express themselves. When they allow themselves to relax, they become spontaneous, and everything is spiced up with improvisation, vitality, and creativity. Teaching becomes playful and informal. The connections formed during interactions between the students and the PSTs help to establish positive and secure relationships.

After the session, everyone agrees: English is enjoyable. Using drama and stepping into roles are an excellent way to learn.

The PSTs are at the very beginning of their training to become teachers, and many have had limited experience in a classroom setting prior to this. The use of drama in teaching so early in their studies requires a degree of gentle courage and practice. The preparation for the session provided the PSTs with the required security and confidence. In the ReTPro rehearsals on campus, they modelled, planned, discussed content and implementation, and also made preliminary adjustments. Additionally, they conducted several rehearsals of their teaching activity. This thorough groundwork offered inspiration, and was crucial for them to successfully execute the teaching activity in the classroom together with the students.

Throughout class, the PSTs showed courage; they embraced the entire space, and excelled.

During the lesson, I observed that they had a well-rehearsed script as a foundation for their teaching, while also incorporating elements of improvisation. The PSTs engaged in spontaneous dialogue with the class, responding in the best way they could, either in Norwegian or English. They utilised vocal variety in speech delivery, body language, and props throughout the narrative, seamlessly incorporating these elements while improvising.

Since they were unfamiliar with the students, and unsure how they would respond to this teaching method, being prepared for the unexpected became an invaluable experience.

The second activity uses conversation pictures and talk moves to improve the students' vocabulary. Through rehearsing in phases 1 and 2 of the ReTPro rehearsing cycle at the university, the first-year PST has prepared a teaching activity for the English subject. She will utilise the theory of talk moves as the foundation for a learning conversation in the classroom. In this context, the

conversation involves the teacher communicating with the students through talking, listening, and reflecting. The teacher may ask questions, with the aim of challenging the students to think and reflect more deeply on a topic. Students will practise vocabulary acquisition and discuss everyday situations in English.

The PST has engaged in thorough preparation under the subject teacher's guidance and has practised and reflected with fellow PSTs. Furthermore, reflections on the enactment in the classroom are part and parcel of the PST's term paper.

The PST is seated in the classroom with 20 fourth-grade students who have gathered in a semicircle in front of her. On the back screen, there is a large, colourful conversation picture featuring many small and surprising details. The picture shows a farm with some illogical and peculiar elements that might intrigue the students, inviting them to think creatively. The subject matter is light-hearted until they notice a sheep with pink stripes, a blue sun, purple pigs, and a television perched on the roof of a barn.

The PST's objective is to inspire the students to use their imagination to discuss what they see, think, and believe about the image in English.

The student poses the question to the class: What can you see in the picture? This is a committed and enthusiastic group; all the students raise their hands and eagerly rattle off words in English and Norwegian: 'I can see a cow, a dog, a chicken... I can see a bull; I can see a farm.' The students receive praise and encouragement for their contributions. Instead of correcting mistakes, the PST repeats the word in English with the correct grammar and always clarifies when the word refers to both Norwegian and English. Here, she employs the talk move 'revoicing'. In this way, she ensures that all students are engaged and can learn at their level through the principle of effective inclusion in teaching.

Some students are confident enough to use the language more extensively, speaking English in whole sentences, and introducing new, somewhat unexpected vocabulary:

*Student: I can see a cow tanning.*

*PST: Yes, very good! What does tanning mean?*

*Student: It sort of means you're going brown.*

*PST: Yes, that means sunbathing. Tanning. Very good!*

The PST remains calm. At the beginning, she asks questions based on a rehearsed format. This creates a safe environment and allows for a controlled learning conversation in collaboration with the students. Her vocal pitch varies, and she occasionally adopts a low, whispering tone to ensure the students are completely quiet and focused to comprehend what she is saying. There is a pleasant and close rapport between the PST and the students.

Several talk moves are then used in the learning conversation, such as agreeing/disagreeing, adding on, and revoicing. The PST actively engages in choral reading throughout the session. The students pronounce the word in unison: *Toothpaste!* The PST gestures to them and asks them to repeat in chorus: *Toothpaste!* Her self-awareness increases throughout the learning conversation, and after a while, she dares to expand the content of the discussion. Relational dynamics are fostered through conversation, centring on the students' interests in the English subject. The questions become increasingly more open-ended, with all students invited to confidently put forward their answers.

*PST: What is wrong in this picture?*

*Student: I can see a blue sun.*

*PST: Yes, very good. Why do you think it's blue?*

*Student: Because it's a glass wall (read: the picture is taken through a glass wall). Those stripes look like glass shine. Yes, I think it's blue glass.*

The PST concludes with a summary, encouraging all students to utter an English word they have learned. Even after she has taken away the busy and teeming picture from the screen, many students respond with lengthy sentences in English. The atmosphere in class is safe, positive, and inclusive.

The PST's aim for the session was to utilise *talk moves* to foster a productive classroom discussion in English. She had been well prepared for the session thanks to the ReTPro rehearsing cycle through modelling, rehearsals, try-outs, and pre-guidance.

The combination of her strong performance, a positive student group, thoughtful questions, and reflections related to the busy and teeming picture

facilitated an effective learning session. Some of the talk moves were used more than others. Although the PST was well prepared, many of the responses were unexpected because she did not know the students well enough. A learning conversation is always partly planned and partly improvised.

For example, the PST had not anticipated that one of the students would explain the blue sun by suggesting it had a blue glass wall in front of it. Here, she dealt nicely with this unexpected input event by challenging another student, asking if she agreed. Additionally, she enquired in English what colour the sun should be, as this was a natural progression in the conversation. Another student contributed to the discussion, stating, 'because they are trying to trick us'. This demonstrates that the PST has triggered and facilitated the students' thinking.

Techniques like choral reading and agreeing, disagreeing were used systematically, while questions requiring longer explanations from the students were used less. The PST guided the class throughout the session in a supportive and constructive manner.

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## Rehearsing individual teacher–student conversations

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As part of the practicum period at our school, the PSTs are assigned a task by the teacher education institution to conduct an individual teacher–student conversation (‘elevsamtale’ in Norwegian). As a practicum teacher, I challenged one of the PSTs to practise teacher–student conversations in 8th grade, following the stages of the ReTPro rehearsing cycle. This cycle involves modelling, rehearsing on campus, enacting a real conversation at the practicum school, and, in the final stage, reflection between the PST and the practicum teacher.

As this was in the middle of the practicum period and I had good access to various student cohorts, I opted for a slightly different approach. First, I modelled a conversation which the PST observed. Then the PST conducted a real student conversation, followed by a reflection session with me. In the final stage, the PST carried out a second conversation and concluded with a final reflective conversation. The cycle we carried out thus deviated somewhat from the ReTPro rehearsal cycle but was based on the same principles.

Prior to the practicum period, the PST had proposed a structure for the teacher–student conversation. The goal was to build relationships, and to get acquainted with the student, as well as to explore the student’s experiences of different conditions at the school. The questions were organised in a sequence, with a focus on the student’s experience of motivation, self-effort, and mastery, both academically and socially.

At the teacher education institution, the PSTs had also been introduced to conversation methodologies and techniques, more specifically talk moves teachers can use to encourage students to speak more openly and deeply. In this case, the PST had received feedback from the practicum teacher to allow for more ‘thinking time’, and to seize ‘golden opportunities’ during the lessons. Thus, the PST chose to place particular emphasis on these aspects.

In the first phase, I modelled and conducted a teacher–student conversation with a randomly selected 8th-grade student. I chose to use my own conversation template, as I typically would. I drew a cross on a piece of paper and marked the centre. I explained that the centre point represented where the student was standing. In the four quadrants created by the cross, I placed the topics of conversation. In this case, the goal was not only to get acquainted with the student, but also to assess how they were doing at school. I selected four thematic areas: subject, leisure, friends, and teachers as the starting points.

From my experience, students tend to speak more openly when the focus is on ‘what do you like, what do you not like, what are you confident

about, what are you not confident about?’ I believe it is easier for students to respond to these questions compared to more direct queries like ‘How is your effort in mathematics?’. This type of questioning may trigger feelings of shame or guilt and might prompt students to answer based on what they think is expected of them.

I began by asking about subjects, and the student ranked them based on preference. The subjects the student liked most were placed closest to the centre, while those liked least were positioned further out. I repeated the process with the other topics. Throughout the conversation, the student was able to clearly express his or her preferences, and as the student spoke, I wrote the answers in the four boxes of the cross. Certain answers stood out. For example, one particular peer was placed far away from the centre of the cross, which indicated some difficulty between the student and this peer. I recognised this as a ‘golden opportunity’ to learn more about the student’s feelings and decided to further explore the matter with follow-up questions. The student then elaborated, explaining that they had recently experienced a challenging conflict with this particular peer.

The PST then conducted his first teacher–student conversation, while I observed. Throughout the conversation, it was not unusual for the PST to give the student very little time to respond. The PST quickly provided suggestions for answers. For example, he asked: ‘What do you do in your spare time? Do your mum and dad take you out for activities?’ The student began with ‘So ...’. But instead of waiting for the student’s full response, the PST followed up with suggestions: ‘Do they take you somewhere? A walk, or the cinema, or...?’ The student replied: ‘When I’m at my mum’s, it’s just the two of us, and we relax on the sofa. We do a lot of exciting things. When I’m at my dad’s, there are a lot of people, lots of kids, so it’s not really the same focus on me.’

Hearing this, I became curious about how the student experiences the differences between the two homes. However, the PST did not pursue this line of thought. Was this perhaps a missed opportunity the PST could have used to encourage the student to further open up?

Following the conversation, the PST and I reflected. He mentioned that he had felt nervous and tense during the teacher–student conversation. He said he liked the conversation template, as it allowed for a real discussion, rather than feeling like a formal interview guide. The open structure of this type of conversation provides an opportunity to explore the student’s views and expe-

periences from their own perspective. The student's responses become the basis for the next question, rather than being restricted by a rigid structure. The PST also appreciated the ability to take notes without feeling confined to writing.

I asked whether he felt he had seized any 'golden opportunities'. The PST admitted that he had probably missed something the student had said, something that seemed important, and he expressed a desire to follow up on it in a later conversation. I also asked if he felt he had given the student enough time to respond. He thought he had. I then chose to be honest with the PST and say that I noticed that he asked a lot of leading questions, and that he could have waited longer, to give the student the opportunity to speak freely. I explained that it is an art to tolerate silence, and students often need time to formulate their answers. The PST understood, and we agreed to focus on specific areas for the next conversation. He wanted to work on allowing more time for the student to respond and giving the student the opportunity to answer without offering suggestions. I also advised him to try to share curiosity with the student and be open to their input.

In the next teacher-student conversation, it was clear that the PST allowed the student more time to think and respond. For instance, the student mentioned that arts and crafts is a difficult and demotivating subject. This contrasted with the other subjects, which the student enjoyed and excelled in. When the student shared this, the PST paused and focused intently on the student. He then reiterated what the student had said, using the talk move 'repeat' to confirm the student's statement: 'So you think arts and crafts is difficult and demotivating?' Again, the PST waited, maintaining his attention on the student. After some time to reflect, the student replied: 'I have a low opinion of myself and compare myself to others. It's not very motivating when they're better than me.' The PST nodded noticeably and kept his focus on the student, waiting to see if there was more to share. When there was not, he confirmed what the student had said, offered some encouraging words, and then moved on.

Towards the end of the conversation, the student brought up arts and crafts again, stating that it is difficult to concentrate in this subject. The PST did not follow up on this.

In the subsequent reflection, the PST remarked that he felt less nervous and more relaxed during this last conversation. He took his time and did not rush, even when there were moments of silence. The PST observed

that when he allowed the student time to think, the student would make follow-up comments on own initiative. Regarding the ReTPro cycle, he found the modelling phase particularly useful, primarily for demonstrating a genuine teacher–student conversation. Similarly, he believed that this template fostered a more authentic form of dialogue, allowing for free expression, rather than a rigid question–answer–response format. He also noted that the two trials provided him with an opportunity to test new approaches in the second conversation. Engaging with students to uncover and map their experiences requires knowledge and practice, a competence which is developed over time. The PST appreciated the opportunity to hold a teacher–student conversation and then select a few focus areas to practise in the next conversation. He believed that the reflection and mentoring between the exercises were crucial for determining the areas of focus.

The first phase of the rehearsing cycle is modelling. In this project, the PST noted several times that he found this phase to be educational and useful. He described the conversation as genuine and dialogical, rather than simply an interview. He appreciated the structure I employed, considering it a solid starting point for documenting and visualising what the student had conveyed. The outcomes of the conversation were written down directly in the cross, providing a strong foundation for follow-up conversations in the future. If teachers later wonder why the student placed a particular subject or teacher far from him- or herself, they can reference the description and express their curiosity. According to the PST, these were crucial insights that he might not have recognised had he not seen them modelled.

Phase two involved the PST's first teacher–student conversation. From a learning perspective, this served as a starting point for identifying the PST's zone of proximal development. What does the PST already know, and what areas should they focus on for their professional development?

In the reflection following the teacher–student conversation, we initially examined the dialogue on a more superficial level. Following the supervision method of *situation analysis*, we focused on events from the teacher–student conversation. I began with what the PST had handled well, such as introducing the teacher–student conversation, and creating a safe and supportive environment. The PST demonstrated a natural ability to show affirmation towards the student by repeating what he said, and by nodding to show understanding. This technique of repetition or retelling was not something the PST had

initially focused on, but I chose to emphasise it in our reflective conversation to reinforce this skill.

The third phase of the rehearsing cycle involved conducting a new trial to practise areas in which the PST needed improvement. In this instance, the PST had struggled to effectively utilise the talk move ‘wait time’, as well as ‘explain/say more’. The PST expressed a desire to focus more on these aspects during the next teacher–student conversation.

The impact of the enactment–reflection–new enactment cycle was evident throughout this conversation. While the PST in the first teacher–student conversation seemed primarily concerned with his questions and input, he focused much more on the student in the second conversation. The PST was mindful of allowing the student time to think, and of asking follow-up questions. Overall, the PST was more attentive, making the conversation more dynamic and dialogical. The PST’s concluding remarks summarise this reflection:

*It was useful to observe a real conversation and a conversation template. I was nervous in the first conversation, but not in the second. Reflecting after each enactment is valuable because it has a greater impact than thinking things through alone. Reflecting together leads to a more comprehensive understanding of what has been accomplished. One becomes better at reflecting overall. The cycle of modelling, enactment, reflection and re-enactment was beneficial.*

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## Learning to manage complex teaching situations through modelling and reflection

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At the start of every practicum period, the preservice teachers (PSTs) always have a couple of days for observation. During the observation period, various aspects of a teacher's role are highlighted, such as teaching a specific subject, carrying out teacher–student conversations, delivering specially adapted lessons, parent–teacher meetings, and so on.

In this paper, I focus on class management.

Class management is a blend of theoretical knowledge, experience, and improvisation. The ability to lead a group of students effectively is a key prerequisite for success as a teacher. There are no set strategies or solutions that will work in every situation. Class management involves preventing disruptions and choosing an appropriate response at the right moment. Teachers often need to act quickly and evaluate several situational factors on the spot.

Therefore, after a teaching session involving modelling, it is crucial to take some time to reflect upon how things went. These reflective conversations are in many ways similar to the classroom learning conversations the PSTs are struggling to lead.

Classroom learning conversations are planned and structured dialogues with learning as the central objective. Learning should be viewed broadly, encompassing academic, social, and personal development. It is essential that students actively participate in such conversations and help to shape and guide the conversations alongside the teacher. By thinking aloud and explaining their own understanding, they verbalise their learning, which enables them to influence their own learning process. During these conversations, the focus is on the process rather than performance. It is important to give students the time both to think and speak during these learning conversations.

I model for my PSTs how I use learning conversations as a tool, both in group settings with the students I teach, and during reflective discussions with the PSTs after the lessons.

In the reflection conversations with the PSTs afterwards, it is the PSTs themselves who should explore their thoughts and seek answers. As a practicum teacher, I try to guide the conversation by asking questions, listening, repeating answers, and allowing time for reflection before posing new questions. Few of these reflection questions have definite answers, but they are worth discussing, focusing on how a PST acted, and what could have been done differently. By asking critical questions and justifying one's choices, one develops a professional identity. Our core beliefs and values play a significant role

in this process. Mentalisation – the ability to continuously try to understand the students’ perspectives from the inside while simultaneously reflecting on oneself and one’s practice from the outside – is key in the teaching profession.

In this context, I will provide an example of a modelling session where I initiate a lesson with a group of 24 students. Three PSTs join me as observers during this session. Following the lesson, my intention is to engage in a reflection conversation with the PSTs. Prior to the session, I have prepared relevant questions to facilitate the discussion, but I am aware that some degree of improvisation will likely be necessary.

It’s morning, so it’s time for the first lesson. I feel calm and smile as I prepare, connecting my computer to the board and gathering books, notes, and other materials. Some students appear dazed, while others joke, smile, engage playfully, and jostle their way to their seats. A couple of students pass by, whispering private messages to me, to which I respond quietly.

Once I am ready to start, I stand in front of them and wait for the students to settle down, calm themselves, and focus. This process takes some time. As I scan the room, my gaze lingers on the uncertain and disruptive students. I smile at them and observe. Today, this approach is sufficient to create a peaceful and focused atmosphere. I greet the students as they take their seats. I then take the roll call, addressing a warm welcome to each of the students. The atmosphere in the room is calm and warm, which is precisely how I want it to be.

After the modelling session, I ask the PSTs reflection questions, such as:

- How did you perceive the atmosphere in the room?
- How do I approach class management?
- What contributes to building the atmosphere in the room?
- What would a verbal reprimand towards the disruptive students have resulted in during this situation?
- Would I have been able to manage any ‘verbal misbehaviour’ had it occurred?

Practicum teachers can model attitudes, values, and good strategies for their PSTs. Through the reflection conversations following the teaching sessions, they can provide a metaperspective on the modelling. During planning and preparation, practicum teachers can model by sharing ideas about classroom

management and learning, as well as exemplifying teaching in a learning session.

Modelling can also occur during the active teaching phase, when the practicum teacher engages in supervising and guiding the PSTs.

Through modelling, we mentor PSTs, but mentoring can also come in the form of sound advice and assistance with the structure of a session.

In the following example, I focus on how the need for mentoring can manifest differently based on the PSTs' preparation, their personalities, and the specific group of students they encounter.

The example is from teaching in mathematics as an outdoor activity. Three PSTs led the session, after planning it as a group. The session was designed to last 45 minutes and was implemented for three different groups of 24 students over the course of three days. Because the sessions were spread across three different days, we had the opportunity to facilitate a reflection conversation between each session.

The topic of study was geometry, with a particular emphasis on the circle. Key concepts for the session included the circle, centre, arc, radius, diameter, circumference, and Pi. The general outline for the session was as follows:

- Start of class: Gather focus and conduct health checks. Roll call.
- Initiate learning conversation and activate prior knowledge among the students.
- Make certain that everyone comprehends what they are doing and receives training on how to use the materials.
- Practical task: Use a wire and a measuring stick to measure the circumference and diameter of at least three circular objects, recording the measurements found. Then, divide the circumference by the diameter. What kind of numbers do you obtain as an answer? This approach leads to an exploration of Pi, fostering a learning conversation about this unique concept. Everyone can contribute to the discussion, as each student has a role in carrying out the tasks.
- Summary of the session where the students explain the concepts they encountered, discuss what they contributed, and reflect on what they learned. This type of positive conclusion optimises the overall experience of the session.

In our school area, there is a large, circular stone that is polished on top, resembling a table. The session started by gathering around this stone. The students were slow to exit the building. The PST assigned to lead the session complained that time was slipping away. He could not wait and jumped into the activity before establishing focus and calm.

It was challenging to capture what the PST said, and the students' eyes began to wander. Some giggled, leading to a little unrest. Several students challenged the PST verbally. As a result, the PST had to restart and spend energy on regaining focus from multiple distractions. It improved somewhat, but focus was never entirely recovered.

The PST began with an uncertain and somewhat awkward usage of mathematical terms. He said rounding instead of circle, middle instead of centre, and edge instead of arc. He also failed to offer any clarification by demonstrating clearly what the terms meant on the large circular stone that we were all standing around. The introduction and review of the topic felt rather lacklustre.

Once the students were given the practical task and were in motion, I took the opportunity to provide some mentoring to the PST. Allocating time for a thorough summary was vital to ensure the effectiveness of this session. In the summary, the PST had to show a firm grip on all the terms he used, and all terms had to be clearly illustrated on the stone so that the connection between the stone and the terms was evident. This was the goal of the session.

The learning session did not unfold as the PST had envisioned. This provided a solid foundation for a reflection conversation with the PST. There are no straightforward answers, but wisdom is gained through experience, reflection, and discussion.

My questions for the conversation were as follows:

- What can I do to ensure that students arrive at the designated area at the right time and have the necessary equipment?
- What strategies can be employed to gather focus within the group?
- How can I prevent unrest and focus on disruptive students?
- Is there a difference between conducting a learning session outdoors compared to indoors? If so, what are those differences, and what implications do they have for us as educators?
- How does language shape our teaching and our identity as individuals?

- How can we maintain the integrity of a session, ensuring that we keep focus from start to finish?

The second time the session was conducted, the students were present at the designated time. Did this relate to the fact that the information about the programme was communicated clearly, both on our digital platform and schedule, as well as verbally during the previous session, or was it simply because this was a different group of students? In any case, the students quickly settled down and were directed by the second PST.

This time, correct use of terms and exemplifications were in place, but the learning conversation was difficult to get going. The students provided little feedback and appeared reluctant to think aloud. This made the PST seem insecure, leading her to rush through the session. She asked questions and responded relatively quickly to them herself. The students were supposed to be contributing. The PST appeared stressed about the lack of student involvement in the learning conversation. She presented the practical aspects of the task and asked the students to work without defining a time limit, specifying the number of measurements, or stating the distance from the gathering point. The students set off with determined enthusiasm.

I seized the opportunity to offer some guidance to the PST: Allow ample time for summaries and give the students time to think. You should expect responses! After group work in which everyone has actively participated, one can also approach the groups and ask them directly. The students should articulate the relevant content and draw connections between the concepts!

Some students had made significant efforts to complete the assignment, so we struggled a bit to find them and bring them back for the session. The PST excelled in summarising the session and engaged the students effectively by asking the groups directly. Together, they managed to highlight some important points.

The session posed several challenges for PST number two. Therefore, a new round of conversation, reflection, and discussion was in order.

My questions for the reflection conversation were as follows:

- What is required for a productive learning conversation?
- How can I support insecure, particularly introverted, students so they feel comfortable using their voices and participating in a learning conversation?
- What characterises a good learning conversation?
- What contributes to creating a sense of security and a safe environment within a group of students?
- How does limiting an activity's time, the number of measurements, and the distance impact us?
- What do I gain as a class leader by clearly establishing boundaries?

In total, this session was conducted three times. Here, I have chosen to describe two of them. All the PSTs led the session. We reflected together, and the PSTs received mentoring between each enactment. Knowledge and awareness likely increased after each reflection conversation but proved difficult to implement directly into practice as other challenges emerged. Both the different PSTs and groups of students, of course, created differences in context. In the last learning conversation, the PSTs showed ownership of many of the points that had surfaced throughout the process.



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## ReTPro in teacher education: Lessons learned from rehearsing teaching

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## **Teacher-in-role**

Those of us who chose English as an elective were privileged to be the first preservice teachers to participate as co-researchers in the ReTPro project. Within the English course, the focus was placed on the drama convention teacher-in-role, and subsequent dialogic whole-class discussions instigated by a meaningful use of talk moves. Through both teacher-in-role and whole-class discussions, we were given the opportunity to learn by doing, experiencing first-hand what the two approaches entailed.

In the present article, we examine primarily teacher-in-role by delving into the four phases of the ReTPro rehearsing cycle, that is, (1) studying and modelling, (2) repetitive try-outs and simulations, (3) enactments in the classroom, and (4) analysis and reflections on the enactments.

### **Phase one: Studying and modelling**

In the first phase, we were introduced to what we would later carry out ourselves, namely exploring different ways to use the teacher-in-role approach as part of a process drama. We learned through experience, and together with our English and drama teachers. We participated, for instance, in a teacher-in-role sequence in which the campus teacher in role as Rosa Parks refused to give up her seat (see article 3 in this anthology). This marked our first encounter with the method. The teacher modelled various teacher-in-role scenarios, and we took part in the demonstrations. This allowed us to quickly build confidence in stepping into characters in front of each other, even though none of us had considered pursuing a career in acting. It felt natural and educational because, at this phase, we were not yet performing our own teacher-in-role activities, but practising alongside the teacher and each other. Everyone was equally engaged, and no one stood out more than the rest, which made this phase an excellent introduction and preparation for what was to come later.

Stepping into characters before creating our own activities proved to be a significant advantage. It helped us build confidence and gain valuable skills

for the next stages of the process. Looking back, we do not recall facing any major challenges at this stage of the cycle. Instead, it gave us the self-assurance and motivation we needed to move forward into phase two.

This hands-on approach allowed us to see how teacher-in-role could be an effective tool for capturing students' attention and, more importantly, engaging them in discussions across various subjects. We gained a deeper understanding of the diverse methods within the teacher-in-role framework. This included learning how to transition into a role effectively, and how students perceive the distinction between us as their regular teachers and as teachers taking on a role. In the drama course, we were introduced to techniques such as letter writing, acting, and the 'hot seat' activity, while the English course focused on reenacting well known dramas as examples of how to implement teacher-in-role in practice.

## **Phase two: Repetitive try-outs, roleplays and simulations**

One of the core texts for the English course that semester was Roald Dahl's novel *Matilda*, which served as a focal point during this phase. We were tasked with creating our own process drama activity inspired by the novel. As a group, we decided to base our activity on a scene in which Mrs Trunchbull enters the classroom. We also incorporated additional elements to make it our own.

At the university, we had several opportunities to rehearse and try out various roles and scenes that we had developed. This phase felt like formative assessment, in which we received guidance not only from our English and drama teachers, but also from each other during the rehearsing sessions. After adjusting based on feedback, we would perform the scene again. This process continued until we were confident in our performance, and the teacher felt we were prepared to effectively engage in a dialogic conversation afterwards.

One of the exercises involved enacting a scene where we could switch between different roles. The preservice teachers who were not directly involved in our drama played the roles of students we would later teach during our

practicum. This allowed us to practise dialogic strategies, focusing on building upon students' responses, rather than falling into the traditional IRE (initiation–response–evaluation) conversation structure. All our rehearsing sessions were recorded. While one might assume that being filmed would be distracting, it became an integrated and natural part of the rehearsal process. Watching the recordings gave us invaluable insight into our own performance, how we presented ourselves, how we spoke, where our gaze was directed, and even our facial expressions. The recordings became an essential part of the feedback process, providing clear, tangible evidence of what we achieved, what needed to be improved, and why.

Not only did this approach help us refine the specific task at hand, but it also gave us a greater understanding of how to improve our overall teaching presence. For example, we were able to identify if we were speaking too softly, where we were directing our attention, and how our body language might be perceived.

In many ways, we were fortunate to begin our studies at the onset of the RetPro project. It provided us with the unique opportunity to practise teaching in a classroom-like setting before stepping into a real classroom. This experience allowed us to become familiar with our teaching plans so that we could execute them without doubting whether we had forgotten something. Achieving this level of confidence is something we imagine often takes years of teaching experience. As a result, our first practicum experience was not as daunting as we might have expected.

### **Phase three: Enactment in classrooms**

Stepping into a classroom for the first time can be both scary and exciting. In this phase, we were to carry out our teacher-in-role activity in our practicum class. We also video-recorded in this phase of the project. However, here the camera lenses were focused on us, the PSTs, and not the students, because we were primarily interested in how we enacted teacher-in-role. Informed consent had been procured by the practicum teacher from all participants.

It felt safe to be in the classroom since we had already rehearsed so much on campus. After all, we had planned, and had professionals who helped us organise and improve our teacher-in-role activities throughout the process. In the following paragraph, we will describe in detail what happened in the classroom:

*In our practicum group, one of us used teacher-in-role, playing Miss Flower, a sweet and kind teacher who deeply cared about her students, and another of us played the role of the strict and mean principal, Miss Bummer. The teacher-in-role started with Miss Flower, who explained to the students that the principal was coming for a visit. She told the students to remove everything from their desks, for example, the flowers, the books, and to cover up the paintings. However, that day the class had welcomed a new student. The new student was late and had a messy desk. The principal did not like fun and chaotic classrooms. When she saw some of the things they forgot to hide, for example, a teddy bear, she became angry and threw the teddy bear across the room. She then started to argue with the new student and Miss Flower. The principal made deprecatory remarks about this student loudly in front of the class.*

This teacher-in-role activity was our introduction to a subsequent whole-class discussion, in which we asked the students what the principal did wrong, and how she could have done things better. The discussion was supposed to make the students think about what was right and wrong to do in a classroom. They had to use critical thinking.

Both the teacher-in-role activity and the subsequent whole-class discussion were videorecorded. In doing so, we could analyse, reflect on, and discuss our performance afterwards on campus in phase 4 of the project, which we will examine in the following.

## **Phase four: Analysis and reflections on enactments**

In the last phase, that is, phase four, we experienced that the main focus was on reflection not only on the enactment in the classroom, but also on the various stages we had been through. We had to prepare and organise a reflective Zoom session in which we, the PSTs, the practicum teachers, and the campus teachers participated. These stimulated recall conversations gave us the opportunity to express our thoughts about the enactment.

We, the PSTs, were particularly interested in questions of whether the enactment in the practicum schools matched with the rehearsals on campus. The campus and practicum teachers were, however, more interested in discussing ‘golden moments used’ to praise the PSTs, or ‘golden moments lost’ to show us the potential of teacher-in-role, which, for us, could be perceived as feed forward. Our perception of this was that the feedback here was not the same as feedback you usually get after other completed tasks in teacher education. Here you looked rather at whether you seized ‘golden moments’, that is, whether you made good use of an opportunity to develop the students’ understanding, or conversely, whether we missed or muddled such an opportunity.

An interesting and important aspect here is that, during this phase, we analysed whether we were able to anticipate some of the students’ responses. However, we did not only focus on their answers but also reflected on whether we carried out the lessons in line with what we had rehearsed at university.

In this final phase, we experienced how all the phases of the rehearsal cycle came together. It became easier for us to see the process as a whole. There was no time to see the video-recordings together on Zoom, but we saw the video-recordings individually to analyse whether and how we seized golden moments, both lost and used.

## **Reflections four years later**

Today, almost four years later, we see what benefits we have gained from such a holistic experience of having to carry out teacher-in-role and later reflect on the use of this method. For example, we asked ourselves whether we stimulated student responses using talk moves meaningfully in whole-class discussions after teacher-in-role.

We now realise that this experience has had a lasting impact on our teaching practice. It has made us more aware of the importance of student participation, and how one might be able to integrate critical thinking skills into the classroom.

Furthermore, the hands-on engagement that comes with teacher-in-role and dialogic discussions has shaped and strengthened our ability to facilitate meaningful classroom interactions. It should be mentioned that learning to analyse and reflect on our own teaching has become an invaluable skill, which continues to shape how we plan and execute lessons today.

Now, as we are approaching the end of our teacher education and are about to begin working as teachers, we feel confident in our ability to identify and seize golden moments. This will undoubtedly continue to be a central part of how we create deeper learning experiences for our future students. In sum, we have learned to improve our self-awareness as teachers.



## Part 3

# Empirical Aspects of Rehearsing in the Project Rehearsing Teaching Professionally



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Prologue 3

## **Rehearsing – the making of reflective teachers**

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Reflection and reflective practice are acknowledged as being at the heart of teacher education (TE). Yet the concepts remain difficult to define, and even more difficult to communicate and teach meaningfully to preservice teachers. The question of 'how to teach reflection' effectively has underpinned the design of the ReTPro project, which brings rehearsal and reflection together in order to create a process model. The process model describes a pedagogy of reflection that aims to be meaningful to all those partners involved. It thereby not only contributes significantly to the practice of initial teacher education (ITE) but will also continue to have 'a central role in the learning life' of the effective teacher (Day, 1993, p. 83) for the longer term.

Despite its significance in stimulating substantial amounts of research and copious publications, the meaning of reflection and its application through reflective practice remain elusive. 'Reflection', viewed as a particular form of 'teacher thinking', remains broad, carrying diverse meanings not immediately accessible or applicable to preservice teachers (PSTs).

What would be helpful at this juncture is to re-examine the concept of reflection within teacher education, with the intention of making reflection more active and meaningful, and the subsequent action more reflective and practicable, thereby rendering the facilitation of reflection more tangible and easily understood by all actors within initial teacher education (ITE). This has been precisely the intention of ReTPro: to offer, try out, and evaluate a model of reflective practice based on rehearsal, loosely defined as a form of creative and embodied practice teaching sessions.

In order to fully appreciate this contribution by ReTPro, it is necessary to understand and unpack the theoretical building blocks of reflection and reflective practice. The challenge for ITE is to initiate and instil this fundamental artistry of reflective practice, but to do so requires the abstract concepts and processes to be translated and made meaningful and practicable, so that beginning teachers can see and experience how their enactment visibly enables their progress through their teaching practicum and the ongoing art of classroom teaching.

It is Schön in the mid-1980s who is the author most associated with unpacking and popularising the concept of reflection in teaching and other professions. Schön drew upon Dewey's (1933) foundational ideas on reflection, which Dewey largely viewed as 'acts of cognition' (1933, p. 12), in which reflective practice was seen as the consciously rational use of systematic thinking

by teachers. He emphasised that learning depends on practical engagement in situations where the individual poses questions about why things turned out as they did, and where the individual uses evidence arising from their prior experiences to make personal judgements and solve problems about their teaching, and by such means, contributing to their ongoing development.

Schön's (1983, 1987) metaphor of the 'reflective practitioner' significantly extended this notion and caught the imagination of professionals, particularly those in education. Schön defined reflective practice as the practice through which professionals become conscious of their implicit knowledge base and thereby learn from their experience. This 'knowing in action', he considered, is the practical knowledge that professionals develop and add to over time. They achieve this through a form of cyclical and systematic inquiry, where they carefully observe, collect, and analyse evidence about their teaching practice in order to improve future teaching (Mathew & Peechatu, 2017).

Evidently, this notion of reflective practice was well received, given its recognition of teachers as professionals in charge of their own professional development, as opposed to them being perceived simply as instrumental technicians applying forms of rational problem solving based on scientific models of 'technical rationality'. Since then, there has been much discussion, debate, research, reformulations, and typologies that have elaborated, expanded, and critiqued the concepts of reflection and reflective practice. Eraut (2004), for example, faults Schön's work for its lack of precision and clarity. Nevertheless, reflective practice remains steadfastly at the heart of educational practice and career-long teacher professional development.

One of the main building blocks to the 'pedagogy of reflection' lies in Schön's (1987) use of time frames to differentiate reflection into what occurs during and after an event, such as a practicum class for a preservice teacher (PST). Schön drew a distinction between reflection-in-action and reflection-on-action as the two main forms of reflective thinking.

Reflection-in-action, he considered to be the rapid thinking, decision-making, and adjustments that go on from moment to moment during the event, such as giving an instructional activity. It is akin to 'thinking on your feet' and this type of reflection often appears very intuitive – a form of improvisation. According to Schön (1983), reflection-in-action acknowledges the tacit processes of *thinking* that accompany *doing*, and which constantly interact with and modify ongoing practice in such a way that learning takes place. Despite

being based on intuition, improvisation, and ‘spontaneous performance’, the capacity to benefit from reflection-in-action can be slow to develop, the skills being honed over time into expert practice through the creation of an extensive repertoire of rehearsed interventions.

Reflection-on-action, by contrast, occurs retrospectively, *after an event*, such as when a practicum class has taken place, and allows the individual to evaluate actions and outcomes from the event, and to plan for future improvements. It is a form of explicit knowledge that encourages learning from experience and is commonly perceived to be easier than reflection-in-action. Russell and Munby (1992) describe it succinctly as the ‘systematic and deliberate thinking back over one’s actions’ (p. 3). Reflection-in-action suggests that adjustments are made in the moment, whereas reflection-on-action may lead to adjustments to future learning and actions.

While it seems that in Schön’s terms, these are two separate types of reflection with different purposes, the two processes together form the core professional artistry of the reflective practitioner. By reflecting *in* and *on* action, PSTs can learn from their own experiences and grow as teachers and future learners.

Since then, in the education field, related concepts of reflection have extended the core constructs of Schön’s ‘*in*’ and ‘*on*’, arguably, to provide a more holistic and practicable model of reflective practice. Grushka et al. (2005) make a case for ‘*reflection for action*’ or ‘*reflection before action*’, which anticipates what might occur during a teaching event, taking into account any reflections on past experiences. This can include thinking practically through lesson planning issues, such as objectives, learning intentions, necessary resources, timings, dynamics of the classroom, individual pupil learning needs/styles, pedagogical strategies, and how the content might flow on a particular topic.

There has also been a strong argument for ensuring that PSTs move beyond the more individualistic, introspective approach to embrace *reflection about action* and reflect upon the social and cultural context of any learning milieu, and the political context of schooling in which action takes place. Boud and Walker (1998) argue that Schön’s analysis ignores critical features of the context of reflection, while Smyth (1989) deplores the atheoretical and apolitical quality of his conceptions. Fook et al. (2006) argue, therefore, that the focus of critical reflection should be concerned with connecting individual identity and social context. These broader social, political, and cultural

contexts permeate every aspect of learning and teaching experience, and yet are often invisible and part of the taken-for-granted, while still so necessary for beginning teachers to take account of.

There has been a plethora of research to demonstrate that reflection assists beginning teachers in identifying what is going on inside their minds, and Korthagen (2017) argues the new insights gained from reflection can lead to new and effective behaviours in the classroom. Other studies have shown that reflective practice can improve classroom interaction (Solheim et al., 2018) and positively affect teacher self-efficacy and autonomy (Noormohammadi, 2014).

Yet, despite mounting evidence, this still leaves us with questions in our endeavour to understand how to develop reflective practitioners well, *how to* make reflection, with all its ambiguities and complexities, meaningful to PSTs. The goal is to ensure that its intricacy is not reduced to a set of techniques and tools, but rather engages in a process that allows PSTs to thrive and develop their capacities for becoming independent, reflective, and effective practitioners. While most PSTs are urged to engage in reflection and reflective practice, Russell (2005) argues that no-one provides them with a ‘personal model of reflective practice’ (p. 200). Ward and McCotter (2004) remind us that ‘Students do not automatically know what we mean by reflection; often they assume reflection is an introspective, after the fact description of teaching’ (p. 225), largely engaged in through reflective journaling.

Schön’s work has indeed inspired many models of reflection and categorisations of reflective practice. One of the main ways adopted to try to help initial teacher education (ITE) students come to terms with the ambiguity and complexity of reflection is to expose them to a repertoire of typologies that include distinctive levels or types of reflection. Commonly, these tend to be hierarchical in nature, with lower-level, instrumental or technical reflection being transcended by higher-level, introspective, emancipatory, or critically conscious collective processes considered useful to PSTs as a way of scaffolding learning how to reflect.

Frameworks, such as Hatton and Smith (1995), Zeichner and Liston (1996), Valli (1997), Ward and McCotter (2002), and Larrivee (2008), each provide interesting insights regarding what reflection involves, attempting to get below surface descriptions of reflection, and all are designed to help teacher educators, supervisors, and preservice teachers understand different levels and ways of achieving the goals of reflection. Some form of *critical*

reflection is often seen as essential or, in some conceptualisations, is the pinnacle of becoming a critically reflective teacher. Larrivee (2000 p. 294) states that unless teachers move beyond accumulating skills and strategies, they will stay trapped in unexamined judgements, interpretations, assumptions, and expectations, while what they actually need to develop is the practice of critical reflection, which encompasses both critical inquiry and self-reflection. She is adamant ‘The route to becoming an effective teacher cannot be pre-planned, it must be ‘lived’ (p. 306).

One typology, for instance, that has been tried and evaluated is that created by Jay and Johnson (2002) as a means for PSTs to obtain a better understanding of the processes related to reflection.

Jay and Johnson’s typology of reflective thought is aimed at structuring reflective practice in an attempt to address *how to teach* reflection and bridge the theory–practice gap. Jay and Johnson’s typology claims to stick closely to Schön’s work and comprises three (non-linear) dimensions: *descriptive* (PST describing the matter for reflection), *comparative* (reframing the matter in light of alternative perspectives and readings), and *critical* (making a judgement, a choice among actions, and reframing into a new and better understanding of the problem). This framework guides the pedagogy of reflective practice, wherein reflective strategies are modelled by the teaching staff, followed by open, non-threatening discussions centring around the thoughts, feelings, and ideas that the students have about teaching and their roles as prospective teachers. Anselmann (2023), using this framework of reflective practice and adopting a pre- and post-test design, found that students in German nursing education significantly improved their teaching reflection abilities after participating in the training. However, not all students accomplished the critical dimension of reflection, which she puts down to a lack of opportunity to ‘teach experience in practice’ (pp. 6–7).

Evidently, using typologies of different types of reflection as a key modus operandi for teaching students how to ‘learn to teach’ is not without its criticisms or limitations. While at one level such frameworks offer a supportive scaffold to aid understanding of different ways of thinking about the process of learning to teach, at another, a typology can be perceived as too prescriptive, thereby constraining learning capacity by keeping reflection too firmly in the cognitive domain.

Authors such as Leitch and Day (2000), Day and Leitch (2001), and McManus (2011), for instance, ask ‘where is emotion in critical reflection?’ and argue the need for a more flexible, holistic approach to reflective practice and professional development. Gibbs’s (1988) reflective cycle specifically focuses on emotional reflection, on how the emotions felt during an experience, impact a practitioner’s reflections and, through debrief, determine what knowledge was gained as a result. Jay and Johnson (2002, p. 9), too, while proponents of their typology, consider that reflection involves intuition, emotion, and passion, reinforcing that reflection is not something that can be neatly packaged as a set of techniques for preservice and in-service teachers to use.

If emotion and thinking are inseparable, then developing emotional salience in beginning teachers also has to be a significant part of building a model of, or approach to, critical reflection in order to help them understand and adjust their reasons for action (Estola & Elbaz-Luwisch, 2003). Given that we bring our whole selves into teaching, then emotions, it seems, are a key part of experiential learning, and any approach to developing new teachers needs to appreciate the role the emotions, and indeed, the body, play in knowledge construction. It is vital to see the preservice teacher (PST) as emotionally embodied, and where the body is part of what constitutes the act of teaching (Klein et al., 2019, p. 699). Centralising embodiment as a key component of reflective learning in teacher education aligns with Biesta’s (2010) claim that craft, wisdom, and orientation to teaching are not merely reflective capacities, but also consist of skills, qualities, and dispositions that need to be(come) embodied.

Realising that embodied pedagogies are largely absent from the theorising of teacher education, a key challenge for RetPro (teacher education) has been how to truly re-conceptualise teacher education, honour the role of emotions within embodiment in reflection, and build a model that is dynamic and holistic in order to make wholly reflective teachers.

Rehearsal is viewed as the vehicle through which to build an inclusive, dynamic model of reflective learning that would also engage emotions and bodies for educational purposes, not just for the PSTs, but also for all actors involved in what Schön (1987, p. 170) termed ‘the reflective practicum.’ The reflective practicum Schön described as a ‘virtual world’, finds ways to replicate the essential features of a practice to be learned. It ‘encourages students

to experiment at low risk (...) and go back to do things over when it seems useful to do so' (p. 170) under the coaching of expert practitioners.

The RetPro concept of the 'rehearsal room' (Vangsnes, 2021–2026) has been designed as a conceptual space that extends these foundational Schönian ideas, through which the focus of teacher education shifts from predominantly theoretical reflections about teaching to building professional teaching repertoires of embodied, reflective, and purposeful actions by means of 'rehearsal', with the aim of closing the perceived gap between theory and practice.

Rehearsals come in various forms and opportunities, under the coaching, supervision, and modelling by expert practitioners (teacher educators, supervisors, and practicum teachers) who engage in a community of practice with PSTs to 'try-out' new and critically important ways of practising and performing in order to develop professional artistry and wisdom in preparation for school practicum and beyond.

Outside of music performance studies, it is a rarity to see 'rehearsal' linked to the development of reflective practice.

And yet, rehearsal, as a purposeful and embodied means of building teaching repertoires and of linking theory to practice, is becoming more visible as a core technique within ITE, whatever the terminology or technique – micro-teaching, simulations, role-play, try-outs, and so on.

Rehearsals in their various formulations act as problem-solving spaces in which PSTs can observe and practise safely how to co-ordinate the complexities of classroom teaching, how to deal with the dynamics of student interaction alongside pedagogical strategy and purposeful content in advance of real-life enactments with children.

Coached rehearsals 'approximate' real life, providing opportunities for PSTs to engage in 'deliberate practice' (Ericsson, 2002) through experiences, such as simulations and rehearsals that are proximal to classroom teaching and where students can safely experiment.

Such rehearsed, embodied pedagogical strategies and experiences engage PSTs in different kinds and ways of learning about teaching under reflective supervision or what Schön (1988, p. 19) termed 'the coaching of expert practitioners' to help PSTs develop their knowing-in-action and thus become more 'educationally wise' Biesta (2012, p. 8) by learning to be more freely reflective-in-action.

Schön (1988) decreed ‘Follow me!’. Indeed, it is worth expanding the notion of rehearsal to include the element of explicit modelling (after Jay and Johnson (2002) above), where the academic tutor steps out within the teacher education session and tries out or experiments with an instructional episode (e.g. introducing creative pedagogical strategies, such as process drama).

This is not a ‘do as I do’ directive, but more in the spirit of the tutor being in the self-conscious position to receive feedback from students, and explicitly to reflect in front of the students by ‘thinking aloud’ about his/her design and enactment of the session.

Schön (1989) argued that such reflective supervision would help teachers become more reflective-in-action by learning important things from ‘the virtuosity of others’ (p. 19).

Finally, as we move forward in the quest to make teacher preparation more embodied, and reflection more practically meaningful, it is possible to envisage a teacher education pedagogy combining the differing reflective processes (*-for*, *-in*, *-on*, and *-about*) at each stage within a model that foregrounds rehearsal and modelling.

One such developmental framework is that offered by McDonald et al. (2013). This model of rehearsal illustrates four stages or processes: 1. Studying and Modelling; 2. Repetitive Try-outs; 3. Enactment in Classrooms; 4. Critical Analysis and Reflection. Table P3.1 on the next page unpacks the differing forms of reflective processes that predominate at the different stages, although all forms of reflection can be articulated, planned for, and realised throughout the iterative process.

Adopting or adapting such a model of rehearsal may make meaningful a complex and layered pedagogy for teacher education, and make explicit the link or ‘transfer of learning’ between formal academic-based sessions and school-based practicum that is so vital to the making of truly reflective teachers.

**Table P3.1**

*Summarising a cyclical teacher preparation model of rehearsal, combining differing reflective processes (-for, -in, -on, and -about). Based on McDonald et al.'s (2013) model of rehearsal*

| Rehearsal processes                                                                | Key activities                                                                                                                                                                               | Predominant forms of reflection                                                                                                                                                                            |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Studying and modelling                                                             | Planning instructional and pedagogical activities.<br>Viewing expert modelling of practice, e.g. live simulation of an episode of teaching undertaken by teacher educator or teacher mentor. | Reflection <b>for</b> practice<br>Reflection <b>on</b> practice                                                                                                                                            |
| Repetitive try-outs                                                                | Individual and group coached rehearsals using different strategies (practical/embodyed) under tutelage by a more expert guide<br>Observing peer try-outs                                     | Reflection <b>in</b> action<br>Reflection <b>on</b> action<br>Self-reflection, giving and receiving feedback                                                                                               |
| Enactment in classrooms                                                            | In practicum, undertaking <i>in vivo</i> classroom lessons with PSTs under teacher mentor supervision and in light of rehearsals                                                             | Reflection <b>in</b> action<br>Focusing on feelings, actions and adjustments in 'the real situations' before 'other' feedback                                                                              |
| Critical analysis and reflection combining different forms of reflective processes | A holistic review of the situated activity and what was experienced and learned before the cycle begins again                                                                                | Critical reflection <b>on</b> action<br>Critical reflection <b>about</b> action<br>Looking critically over the what, why, and when of activities and experiences in context, using all forms of reflection |

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Cabot, M. A. & Brodal, J. (2025). 'Here, I should have used the talk move challenge ...': Video-stimulated reflections on rehearsing vocabulary learning-friendly whole-class discussions. In M. A. Cabot, S. M. Høisæter & V. Vangsnes (Eds.), *Rehearsing for teaching: Theoretical and empirical approaches to a practice-based teacher education* (pp. 203–229). Fagbokforlaget. DOI: <https://doi.org/10.55669/oa600510>

10

## **'Here, I should have used the talk move challenge ...'**

*Video-stimulated reflections on rehearsing vocabulary learning-friendly whole-class discussions*

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**Abstract:** There is little research on preservice teachers' (PSTs') video-stimulated reflections on whole-class discussions that can be useful for vocabulary learning at elementary school. This qualitative small-scale case study examines the following research questions: What use of various talk moves did the PSTs articulate in their reflections? What reflections did the PSTs put forth when describing how talk moves created used or lost moments of vocabulary learning? The study is based on term papers and reflection dialogues after rehearsing on campus and enactment at practicum schools. To analyse the data, we used Michaels and O'Connor's (2015) and Hardman's (2020) description of talk moves and Swain's (2005) functions of output. The PSTs identified that using basic talk moves can lead to noticing vocabulary gaps, whilst advanced moves facilitate hypothesis-testing and metalinguistic reflection. The study emphasises the importance of dialogic whole-class discussions as a method to strengthen vocabulary learning in EFL/ESL teacher education.

*Keywords:* whole-class discussion (WCD), talk move (TM), vocabulary learning, teacher education

**Sammendrag:** Denne kvalitative studien tar for seg lærerstudenters video-stimulerte refleksjoner rundt helklassesamtale som middel til ordinnlæring. Følgende problemstillinger undersøkes: Hvilken bruk av ulike samtaletrekk kom fram i lærerstudentenes refleksjoner? Hva var deres refleksjoner rundt nyttiggjørelse og manglende nyttiggjørelse av potensielle ordinnlæringssituasjoner fremkalt ved bruk av samtaletrekk? Studien tar utgangspunkt i studentenes semesteroppgaver og reflekterende samtaler etter gjennomføring av øvelser på campus og utøving av undervisning i praksisskole. Beskrivelser av samtaletrekk i Michaels og O'Connor (2015) og Hardman (2020), samt Swains (2005) teori om outputtets funksjoner ble brukt i analysen av data. Lærerstudentene slo fast at elever kan gjøres oppmerksomme på tomrom i ordforrådet ved bruk av basale samtaletrekk, mens mer avanserte samtaletrekk kan benyttes til å fremkalle hypotesetesting og metaspråklig refleksjon. Studien peker på betydningen av dialogisk helklassesamtale som middel til å fremme ordinnlæring i undervisning av engelsk som fremmed- eller andrespråk.

*Nøkkelord:* helklassesamtale, samtaletrekk, ordinnlæring, lærerutdanning

## Introduction

International research has argued for the importance of vocabulary learning that can be improved by dialogic whole-class discussions (e.g. McKeown, 2019, p. 472). However, there is little research in Norway on how dialogic discussions and vocabulary learning are facilitated. Norway’s most recent English subject curriculum (NDET, 2019) points to the importance of both dialogic teaching and vocabulary learning at primary school. For example, the competence aims in year 2 mention explicitly that students must ‘participate in rehearsed dialogues and spontaneous conversations about one’s own needs and feelings, daily life, and interests’ (dialogic dimension), and ‘find words that are common to English and other languages with which the student is familiar’ (p. 5) (lexical dimension).

The purpose of this qualitative case study is to elucidate preservice teachers’ (PSTs’) video-stimulated reflections after practicum on how talk moves can promote vocabulary learning through dialogic teaching. More specifically, the study examines PSTs’ reflections after rehearsing and enacting dialogic, vocabulary learning-friendly whole-class discussions in English as a Foreign or Second Language (EFL/ESL).

We look into the following two research questions:

- What use of various talk moves did the PSTs articulate in their reflections?
- What reflections did the PSTs put forth when describing how talk moves created used or lost moments of vocabulary learning?

## Theoretical framework and existing research

### Meaningful vocabulary learning-friendly classroom discussions

We coined the term ‘vocabulary learning-friendly’ to emphasise PSTs’ responsibility in creating a classroom atmosphere in which students are allowed to try and fail when speaking English. An accepting learning environment is crucial for L2 vocabulary learning, not only for learners’ willingness to produce output, but also in terms of their ability to take in input, in accordance with Krashen’s (1982) affective filter and input hypotheses. The affective

filter is an invisible filter that can either facilitate or hinder language acquisition, including vocabulary (see also Sparks & Ganschow, 2007; Wang, 2020). When the learners' affective filter is lowered, they will acquire new words, particularly in situations of input being slightly above the current level of the learner's language (pushed input:  $i+1$ ). When the filter is high, the learners experience stress and are reluctant to participate and seek out opportunities to collaborate. The main affective variations pointed out by Krashen are motivation, self-confidence, and anxiety, which can foster or inhibit success in acquiring vocabulary.

Moreover, PSTs must ask themselves how they fostered vocabulary learning during their practicum. One possible method to increase students' vocabulary learning is to carry out whole-classroom discussions. Indeed, language production in classroom discussions provides what Selinker (1972) and Corder (1982) qualify as communicative needs – that is, the opportunity for meaningful practice. In other words, if the students experience no needs when they speak or write, they will not learn English. However, if they must express themselves and find the right words, they will learn.

In this context, Swain (1995, 2005) distinguishes three functions of output (e.g. speaking, writing): (1) noticing function, (2) testing and hypothesis formulation, and (3) metalinguistic function. In the first function, English learners might encounter lexical problems, leading them to notice what they do not know or know only partially. In the second function of output, English learners are liable to test out new words. Swain advocated that learners become much more aware of input when they are desperately searching for a word in reaction to something they hear. These situations of pushed output ( $o+1$ ) somehow resemble Krashen's (1989) above-mentioned pushed input situations ( $i+1$ ), as language acquisition in both cases is facilitated by supportive classroom environments and positive learner affect. The third function of output refers to a negotiation over form and meaning, which might occur in collaborative dialogues when learners use language to talk about language.

Vocabulary learning is a gradual process that can be fostered by receptive and/or productive activities (e.g. pushed input and output), which seem mutually constitutive of communicative situations, and thus equally important in teaching (Nation, 2007).

Much research (e.g. Cabot, 2018; Min, 2008) links vocabulary learning to receptive skills (i.e. reading and listening). In contrast, the present case study examines the combination of vocabulary learning and productive skills.

International researchers (e.g. Lee, 2009; Swain, 2006) have shown that students who were involved in actively producing language became more proficient than those just using receptive skills.

Interestingly, many Scandinavian studies (e.g. De Wilde et al., 2021; Sundqvist, 2009, 2024) have shown that vocabulary learning often occurs outside school (extramural English). There is, however, little research in relation to in-school learning at primary school (intramural English).

Drew et al. (2007) do not examine specific oral activities but conclude in broad terms that primary EFL/ESL in Norway is mainly directed towards developing oral communicative competence.

A recurring problem in many EFL/ESL classrooms is getting students to speak out loud in activities. According to Dahl (2022), whole classroom discussions are often avoided.

Little research (e.g. Drew et al., 2007) exists in relation to intramural English focusing on whole-class discussions and dialogic teaching instigated by TMs at grades 1–7, which are under scrutiny in the present study.

## **Dialogic teaching and talk moves**

McKeown (2019) has shown that vocabulary learning can be improved by dialogic talk in whole-class discussions (WCDs), as both definitional and contextual information is presented, encounters with words in multiple contexts are provided, and students’ active processing of word meanings is engaged.

WCDs may be qualified as dialogic when students and teachers use words to talk to each other, as illustrated by the etymology of the term itself: in ancient Greek *dia* (English: via) and *logos* (English: word). Indeed, dialogue can mean ‘conversation, discussion, deliberation and argumentation’ (Alexander, 2020, p. 49).

It moves beyond other forms of classroom talk, such as rote and recitation, and not only has greater cognitive potential for students, but also

demands more of a teacher's subject knowledge and pedagogical skills, especially through the use of effective questioning.

Researchers have studied dialogic discourses in many subjects, *inter alia* in mathematics (Tabach et al., 2020; Myklebust et al., 2024), English, and social studies (Hardman, 2020; Nystrand et al., 2003).

Talk moves (TMs) are 'simple families of conversational moves intended to accomplish local goals' (Michaels & O'Connor, 2015, p. 334). Teachers can use them in WCDs to promote a form of learning-promoting verbal response from students.

Both international (e.g. Tabach et al., 2019) and Scandinavian (e.g. Myklebust et al., 2024) research – mostly in the subject mathematics – have examined various TMs teachers choose during WCDs, intentionally or unintentionally. For example, Tabach et al. (2019) found that teachers use different sequences of TMs (e.g. revoicing + explain/say more, or revoicing + press for reasoning).

Furthermore, Michaels & O'Connor (2015) identified 'a set of recurring moves that seemed to take the conversation from recitation to reasoning' (p. 335). Using TMs, teachers can help individual students 'share their own thoughts', 'orient to and listen carefully to one another', 'deepen their reasoning', and 'engage with others' reasoning' (p. 338).

According to Myklebust et al. (2024), PSTs in Norway struggle with 'the third turn in the exchange, following up after a question and a response' (p. 1001). In line with Blikstad-Balas and Jensen (2024), Myklebust et al. (2024) recommend video-filming WCDs and analysing the use of TMs to ensure PSTs' professional reflection.

Indeed, TMs represent a powerful opportunity for providing learning with a meaningful context. Drawing on this concept of TMs as part of dialogic teaching, the present study examines how PSTs can use TMs to foster students' vocabulary learning during WCDs.

From our point of view, the two research areas – vocabulary learning-friendly output (linguistic approach) on the one hand (e.g. McKeown, 2019; Kwon, 2007), and TMs in EFL/ESL teaching (pedagogical approach) on the other hand (e.g. Hardman, 2020; Nystrand et al., 2003) – seem to exist separately.

The present study aimed to integrate these two strands of theories to contribute to a sharper research focus on possible links between dialogic classroom discussions and vocabulary learning in EFL/ESL.

## Methods

### Study design and procedures

This qualitative, small-scale case study examines PSTs' reflections on the use of TMs in WCDs in EFL/ESL. It was conducted as part of the research project *Rehearsing Teaching Professionally* (ReTPro), funded by the Norwegian Research Council.

It draws on four different engagement phases, both on campus and during practicum: (1) studying and modelling, (2) repetitive try-outs and simulations, (3) enactments in the classroom, and (4) analysis and reflections on the enactments (McDonald et al., 2013).

The PSTs carried out twelve WCDs that lasted about 20 minutes in phase three. They used pictures (e.g. leisure activities: pictures with animals doing weird things), and short video clips (e.g. sports, the Olympic Games), to trigger the WCDs.

In phase four, the PSTs were asked to analyse their WCDs by examining their own use of the following TMs (Chapin et al., 2009, p. 13; Hardman, 2020, p. 72):

**Table 10.1**

*Talk moves (based on Chapin et al., 2009, p. 13; Hardman, 2020, p. 72)*

| Talk moves                  | Examples                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 1. EXPLAIN/SAY MORE         | Can you say more, explain, give an example, expand,... ? What do you mean by that?                                    |
| 2. REVOICE                  | So, you're saying that... Is that what you are saying?                                                                |
| 3. RESTATE/REPEAT           | Could you please repeat in your own words?                                                                            |
| 4. PRESS FOR REASONING      | Why does it make sense? What does it prove? What convinced you that it was the right answer?                          |
| 5. CHALLENGE                | How is this different from... ? If discussant B is right, what about discussant A? Can they both be right?            |
| 6. AGREE/DISAGREE           | Are they right? Do you agree or disagree?... Why do you agree?... Who has a similar idea? Does it make sense?... Why? |
| 7. ADD ON                   | Would anyone like to add on this? Do you want to add something? Who wants to respond to that?                         |
| 8. Talk-enhancing WAIT TIME | Please take your time... We wait.                                                                                     |

The PSTs' reflections on the use of TMs were video recorded in all four phases. According to Blikstad-Balas and Jenset (2024), authentic video clips can be used systematically to ensure PSTs' professional reflection. Interestingly, video recordings of WCDs can reveal so-called 'teachable moments'. Hyun and Marshal (2003) describe the concept as follows:

Teachable moments are fortuitous opportunities provided by the students [i.e. learners] that are recognised, interpreted, evaluated and acted upon by the teacher [i.e. a knowledgeable other]. (p. 115)

Identifying such moments during WCDs is challenging but advantageous. Once PSTs have identified these opportunities, they can act upon students' ability to learn 'when the time is right' (Havighurst, 1952, p. 7).

Accordingly, Erickson (2011) emphasises that 'good teachers improvise as they talk to their students... They look for teachable moments and take opportunistic advantage of them' (p. 130).

Drawing on Havighurst (1952), Hyun and Marshal (2003), and Erickson (2011), we defined teachable moments (see similar concepts in Kulild et al., 2025, and Myklebust & Tuset, 2025) as meaningful, critical decision-making moments during instruction that can further PSTs' professional development by providing them with an opportunity to reflect on both more successful (used), or less successful (lost), moments of students' vocabulary learning.

## Participants

Informed consent was obtained from the participants. All information collected was treated confidentially (NSD 619149). The PSTs were recruited in person from a university in Western Norway that offers EFL/ESL courses for PSTs. The teacher training institution required all first-year students to undertake their practicum at elementary school (years 1–7), even though some of them were studying teacher education for grades 5–10.

The PSTs were in their first semester. Table 10.2 provides an overview of the participants.

**Table 10.2**

*Profile of study participants*

|                                       |                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Participants</b>                   | 6 PSTs (4 females/2 males) with the pseudonyms Ava, Cass, Grace, Jade, Brad and Joe                  |
| <b>Specification of PST's studies</b> | 4 students of 'GLU 5–10' (lower upper secondary school), 2 students of 'GLU 1–7' (elementary school) |
| <b>Age</b>                            | 18–40 years                                                                                          |
| <b>Teaching experience</b>            | None                                                                                                 |
| <b>Participants' L1</b>               | Norwegian (6)                                                                                        |

## Data collection methods

As shown below in Table 10.3, the study's data were derived from both oral (i.e. video/audio recordings) and written sources, more specifically from modelling sessions and rehearsing sessions on campus, enactments of WCDs at practicum schools, (video-stimulated) reflection dialogues, and term papers written by the six PSTs.

**Table 10.3**

*Overview of the data sets*

| Data source            | Rehearsing phase 1                                                                                  | Rehearsing phase 2                                  | Rehearsing phase 3                                                           | Rehearsing phase 4                                                        |
|------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Video/audio recordings | 5 modelling sessions (approx. 20 min each), 3 sessions using a picture and 2 sessions on talk moves | 6 first rehearsing and 7 second rehearsing sessions | 12 video-recorded enactments of whole-class discussions at practicum schools | 8 video-stimulated reflection dialogues on Zoom                           |
| Documents              | 6 obligatory assignments, i.e. thesis statement/disposition, 1st draft of methods section           |                                                     |                                                                              | 6 entire drafts of term paper and 6 final exam submissions of term papers |
| Relevance for RQs 1–2  |                                                                                                     |                                                     |                                                                              | RQ 1 + 2                                                                  |

We chose to use phase 4 data after enactment and rehearsals because they provided the reflective data answering both research questions. The data consisted of the video/audio recordings (i.e. 8 video-stimulated reflection dialogues), and the term papers (i.e. 6 final exam submissions).

In the reflection dialogues, the PSTs presented self-chosen snippets from the video recordings to reflect on how and why they over- or underused TMs, and whether they managed to use specific moments of dialogical WCDs to enhance vocabulary learning. In the term papers, the PSTs were asked to provide an in-depth analysis of their use of TMs, and to link their WCDs to dialogic teaching (e.g. Alexander, 2020).

## Data analysis

For data analysis of the term papers and reflection dialogues, a qualitative codebook using NVivo 11 was developed. To do so, we used both content and thematic analyses (e.g. Braun & Clarke, 2019; Maxwell & Chmiel, 2013). Content analysis categorises data by ‘similarity’, whereas thematic analysis focuses more on connecting analyses or ‘contiguity-based relations’ (Maxwell & Chmiel, 2013, p. 3).

Rossmann and Rallis (2017) suggest that content analysis can characterise categories as words or phrases describing some ‘segment of your data that is relatively discrete (a variable, if you will)’ (p. 240). In this study, content analysis consisted in quantifying the PSTs’ talk move practices to answer research question 1. Indeed, Saldana (2016) asserts that such ‘quantitizing may be better applied to content analytic studies’ (p. 26).

Considering this, we decided to focus on thematic analysis when analysing the findings on research question 2. Thematic analysis ‘involves the searching across a data set to find repeated patterns of meanings’ (Braun & Clarke, 2022, p. 86). The present study used NVivo to colour (for typographic reasons in light and dark grey in Table 10.5) such emerged themes or repeated patterns of meanings (TMs used or lost) when the PSTs linked vocabulary-learning friendly TMs to used or lost moments of dialogic talk.

Rossman and Rallis (2017) suggest that themes ‘state an argument regarding your interpretation’ (p. 240). Thematic analysis is essential for developing new theories and interpreting findings. Indeed, in our analysis (cf. Figure 10.1), we were interested in linking the general distribution of TMs (pedagogical dimensions) to Swain’s (2005) three functions of output and vocabulary learning (linguistic dimensions).

## Findings

Using illustrative examples, this section presents the PSTs’ reflections on use or non-use of TMs during dialogic WCDs intended to foster vocabulary learning. The first part elaborates on the PSTs’ thoughts on the distribution of TMs (RQ 1). The second part describes the PSTs’ reflections on teachable moments of vocabulary learning that were used or lost during the WCDs (RQ 2).

### Distribution of talk moves

The general findings pertaining to the content analysis of the various TMs in research question 1 revealed that the PSTs distinguished between basic TMs ‘explain/say more’, often referred to as what-questions (What do you see? What do we call this?), and more advanced TMs such as ‘challenge’ and ‘press for reasoning’, or why-questions (Why does the elephant wear sunglasses?). This tendency was confirmed by the PST Ava: ‘My initial approach would involve initiating a discussion with the question “What can you see?” as a trigger.’

Interestingly, the PSTs did not distinguish clearly between initial and follow-up use of the TM ‘explain/say more’ in their reflections. Based on the reflection dialogues, it seemed that few ‘explain/say more’ TMs were used as second moves. This was, however, disconfirmed by the video-recorded enact-

ment of the WCDs at the practicum schools, which showed that ‘explain/say more’ TMs were used to prompt elaboration, as opposed to the initiation of an IRE (Initiation–Response–Evaluation) exchange.

The PSTs used all TMs in their classroom discussions. Based on the content analysis of the video-stimulated reflection dialogues, we elaborated the following overview of the PSTs’ self-reported TM practices during practicum.

**Table 10.4**

*PSTs’ self-reported use of talk moves*

|                          | Ava | Cass | Grace | Jade | Brad | Joe |
|--------------------------|-----|------|-------|------|------|-----|
| Explain/ say more        |     |      |       |      |      |     |
| Revoice                  |     |      |       |      |      |     |
| Restate/ repeat          |     |      |       |      |      |     |
| Press for reasoning      |     |      |       |      |      |     |
| Challenge                |     |      |       |      |      |     |
| Agree/ disagree          |     |      |       |      |      |     |
| Add on                   |     |      |       |      |      |     |
| Talk-enhancing wait time |     |      |       |      |      |     |

*Note.* The PSTs’ self-perceived estimates were derived from the video-stimulated reflection dialogues after the whole-class discussions. For example, high or low use of a talk move is respectively symbolised with the colours black or light grey, while medium grey is used for a medium use, indicating that the PSTs considered the use satisfactory and reasonable.

Table 10.4 shows three interesting tendencies, which did not involve any statistical inference. First, the PSTs reported a high use of 'say more/explain', and medium to high use of 'talk-enhancing wait time' in the reflective dialogues. Second, the PSTs made little use of the TMs 'challenge' and 'restate/repeat'. Third, the TMs 'revoice', 'press for reasoning', 'agree', and 'add on' showed medium use, even though all PSTs had rehearsed all TMs during classroom simulations on campus. The following illustrative sentences from some reflection dialogues explain these tendencies in more detail.

Concerning the predominant use of the TM 'explain/say more', the PST Brad elaborated in the following manner on a natural order of TMs:

*Naturally, a discussion will usually start with seeking explanations before moving on to challenge the students and seek different points of view...*

This natural order of TMs may explain the high reported use of the TM 'explain/say more'. In contrast, the TM 'challenge/press for reasoning' was used less frequently. The PST Ava was one of few participants to use it. She noticed that 'the students got very engaged when I asked them... to justify. They laughed and wanted to share what they were thinking.'

The PST explained the frequent use of the TM 'wait time' with the explicit focus on this TM during phase 1 (modelling), phase 2 (on-campus rehearsals), and phase 3 (enactment at the practicum schools). Thus, rehearsals of this TM seemed to be successful because the TM was also used during practicum.

The PSTs emphasised that all TMs were rehearsed on campus, but that the enactment at the practicum schools was challenging in the case of more advanced TM.

The following section will examine the WCDs in relation to the question of how the PSTs used TMs to create possibilities for vocabulary learning.

## Used or lost moments of vocabulary learning?

This section elaborates on the general findings pertaining to research question 2, that is, the thematic analysis of the essential moments (used or lost) describing vocabulary learning-friendly WCDs that were rehearsed on campus and enacted in the practicum schools.

Based on the video-stimulated reflection dialogues and the term papers, the following overview provides illustrative snippets from examples of teachable moments which the PSTs mentioned as used or lost moments to enrich the students' vocabulary during the WCDs.

**Table 10.5**

*Overview of a selected amount of PSTs' moments used or lost to instigate possible vocabulary learning*

| PST  | Possible vocabulary learning                                     | Vocabulary-learning friendly talk moves in used moments (coded in light grey)                                                                                                                                                                                                                                                    | Vocabulary-learning friendly talk moves in lost moments (coded in dark grey)                                                                                                               |
|------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Joe  | Engine failure                                                   | (...) a student said, 'the car is smoking.' Here the student probably did not know the word 'engine failure' (...) The student 'noticed the gap' when struggling to find some other words to describe what he saw. I then asked to the entire class what this is called. Another student answered 'motor stop'. EXPLAIN/SAY MORE | Here I could have gone more in depth and asked the second student why he thought that, or if he knew another word for it, but I just corrected it to 'engine failure'. PRESS FOR REASONING |
| Cass | Different Halloween words like: bat, skeleton, pumpkin and mummy | (...) a student answered 'a mummy is something with bandage around him'. Afterwards I asked him 'what kind of bandage?' This was a good opportunity to start a conversation with the student. EXPLAIN/SAY MORE                                                                                                                   |                                                                                                                                                                                            |

| PST  | Possible vocabulary learning                                      | Vocabulary-learning friendly talk moves in used moments (coded in light grey)                                                                                                                                                                                                       | Vocabulary-learning friendly talk moves in lost moments (coded in dark grey)                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cass | Tombstone                                                         |                                                                                                                                                                                                                                                                                     | 'What is a tombstone in Norwegian?' Almost no students were able to figure it out on the first try. Student A answered tombstone is Frankenstein. Here the student became aware that he does not know the word... Frankenstein was a very interesting answer. Here I could ask him 'why are you thinking about Frankenstein?' <b>PRESS FOR REASONING</b>                                                                                                                                               |
| Cass | Hens                                                              | (...) I ask them 'do you have any animals at home?'. Then a student says 'I have 8 goats, and ten...'. I asked 'ten...?', waiting for his answer. The student meant to say hens and became aware that he is missing that word in his vocabulary. <b>EXPLAIN/SAY MORE, WAIT TIME</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Cass | Witch                                                             |                                                                                                                                                                                                                                                                                     | When the students answered me witch is 'heks' in Norwegian, I could have asked them 'Would anyone like to add on this?' or 'can you describe a witch in your own words?'. If I had asked these questions the students could talk more in complete sentences and gain insight into which words they knew and which words they did not know. <b>ADD ON</b>                                                                                                                                               |
| Ava  | False friend: 'light pear' in Norwegian vs. light bulb in English |                                                                                                                                                                                                                                                                                     | (...) a student raised her hand and told me in Norwegian that she could see a lightbulb. I asked if she knew what it was in English, but she did not know. We had to find this out (here I used wait time), so I asked the rest of the group, and a boy raised his hand and said, 'light pear'. (...) I could have used this moment as an opportunity to facilitate a metalinguistic discussion and make the student reflect over why he thought 'light pear' was the correct answer. <b>CHALLENGE</b> |

| PST   | Possible vocabulary learning                     | Vocabulary-learning friendly talk moves in used moments (coded in light grey)                                                                                                                                                                                                                                         | Vocabulary-learning friendly talk moves in lost moments (coded in dark grey)                                                                                                                                                                                                                                         |
|-------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brad  | Sports: relay in English, 'stafett' in Norwegian | A student used the [Norwegian] word 'stafett' [pronounced with the diphthong /ei/ in English]. I revoiced the word, and told him that it was a nice try to pronounce the word in English but that the English word is 'relay'. I asked him then whether he likes watching ski relays on TV. REVOICE, EXPLAIN/SAY MORE |                                                                                                                                                                                                                                                                                                                      |
| Grace | Cheerful                                         |                                                                                                                                                                                                                                                                                                                       | I ask the students if they did see any feeling in the You Tube clip... . One of the students said he could see 'cheerful'. I replied with 'very good'. I should have asked the student if he could give an example, or I could have asked why it made sense that it was cheerful he saw. EXPLAIN/SAY MORE, CHALLENGE |
| Grace | Proud                                            | A golden moment was at minute 14 in the clip. I said 'A student said that the parents probably felt very proud, did any of the rest of you also see that?' The students said yes, and then I continued asking 'how did you see that, why did that make sense?' PRESS FOR REASONING                                    |                                                                                                                                                                                                                                                                                                                      |
| Jade  | Please                                           |                                                                                                                                                                                                                                                                                                                       | In 5:32 press for reasoning could have allowed a deeper explanation to why using kind words... is important, and by that enlighten the importance of acknowledging each other. PRESS FOR REASONING                                                                                                                   |

*Note.* The extracts are the PSTs' direct quotations from the term papers or reflection dialogues.

As shown in Table 10.5, the PSTs created several teachable moments during the WCDs. Some of them were used (in light grey in Table 10.5), or not used (in dark grey), to enhance possible vocabulary learning. All above-mentioned excerpts represented teachable moments of vocabulary-learning-friendly WCDs. They were used or not used due to various personal (e.g. lack of

planning, self-reliance, knowledge about talk moves), or contextual factors (e.g. format of chosen trigger, classroom management, unknown proficiency levels of the students), which could not be analysed due to the research scope and limited word count of the present article.

To sum up, most moments used were instigated by the predominant TM 'explain/say more', except for some instances of 'revoice', 'wait time', and 'press for reasoning' (in light grey in Table 10.5). In contrast, the PSTs' reflections on moments lost seemed to mention predominantly 'press for reasoning', 'add on', and 'challenging' as unused TMs (in dark grey in Table 10.5).

## Discussion

The following discussion section will first examine pedagogical dimensions of findings in light of theories on dialogic teaching and TMs and then elaborate on linguistic dimensions in terms of vocabulary learning, showcasing that certain TMs can be linked to different functions of output.

The last section will integrate these two strands of theories to contribute to a sharper research focus on possible links between dialogic classroom discussions and vocabulary learning.

### **Pedagogical dimensions: Dialogic discussions and the reported use of talk moves**

In the term papers and the video-stimulated reflection dialogues, the PSTs distinguished between more advanced TMs, such as 'press for reasoning', and basic TMs (e.g. 'explain/say more', 'revoice'). Even though the video-recorded enactment showed that approximately half of the 'explain/say more' moves were used in a follow-up move, the PSTs stated that basic TMs were often used to initiate a discussion. This is in line with Myklebust et al.'s (2024) study

stating that PSTs in Norway struggle with ‘the third turn in the exchange, following up after a question and a response’ (p. 1001).

More advanced TMs were often subsequent to basic TMs. Interestingly, the PSTs coined the term ‘natural order of talk moves’ to explain this phenomenon. They seemed to understand that finding a good balance between basic and more advanced TMs is of particular importance. This aligns with previous research (e.g. Tabach et al., 2019) that uncovered different sequential patterns of TMs used by teachers in the subject mathematics (e.g. revoicing + explain/say more, or revoicing + press for reasoning).

Use of the TM talk-enhancing wait time entails delaying both the allocation of turn and provision of feedback. Teacher follow-up or feedback has been shown to be an integral part of the communicative context of the classroom (Sinclair & Coulthard, 1975, p. 51; Cullen, 2002, p. 118). The teacher is expected to provide feedback. Merely withholding it slightly longer than what is natural in the situation may be perceived as a break with expectations of normality, and as potentially detrimental to class management.

In contrast to research showing that the TM ‘challenge’ is a difficult move for teachers to get used to (e.g. Michaels & O’Connor, 2015, p. 337), it is surprising that wait-time was frequently used in the present study. In the context of L2 instruction, waiting time can be a talking tool with a potential downside. While giving learners the opportunity to pre-plan their output has been linked to increased accuracy, it may cause them to withdraw to the safety of familiar, yet unchallenging, linguistic choices (Batstone, 2002, p. 10).

The present study shows that all TMs had to be adapted to the specific classroom situations. Indeed, the PST often had to make spontaneous decisions and improvise (e.g. Erickson, 2011). In other words, the rehearsing of TMs on campus before practicum helped to gain insight into the various TMs, specifically the reported use of more advanced TMs (e.g. press for reasoning, challenging). However, in the end, the enactment at the practicum schools was highly contingent on personal or contextual factors.

All TMs presented in the present study are in line with what Michaels and O’Connor (2015) qualified as ‘a set of recurring moves that seemed to take the conversation from recitation to reasoning’ (p. 335).

However, in relation to Michaels and O’Connor’s (2015) four goals of TMs, only the goals of ‘helping individual students share their own thoughts’, and ‘orient to and listen carefully to one another’ (p. 338) could be seen in the

high or medium reported use of basic TMs such as 'explain/say more', 'revoice', and 'talk-enhancing wait time'.

Given the reported underuse of advanced TMs such as 'press for reasoning', 'challenge', 'agree/disagree', and 'add on', the present study suggests that Michaels and O'Connor's (2015) goals of 'helping deepen their reasoning', and 'engage with others' reasoning' (p. 338) were met unsatisfactorily, and made the WCDs thus less dialogical.

## **Linguistic dimensions: Can language theories help us understand teachable moments of vocabulary learning?**

Swain (1995) emphasises the role of output in L2 learning and distinguishes between the noticing and metalinguistic function of output, in addition to the hypothesis-testing function.

Our data show interesting examples of Swain's three functions of output. For example, in Joe's classroom discussion, a student said 'the car is smoking' to describe a car that had broken down. The PST asked the same student to describe the situation. The student struggled finding the right word (first function: noticing the gap), and another student suggested the word 'motor stop' (second function: hypothesis testing). The PST corrected the student as he thought that 'engine failure' is the correct word in English.

The third function of output, that is, the metalinguistic function of output, could also be seen in the data but often related to moments lost. For example, a student raised her hand and told the PST Ava in Norwegian that she could see a 'lyspære' (in English: lightbulb) on the picture at the screen. Ava asked if she knew what it was in English, but she did not know. The PST asked the rest of the group, and a boy raised his hand and said 'light pear', translating each of the constituents of the Norwegian compound noun 'lyspære' into English. The PST qualified this situation a moment lost because she only corrected 'light pear' into 'light bulb' without talking about amusing interferences (i.e. false friends) between English and Norwegian.

Examining relevant didactic questions for L2 instruction within Swain's conceptual framework, this study suggests that PSTs can easily initiate hypothesis

testing – that is, the learners’ testing out of new words such as ‘motor stop’ in the example above – by increasing the total amount of output (e.g. via WCDs).

However, the metalinguistic function – learners’ explicit use of ‘language to reflect on language’ (Swain, 1995, p. 132) or ‘negotiation about form’ (Swain, 1995, p. 132) – appears to be contingent upon the noticing function being engaged, and to be logically and temporally preceded by it.

Thus, to shift from a focus on meaning and communicative purpose (first and second functions of output) to conscious attention to form (third function of output), the PSTs must first help learners notice a ‘gap’; that is, they must help learners become aware of a concrete instance of the general discrepancy between their interlanguage and L2.

Therefore, a relevant didactic question appears to be how to increase the noticing function, and metalinguistic reflection.

The following section looks into possible answers to this interesting question.

### **Pedagogical and linguistic dimensions: The importance of fostering vocabulary learning-friendly and dialogic classroom discussions**

All of Hardman’s (2020, p. 72) standard TMs, which were rehearsed several times on campus, lend themselves to the facilitation of all three of Swain’s functions.

In this respect, there is no inherent difference between high-order and basic TMs in terms of the potential for vocabulary learning. This could also explain the preference for using basic, low-order TMs among the PSTs in this study.

The rationale behind the PSTs’ use of TMs amounted, in most cases, to stimulation of the maximum quantity of output. This was done by promoting vocabulary learning through a strategy aiming for ‘pushed output’ (Nation & Newton, 2009, p. 115), that is, by making the learners produce language about topics unfamiliar to them, and thus to engage the noticing function regarding vocabulary lacunae.

The purpose was, in other words, to generate output in a certain thematic area in the hope that this would make the learners notice a gap in their lexical knowledge, which, in turn, would lead to metalinguistic reflection and conscious reflection on hypotheses with regard to appropriate word choice.

Such a strategy is discernible in the PST Cass's reflection on a moment used through her employment of the basic TM explain/say more:

*In a moment I ask them 'do you have any animals at home?'  
Then a student says I have 8 goats, and ten... The student meant  
to say hens and became aware that he is missing that word in his  
vocabulary.*

However, as teachers will know from experience, learners will often fail to notice the 'gap' – 'what they do not know, or know only partially' (Swain, 1995, p. 126) – by themselves without external cues. Even when they do become aware of the discrepancy between their interlanguage and the target language, learners do not necessarily engage in metalinguistic reflection.

In such cases, advanced high-order TMs, such as press for reasoning, may be used as a focused strategy to stimulate the engagement of both functions, as suggested by the reflections of the PST Joe on a teachable moment lost:

*Here I could have gone more in depth and asked the student why  
he thought that, or if he knew another word for it, but I just cor-  
rected it to 'engine failure'.*

The PSTs' reflections on teachable moments show that TMs can be used in two different ways: (1) reported use of low-order TMs generally to stimulate the total amount of output (often in regard to a specific lexical field), and (2) more targeted reported use of high-order TMs in order to stimulate the noticing function and metalinguistic reflection on a specific instance of L2-inadequate vocabulary use.

In Joe's case, the lost opportunity for using an advanced high-order TM to stimulate Swain's noticing and metalinguistic function was preceded by a successful use of the low-order TM explain/say more. Indeed, in some instances, the participants used low-order TMs to generate output, and followed up with high-order moves in order to focus on a part of the output. This could be described as a planned and integrated approach.

Figure 10.1 shows the distributions of TMs in relation to Swain's (2005) three functions of output in the classroom discussions at the practicum schools.

**Figure 10.1**

*Talk moves (e.g. Hardman, 2020) and Swain's (2005) output hypothesis*

| Functions of output<br>(Swain, 2005)<br><br><b>Talk moves<br/>(Hardman, 2020)</b> | <b>First function<br/>Noticing the Gap</b> | <b>Second function<br/>Testing</b> | <b>Third function<br/>Metalinguistics</b> |
|-----------------------------------------------------------------------------------|--------------------------------------------|------------------------------------|-------------------------------------------|
| 1. EXPLAIN/SAY MORE                                                               | High occurrence                            | Zero occurrence                    | Zero occurrence                           |
| 2. REVOICE                                                                        | High occurrence                            | Zero occurrence                    | Zero occurrence                           |
| 3. RESTATE/REPEAT                                                                 | Low occurrence                             | Zero occurrence                    | Zero occurrence                           |
| 4. PRESS FOR REASONING                                                            | Zero occurrence                            | Low occurrence                     | Low occurrence                            |
| 5. CHALLENGE                                                                      | Zero occurrence                            | Low occurrence                     | Low occurrence                            |
| 6. AGREE/DISAGREE                                                                 | Zero occurrence                            | Low occurrence                     | Low occurrence                            |
| 7. ADD ON                                                                         | Zero occurrence                            | Low occurrence                     | Low occurrence                            |
| 8. Talk-enhancing WAIT TIME                                                       | High occurrence                            | High occurrence                    | High occurrence                           |

■ High occurrence   
 ■ Low occurrence   
  Zero occurrence

As illustrated in Figure 10.1, three tendencies could be seen. First, a high occurrence of 'talk enhancing wait time' related to all three functions of output. Second, a high occurrence of low-order TMs, such as 'explain/say more' and 'revoice', was used to make the students notice that they did not know a word (first function of output). Third, few high-order TMs, such as 'press for reasoning', 'challenge', 'agree/disagree', and 'add on', were used to make students test out new words (second function), and talk about language to describe linguistic phenomena (third function).

The present study suggests two different recommendations. First, rehearsing classroom discussions in teacher education should focus more clearly on explicit hypothesis testing and metalinguistic talk to facilitate vocabulary learning. Second, if we believe Swain's (1995, p. 132) claim that all output is implicit hypothesis testing (i.e. all output is a form of testing out words, or an attempt to reproduce a structure in L2), it is possible to connect the various functions of Swain to the high-order/low-order TM distinction presented in this study.

To increase the total amount of hypotheses in L2, it is enough to increase the total amount of output (i.e. WCDs). The more cumulative the output is, the

greater the chance of learning, and low-order TMs can be used to stimulate output. Thus, the low occurrence of high-order TMs in the hypothesis-testing function presented in Figure 10.1 can qualify as a meaningful choice made by the PSTs. However, the other two functions (i.e. the noticing the gap and metalinguistic functions) do not necessarily follow from increased output and may require the use of high-order TMs. Consequently, teacher education needs to focus more on high-order TMs to support the noticing the gap and the metalinguistic functions of output.

## Limitations and strengths

Concerning research question one, one of the authors served as a second rater and rescored the different TM types mentioned in the video-stimulated reflection dialogues. The inter-rater reliability score was a 1.0 Cohen's kappa for 'explain/say more', 1.0 for 'revoice', .739 for 'restate/repeat', 1.0 for 'press for reasoning', 1.0 for 'challenge', 1.0 for 'agree/disagree', 1.0 for 'add on', and .739 Cohen's kappa for 'talk-enhancing wait time' (0.41–0.60 *moderate*, 0.61–0.80 *substantial*, 0.81–0.99 *near perfect*, and 1.0 *perfect* agreement between the two raters). Moreover, an assistant researcher was asked to peer-check the validity of the codes related to research question two.

To confirm the findings, the term papers and video-stimulated reflection dialogues were triangulated with the video recordings showing the enactment at the practicum schools.

Only six PSTs underwent scrutiny. Thus, the study does not provide an exhaustive picture of Norwegian teacher education.

## Conclusion

The present study makes the following points: Using WCDs during rehearsals on campus and in practicum schools, with a particular focus on TMs, can

be an efficient method for facilitating vocabulary learning because it can enable PSTs to

- develop the ability to facilitate the noticing the gap, hypothesis testing, and metalinguistic functions of output,
- reflect on a good balance between low order and high order TMs in relation to Swain's (1995) three functions of output and thus develop critical thinking.

The study aimed to integrate more closely two strands of theories in EFL/ESL, namely principles of dialogic teaching and TMs on the one hand (pedagogical approach), and vocabulary learning-friendly output (linguistic approach) on the other hand.

The present study contributes to a sharper research focus on possible links between dialogic classroom discussions and vocabulary learning.

Eventually, the study emphasises the importance of video-recorded rehearsing and analysing WCDs as a method to strengthen teaching quality in terms of dialogic teaching and vocabulary learning in EFL/ESL teacher education.

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## Developing preservice teachers' noticing and pedagogical reasoning in video-based reflection conversations

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**Abstract:** Learning to enact ambitious teaching is challenging because of the improvisational skills needed, and the reliance on professional judgment that governs the decision-making in service of many and often conflicting purposes. Research has therefore drawn attention towards PSTs' ability to notice and reason about critical moments in teaching and learning because it captures the teachers' decision-making process when they face novel problems, or pedagogical dilemmas which arise in the moment during teaching. This ethnomethodological case study examines a reflection conversation between three preservice teachers (PSTs) and their practicum teacher and campus teacher educators about three video-recorded 'golden moments' chosen by the PSTs from their enactment of a pre-designed instructional activity. We ask the following research question: How do preservice teachers develop their ability to notice and reason about ambitious teaching practices through a video-based reflection conversation? The analysis shows that the PSTs' initial noticing and pedagogical reasoning do not fully grasp the complexity and possible different instructional purposes in the teaching situations. Through the reflection conversation three pedagogical dilemmas are elevated, and the PSTs are given the opportunity to engage in a discussion about the pedagogical dilemmas and how different pedagogical actions might support different purposes. Their pedagogical reasoning becomes more elaborate, and we find signs that the PSTs increasingly discuss and develop their pedagogical judgment in the direction of ambitious teaching practices.

*Keywords:* teacher noticing, pedagogical reasoning, video-based reflection conversations, practice-based teacher education

**Samandrag:** Å læra å undervisa ambisiøst er ei utfordring på grunn av dei improvisatoriske evnene som trengst, og fordi slik undervisning er avhengig av ei profesjonell dømmekraft som styrer avgjerdsprosessen der læraren må balansera mange ulike føremål. Forsking har difor retta merksemd mot lærarstudentars evne til å leggja merke til og resonnera kring avgjerande augneblinkar i undervisning og læring fordi det fangar den avgjerdsprosessen som læraren må gjera når dei møter nye utfordringar, eller dilemma som oppstår der og då. Denne etnometodologiske kassustudien undersøker ein refleksjonssamtale mellom tre grunnskulelærarstudentar, og deira praksis- og campuslærarar rundt tre videofilma «gylne augneblink» som studentane har valt ut frå praksis, der dei gjennomførte ein førehandsdesigna undervisningsaktivitet. Me stiller følgjande forskingsspørsmål: Korleis utviklar lærarstudentar evna til å leggja merke til og resonnera kring ambisiøse undervisningspraksisar gjennom ein videobasert refleksjonssamtale? Analysen viser at det studentane frå først av har lagt merke til og den pedagogiske resonneringa deira ikkje får fram kompleksiteten i undervisningssituasjonane og avgjerdsprosessane læraren står i. Gjennom refleksjonssamtalen blir tre pedagogiske dilemma løfta fram, og lærarstudentane får sjansen til å engasjera seg i ein diskusjon om dei tre pedagogiske dilemmaa og korleis ulike pedagogiske handlingar kan støtta ulike føremål. Dei pedagogiske resonnementa blir meir utbygde, og me finn teikn til at studentane i aukande grad diskuterer og utviklar den pedagogiske dømmekrafta si i retning av ambisiøs undervisning.

*Nøkkelord:* fokusert observasjon, pedagogiske resonnement, videobaserte refleksjonssamtalar, øvingsbasert lærarutdanning

This article presents an analysis of a reflection conversation between preservice teachers (PSTs), practicum teachers, and campus teacher educators in the subject mathematics. The focus is on the PSTs' ability to *notice* (van Es et al., 2017) and *reason* about (Horn, 2020) ambitious practices in mathematics teaching (Lampert et al., 2010) in the context of a practice-based teacher education project called ReTPro (Rehearsing Teaching Professionally). ReTPro is a design-based research project funded by the Norwegian Research Council that follows a strand of research taking a situative view of teacher learning and sees enacting and analysing teaching as core elements for learning to teach (e.g. Grossman et al., 2009; McDonald et al., 2013).

We ask the following research question: How do preservice teachers develop their ability to notice and reason about ambitious teaching practices through a video-based reflection conversation?

ReTPro aims to improve teacher education by drawing on a four-phase rehearsing cycle at both university and practicum schools, focusing on: (1) studying and modelling, (2) repetitive try-outs and simulations, (3) enactments at the practicum schools, and (4) analysis and reflections on the enactments (McDonald et al., 2013). The overall aim is to develop an improvisational teaching repertoire, including dialogic teaching (Alexander, 2020).

## **Ambitious teaching practices**

The basic pedagogical foundation in dialogic teaching is known under different labels in research on mathematics education, such as ambitious mathematics instruction (Lampert et al., 2013; van Es et al., 2017) and responsive mathematics teaching (Horn, 2020). This research places student work at the centre of activity to support high-level participation, value the knowledge and resources all students bring to the classroom, and aims to maintain academic rigour.

Such ambitious teaching is challenging work for teachers because it requires a nuanced understanding of how to facilitate students' thinking and learning through dialogue, and why this is important. Jacobs and Spangler

(2017, p. 768) highlight two specific teaching practices as core to the interactive part of such ambitious instruction in which students' thinking is central: teacher noticing and leading discussions. They argue that research on both teacher noticing and leading discussions captures the challenging in-the-moment work of teachers.

Teacher noticing grasps the processes of attending to noteworthy features of instruction, such as what students are thinking and doing, and deciding how to respond effectively (van Es et al., 2017). Leading discussions captures the in-the-moment work of supporting students while they explain their thinking and make sense of and critique the reasoning of others (Jacobs & Spangler, 2017, p. 768).

Previous studies report that PSTs' ability to notice what is important in instruction is underdeveloped (Jacobs et al., 2010). PSTs are more focused on classroom management and teachers' actions than students' thinking (Stockero et al., 2017). Consequently, when a PST encounters, for example, an unexpected or incomplete mathematical contribution from a student, she will unlikely attend to and interpret it as a 'golden opportunity... they can use for moving students toward more sophisticated and mathematically grounded understanding' (Walshaw & Anthony, 2008, p. 539). More predictably, she will be limited by her previous experiences and not interpret the moment as noteworthy (van Es et al., 2017).

Consequently, van Es et al. (2017) call for research that not only explores the nature and substance of PSTs' noticing, but also the learning environment designed to create opportunities for PSTs to develop new ways of attending to and making sense of ambitious instruction.

## Preparing for ambitious teaching

In teacher education, there is an ever-ongoing discussion about how to prepare PSTs for ambitious and dialogic teaching, and what can or cannot be taught and rehearsed. Scholars (e.g. Grossman et al., 2009) suggest that teacher education works on what they call core practices of teaching, such as leading discussions (Lampert et al., 2013), and teacher noticing (Jacobs & Spangler,

2017). Grossman et al. (2009) argue that when PSTs engage in these practices, they develop professional knowledge and skills, as well as an emerging professional identity.

Core practices may therefore offer teacher educators powerful tools for preparing PSTs for the interactive and challenging work of ambitious teaching, because they highlight specific, routine aspects of teaching that demand professional judgment, and the creation of meaningful intellectual and social communities for PSTs, teacher educators, and practicum teachers (McDonald et al., 2013, p. 378).

Grosser-Clarkson and Neel (2020) point out that designing and implementing appropriate learning experiences for PSTs is complex and nuanced work. One approach a teacher educator can use is a set of carefully pre-designed instructional activities (McDonald et al., 2013). These often come with a protocol that guides how the teacher and students can interact, how materials can be used, and provide examples of questions and talk moves the PSTs can use in their attempts to enact the relational and improvisational work that ambitious teaching requires. This contrasts with a more open-designed approach, where the PSTs design their own activities to enact the targeted core practices (Grosser-Clarkson & Neel, 2020).

Kavanagh et al. (2020) found that constraining PSTs' choices in activities and content can help focus attention on targeted teaching practices. There have, however, been concerns that such approaches can become too procedural and not taught in connection to instructional purposes and principles.

Kennedy (2016), for example, argues that when teaching is defined only by its visible teaching aspects without attending to the underlying teaching decisions and professional judgments, PSTs are likely to use the offered techniques at 'the wrong times, in the wrong places, or for the wrong reason' (p. 9). Horn (2020, p. 326) reminds us that successful teaching cannot be evaluated by faithful execution of some idealised pedagogical actions from a template. She stresses that even though a teacher strives towards ambitious goals, multifaceted and complex classrooms do not support ideal types of pedagogical action, because the practice needs to be adapted to make sense for specific students in a specific context.

Consequently, teacher educators should keep in mind that professional judgment and pedagogical reasoning need to be a central part of practice-based approaches.

Videos have been shown to be a powerful tool to enhance teacher noticing (van Es et al., 2017), and to discuss and develop pedagogical reasoning and judgement (Horn, 2020). Jensen et al. (2024) found that video-based discussions of PSTs' own teaching can enhance their attention towards pedagogical dilemmas they encounter during in-the-moment decision-making situations.

In this study, we therefore address Kennedy and Horn's concerns by examining how pedagogical reasoning can become explicit and visible in video-based reflection conversations in which the PSTs are provided opportunities to engage collectively in noticing and reasoning, using their own videos as representations of practice (Grossman et al., 2009). The practicum and campus teachers engage in the video-based reflection conversation with the PSTs to contribute to the development of the PSTs' abilities to notice, discuss, analyse, and generalise from their teaching experiences in leading discussions.

## **Pedagogical dilemmas**

Lampert et al. (2010) point out that ambitious teaching is an improvisational practice, contingent on the ideas and contributions in the situative practice in the classroom. One way of looking at this complexity is to see teaching as a problem-solving activity, where the teacher constantly faces novel problems, or dilemmas, which arise in the moment during teaching (Lampert, 2001).

Lampert (1985) coined these problems *pedagogical dilemmas*, which have multiple viable and often contradictory solutions that sometimes require reasoned arguments with oneself. In teaching, these dilemmas need to be acted upon there and then. Often, there are no clear right or wrong responses, just different paths that will determine the direction of the classroom activity or discussion.

Teaching is therefore seen as the act of constantly choosing between alternative courses of action that will create new dilemmas. This cyclical routine activity of attending to, interpreting, and responding to situations in the classroom is foundational for ambitious teachers' in-the-moment decision-making (van Es et al., 2017).

Kavanagh, Metz et al. (2020) argue that to navigate in this terrain, teachers need to rely on their pedagogical judgement to make decisions that are productive to students' learning. This act of drawing on one's professional judgement and knowledge to determine an appropriate response to a pedagogical dilemma in pursuit of particular pedagogical goals or purposes is, by Gotwalt (2023, p. 2), termed *pedagogical reasoning*.

## Pedagogical reasoning

Horn (2020) argues that pedagogical judgement is critical for teacher education and offers a tripartite conception that comprises *pedagogical action* supported by *pedagogical reasoning* and rooted in *pedagogical responsibilities*. Pedagogical actions refer to the choices the teacher makes, intended or not. Horn makes the point that the same pedagogical action might have different interpretations and rationales. So, in the absence of one solution to a dilemma, the teacher's pedagogical judgement is an iterative process between action and reasoning, which are both connected to, and contextualised in, pedagogical responsibilities.

Consequently, teachers engage with their sense of institutional obligations, and pedagogical and ethical commitments, in their decision-making (Horn, 2020, p. 325). For example, when an ambitious teacher encounters the same unexpected or incomplete mathematical contribution from a student, she will most likely notice the moment as a golden opportunity. Still, she might decide not to act on it there and then, because her decision is rooted in another pedagogical obligation, such as time constraints.

For a teacher educator, it is challenging to explain and teach such pedagogical judgement to PSTs. Kavanagh et al. (2020) have studied how teacher educators in practice-based teacher education programmes do this, and find that six practices stand out as suitable for supporting novices to engage in pedagogical reasoning: creating a shared instructional context, posing pedagogical dilemmas, highlighting instructional purposes, engaging relevant knowledges, considering multiple instructional decisions, and making instructional decision-making explicit.

## Methods

This is a qualitative, ethnomethodological study (Francis & Hester, 2004). The authors of this article are both teacher educators and researchers from the teacher education programme where ReTPro is developed and conducted. As researchers, we are thus influenced by our own teaching and research experiences, as well as theoretical understandings. Acknowledging that all knowledge is partial, situated, and contextual (Braun & Clarke, 2013, 2022; Francis & Hester, 2004), we will explain in detail our procedures for data collection, selection, and analysis.

### Data collection

In the ReTPro project, a class of 14 PSTs in the primary school teacher education were participants from the start of their education. In their second semester, they started a two-semester course in mathematics, which included four rehearsing cycles, two in each semester. The PSTs were divided into five practicum groups. Three groups completed all tasks, but to keep the data manageable with the degree of detailed analysis we wished to do, we picked out one reflection conversation from the fourth, and final, rehearsing cycle. Participants in the case conversation are campus teacher educators Carla and Celine, practicum teacher Petra, and the PSTs Susan, Simon, and Sally. They had had their practicum in a first-grade class.

The fourth rehearsing cycle was completed in late autumn 2022 and consisted of a pre-designed 'three-act-task activity' (Lomax et al., 2017) – a mathematical modelling task in the following called 3ACT. This activity is designed to create opportunities for PSTs to practise how to facilitate students' thinking and understanding through dialogue. The activity is structured around 3 'acts'. In act 1, the teacher shows an intriguing short video of an interesting real-world situation. Then, the teacher invites the students to wonder and pose questions. In the protocol, the PSTs are encouraged to invite all students to report on what they notice and wonder about to pique their interest and help them make sense of the situation. Furthermore, all questions

and ideas are suggested recorded on the board to make them accessible to young learners and to treat all students as sense-makers, which are central principles in ambitious teaching (Lampert et al., 2013). Towards the end of act 1, the PST is encouraged to guide the students towards questions that are mathematical and agree on one question to be explored further. In act 2, the students gather information and develop mathematical models to solve the chosen problem. In act 3, the PST leads a classroom discussion using the students' ideas, connecting them to mathematical ideas, and evaluating the mathematical models against the real-life situation in act 1.

In our case, the teacher educator first modelled a 3ACT in phase 1. The teacher educator paused during the modelling to connect suggested pedagogical actions in the protocol to ambitious instructional purposes, for example, the reason why it is important to record all student questions on the board. Then, each PST prepared for and rehearsed a 3ACT on campus, with the other PSTs acting as students. The group of PSTs then prepared and enacted a 3ACT in their practicum classrooms, with one PST leading the activity, the others assisting, observing, and video filming.

The PSTs were then asked to study their video and pick video-clips of what we called 'golden moments used or lost' to embrace successes and failures in their attempts to be responsive to students' contributions in the enactment, and to provide opportunities to engage in pedagogical reasoning in retrospect. Golden moments were described as classroom situations with a potential to develop students' mathematical understanding, in the literature review referred to as 'golden opportunities' (Walshaw & Anthony, 2008). These labels are partly overlapping with what is also known as 'teachable moments' or 'critical moments' (see in this anthology Cabot & Brodal, 2025, as well as Kulild et al., 2025). The chosen video-clips were the starting point for the video-based reflection conversation, which lasted 1 hour and 8 minutes and was carried out and video recorded on Zoom.

The PSTs had all signed informed consent forms and had also collected informed consent forms from the parents of the students, agreeing to the video-recording of the teaching sessions.

## Data analysis

We started by familiarising ourselves with the material by viewing the Zoom recording of the conversation individually and together. We had the recording initially transcribed by a professional bureau, using standard Norwegian spelling, and then read carefully through it while watching the recording again, correcting mistakes in the transcription, adding details, and checking for correct understanding. We roughly coded the entire conversation using codes for the topics being discussed, taking notes describing what was going on in the conversation.

We then individually read through our initial coding and notes, commenting and questioning, before discussing the preliminary coding and understanding. At this stage, we had an inductive approach, where coding was driven by the data.

We then started a more deductive process, using categories from theory and research to code the data. We divided the conversation into episodes based on whether or not they included *pedagogical reasoning* (Kavanagh et al., 2020). We characterised utterances using the concepts from van Es et al. (2017) of *attending to*, *elaborating on*, and *reasoning about* instruction, and we used Horn's (2020) descriptions of pedagogical *action*, *reasoning*, and *responsibility*. In this process, we tried to identify the episodes where pedagogical dilemmas (Lampert, 1985) came to the surface and were further discussed.

The analysis process was not linear. We went back and forth between the inductive and the deductive processes. Throughout the entire analysis process, we maintained a reflexive attitude, questioning our own interpretations and discussing points that might be ambiguous. In writing the analysis, we have striven for transparency, letting the material speak through citations from the transcription, separated from our interpretations and comments by physical frames, so that readers may make their own interpretations.

## Analysis and results

### PSTs' initial noticing and reasoning

The starting point of the analysis was the golden moments chosen by the PSTs, and the reasoning they initially used to explain why they had chosen these moments. We saw them as representations of what features of instruction the PSTs noticed on their own as a group, before the reflection conversation started.

The PSTs had chosen three clips from their practicum video, showing what they characterised as two golden moments used, and one golden moment lost. They had chosen all three moments from act 1, a situation where Simon had shown the first-grade class a MineCraft video showing three-dimensional blocks of different colours being built on top of each other to form a figure.

Simon followed the 3ACT protocol and asked questions – what did they notice, and what did they wonder about? The box below contains transcriptions of the golden moment the PSTs chose, translated into English:

#### Golden moment 1 – used:

T: Do you have any other questions to the movie?

S: How many blocks were there?

T: How many blocks were there? A very good question.

#### Golden moment 2 – lost:

S: What was it, really?

T: It was a figure

S: A figure?

T: It looks like a figure

S: Figure?

T: A square is a figure, a triangle is a figure – lots of things can be figures

### Golden moment 3 – used

S: How many pink, purple, and yellow were there?

T: I don't know if you can see it now, but we can... Do you see? These are the different coloured boxes. There is one purple, one yellow, then one red. Those were the blocks. These squares down here.

S: I'm very good at building things.

T: That was a good question, really. How many are there of the different colours? How many are purple? How many are yellow? How many are red? That's a good question.

All three moments showed a student asking a question connected to the video they had seen. The golden moments described as used are from when the student posed a 'good' or 'relevant' question of the kind the PSTs were looking for. The moment described as lost is from when a student asked a different kind of question – 'what was it, really?'

After presenting the first golden moment, Simon was asked to say why the first clip represents a golden moment used, and he says:

*Simon: Yes, I think this was an example of the student asking a question he was wondering about and posed a constructive question. It was the question we were looking for. It was clear that he had understood what he was supposed to do.*

Simon explained that the question from the student was one of the questions they had anticipated and planned for. He added that it is very difficult for 1st grade students to pose questions, and the student here shows that he has understood the task.

Simon said that he had tried the 3ACT in another 1st grade class, in which they did not know how to pose questions. Therefore, the practicum group had revised their original plan. They had a lesson the day before to work on posing questions.

Simon's reasoning shows that his instructional purpose with the activity was to get the students to pose the mathematical questions that they could work on together in act 2. His professional judgement is also guided by his responsibility and concern for the students, worrying that they are too young

and immature, and that the task is too difficult for them. The same concern is visible several times in the conversation:

*Simon: The students were supposed to choose the question to elaborate on. But we skipped that, because we don't think the students would have the ability to make such a logical choice. We can't write it up for them either because they don't know how to read.*

Simon's initial reasoning about this as a golden moment is that the student who asked the question had understood 'what he was supposed to do'. By this claim, he reveals that his purpose with the activity in act 1 is to get the students to pose the 'right' kind of question – a mathematical one, which can be explored further.

This is not, however, in accordance with the description of act 1, which is designed to have the students wonder and ask questions.

## **The process of posing pedagogical dilemmas**

Our analysis of the conversation that followed resulted in three pedagogical dilemmas that were further discussed, and where the initial description and understanding of the dilemma was revised in the course of the conversation. They all have to do with what can be considered a core practice in ambitious teaching: responding appropriately to student initiatives.

- *Save or answer?* Should we save all questions for the 'bank of questions', or should we answer some of the questions there and then?
- *Evaluate?* Should we evaluate the questions we see most suitable to be discussed in act 2 as 'good questions', or not?
- *Write up?* Should we record the student questions on the board, or not?

In the following, we will present how the dilemmas surfaced during the conversation, and show how the understanding of them was discussed and revised.

### **Save or answer?**

In the conversation that followed Simon's initial reasoning for what he considered a golden moment used, campus teacher Celine challenged Simon to reflect on how he responded to the student contribution, and posed the first dilemma: *Save or answer?*:

*Celine: Can I ask you something? Simon, you took some questions and answered them there and then. Others you kept for your bank of questions. You didn't write them up; you just repeated them and kept them. But how did you make that judgement in that moment, which questions to answer and which to...*

*Simon: The ones I answered were really the ones more related to ... Like, why did you do that, and why did you do this. And then they asked the question, yes, what is it supposed to be? And I was like, well, it's just supposed to be a figure. One of the questions were 'why did it turn out like that?' Those weren't questions that we could find answers to or explore further. They were questions to... what should I say... meta-questions.*

*Sally: Yes, right, just that one – 'what was it?' – that's one they could have explored more themselves, because I think, they are first graders. If it was a crocodile, they would have figured out that it was a crocodile. That's what I think, anyway.*

*Simon: I guess I could have. I see in hindsight that it was a mistake to answer some questions, like, generally. But that's that.*

Simon initially follows the same line of reasoning that he started out with. He claims that some of the student questions are not the kind they could explore further. His peer PST Sally then disagrees with him, saying that the students might have been able to explore some of the questions further. By this, she suggests a different possible pedagogical action, reflecting a more ambitious vision for the first-grade students.

It is not clear if it is the prompt from Celine or the input from Sally that gets Simon to revise his first position, but in this excerpt, we see that he

somewhat reluctantly admits that it might have been a mistake to treat the different student contributions differently.

As Sally goes on to present the second film clip, the moment characterised as a golden moment lost, she refers back to this part of the conversation. They are still discussing the same dilemma, *Save or answer?*, and Sally gets support from Susan:

*Sally: What we talked about before – when a student asked ‘What was it?’ Meaning, what did we see in the video? And then Simon answered it. That was kind of a lost moment. They could have talked about it in groups, for instance, or like this: What did we see? What kind of figures were there? We could have included it in the bank of questions.*

*Susan: Yes – it’s the fact that it was answered. That’s okay. He says that it was a figure. But then he could have followed up and asked ‘what is a figure?’ What does a figure look like? Can a figure be anything, or is it something specific?’*

*Simon: If we had done that, it would have been a distraction from what they were supposed to do. Which was answering the question.*

Both Sally and Susan use their knowledge about the context when they suggest various responses to the dilemma of whether or not to include all questions in the bank. They illustrate how they could have elicited students’ thinking by including all the questions, but Simon is still not quite convinced. He defends his choice not to include all the questions in the question bank, even if he already has said that it was a mistake to answer some questions there and then.

The reflection conversation carries on, and Simon is challenged once again, this time by campus teacher Carla, who tries to lift his reasoning to a more general level. She asks him to reflect on why he acts as he does in the situation where he answers some of the questions, thereby implicitly considering what reasoning lies behind his decisions.

*Carla: Thinking about which questions and answers... should one answer them, or what should one do? How should one follow up?*

*To what extent should one follow up?... should one follow up on everything or which choices do you do there and then?*

*Simon: I choose to answer some, and then I go on. I say that that was a good question if I remember it. But I think maybe it would have been better to let everything pass as interesting questions to ask. That would have gotten us more into asking questions – if we didn't answer them. That was a great question, and that is a question. Answering some questions at the same time becomes a distraction from what we want them to do, which is asking questions. If we give the impression that some questions are better than others, it becomes more unsafe for the students to ask questions. If all questions are good questions, then I think we would get to a point where everyone could contribute.*

We see that Simon's initial understanding of the instructional purpose of Act 1 is to get the mathematical questions asked, so that they can move on to Act 2 – deliberating on a chosen mathematical question. During the conversation, however, he is repeatedly challenged on this perception, and in this excerpt, he *elaborates* on his observations and revises his understanding.

His initial perception of 'what the students are supposed to do' is revised from 'answering the question' to 'ask questions'. In line with this, what he describes as a 'distraction' has changed from the student asking too many questions, to himself answering some of them. His reasoning has changed from showing responsibility for the young and immature students with a task too difficult for them, to showing responsibility for inclusion, and appreciation of student contributions. This is more in line with the ideal from the 3ACT.

### **Evaluate?**

The next dilemma, *Evaluate?*, is posed by the PST Sally. When students ask the questions that the PSTs were expecting, and hoping for, Simon, who is leading the conversation, immediately evaluates the questions as 'good'. In the reflection conversation, Sally reflects on this with reference to the instructional purpose of student participation:

*Sally: Simon said that he [the student] had a good question. We wanted to figure that one out. [Meaning: we wanted this to be the mathematical question to be explored further] But that is what we had decided to do. Because he asked the question we had planned to pick. But what he [Simon] said... What if the student sitting next to him also thought he had a really good question, and we didn't pick it. Then he might think 'Why didn't they pick my question?'*

Here we see that Sally *integrates* the observations into the reasoning about the instruction.

Later in the conversation, campus teacher Celine returns to this point, and challenges Simon to say more about this:

*Celine: But what is a good question?*

*Simon: A good question for us as teachers is a question that the students can find an answer to. Something to explore and figure out and that is relevant to the video they have seen. The kind of questions we got from this guy. But I think that it would have been better for the students if we didn't give the impression that we were looking for specific questions. Once we said 'very good' to this question and answered that question, they were confused about what we were looking for. They always seek to give us what we are looking for. It would have been better to get hold of all questions, no matter what they were about. To get them more active and safe. Then we could have chosen the question in the end, like they did, and the round of questions wouldn't have been coloured by what we were looking for.*

Simon's answer at this point is quite elaborate and well founded, as he integrates the observations in his reasoning about instruction, again showing responsibility for, and appreciation of, student contributions. His revised evaluation is in line with the design of the 3ACT, but in contradiction to his actions at the time.

Practicum teacher Petra and campus teacher Carla follow up:

*Petra: And maybe when they are so young, we didn't need to say that it was a good question. We could have said that; yes, now you asked a question. Does anyone else have a question? Because I think some of them got 'That was a good question', and then some of them withdrew a bit. They became insecure. Was my question not good enough? And that might lead to them not participating next time. So maybe we could drop the 'That was a good question', and rather say 'Yes, now you have asked a question'.*

*Carla: Yes, I also thought about that. Because what is a good question? What is not a good question? And how clear was it for the students what you considered a good question?*

*Simon: It's almost like we shouldn't have had any thoughts about looking for a good question.*

Practicum teacher Petra here explains Simon's actions in the moment, giving him a basis for understanding his actions in the classroom. Carla draws attention to the fact that the students might not have the same understanding of what a good question was. Subsequently, Simon revises his initial understanding of the situation.

### **Write up?**

A third dilemma in the reflection conversation concerns whether or not to write the student questions on the board. Simon chose not to write the questions on the board, as the 3ACT protocol suggested to do.

Susan comments on this and suggests that a different decision could have changed the conversation for the better:

*Simon: I felt that the whole thing about writing on the board became a negative thing for the students. They didn't know how to read, and it took too long.*

*Susan: I think maybe it would have been a good idea to write some key words, even if the students can't read them. It's like we talked*

*about, if it's good or bad, it feels good to get your contribution on the board. No matter how relevant your question is, really. It could have been a positive thing to get it on the board, maybe more students would have contributed then.*

We see that once again Simon's reasoning shows responsibility for the young and immature students. Susan's reasoning, on the other hand, shows responsibility for inclusion, and appreciation of student contributions. Writing everyone's contributions on the board would have been a way of showing such appreciation. Susan disagrees with Simon's initial reasoning about his actions. Simon takes her point, but is not immediately willing to surrender:

*Simon: Possibly. It's hard to tell how they would have reacted, really, without being there and doing it.*

*Petra: Because you have experienced that in the other room, haven't you, that when you wrote things on the board, the students started doing other things. Because you need to have their look on you all the time. But I think maybe some key words ... Just writing down very briefly, to get them back on the hook, and then you say 'Now I've written down what you said'.*

*Simon: For instance, the question 'How many blocks were there all together?' I could have written 'How many blocks'?*

Here, practicum teacher Petra both supports Simon by expressing understanding for his choice in the situation, but she also supports Susan's input. Eventually, Simon concurs and exemplifies how he might have done what Susan and Petra both have suggested.

## Discussion

We asked the research question: How do preservice teachers develop their ability to notice and reason about ambitious teaching practices through a video-based reflection conversation?

Development is a feature that is hard to observe, but if the PSTs change the way they describe or evaluate their teaching practice, it might be a sign of development in the practice they are participating in, which – according to Horn (2020, p. 323) – includes both instructional and reasoning practices. We looked for such changes in descriptions or evaluations.

If we look at what the PSTs in our case initially noticed, we see that they are not really focusing on features of ambitious or dialogic pedagogy in their observations or reasoning, nor are the chosen moments posed as pedagogical dilemmas. This corresponds with what Jacobs and Spangler (2017) say about the difficulties PSTs have with noticing what is important in instruction. It is not surprising that noticing ambitious pedagogy is problematic. Van Es et al. (2017) argue that it is the PSTs' prior experiences in the classroom that inform their observation and reasoning about instruction, and the chosen golden moments could very well be examples of this.

The instant evaluation Simon makes when he gets a student response he is expecting and waiting for, or not, constitutes an example of an IRE structure (teacher initiation, student response, teacher evaluation) (Mehan, 1979) that is very common in classrooms, but is not encouraged within dialogic or ambitious mathematics teaching.

Golden moments 1 and 3 are presented as golden moments used and are not considered as pedagogical dilemmas by the PSTs. Simon's initial reasoning about them shows that the instructional purpose that guides his actions is connected to a traditional student-teacher interaction, where he evaluates the correctness of the answer. He claims that the purpose is to get the students to ask the kind of mathematical question they can use in act 2, while the 3ACT purpose of act 1 is to get the students engaged, and asking questions. Through the conversation, however, the conflict between the purpose of prompting engaging questions versus the evaluative purpose becomes visible through the teacher educators' questions and can therefore be identified as dilemmas.

Golden moment 2 is presented by Sally as a golden moment lost. It is recognised by the PSTs as a pedagogical dilemma: *Save or answer?* Once the

conversation is concerned with this pedagogical dilemma, and also with the other two dilemmas identified in the analysis, the pedagogical reasoning surfaces and can be made explicit and discussed with the support of the practicum or campus teachers.

Horn (2020, p. 327) found that teachers rarely attend to pedagogical reasoning when discussing their own teaching practices. However, she found that when they did engage in pedagogical reasoning, they invoked pedagogical responsibilities as well, and linked it to their pedagogical actions (p. 328).

The reflection conversations that are part of the ReTPro rehearsing cycles are designed to get the PSTs to engage in discussions around their own teaching practice, making pedagogical reasoning explicit. We see that the teacher educators in our case conversation utilise several of the pedagogical practices suggested by Kavanagh et al. (2020): they prompt the PSTs to make them see the pedagogical dilemmas in the chosen golden moments, consider different alternative actions that could have been taken in the moment, and how that might have led the lesson in a different direction – and hence make their pedagogical reasoning explicit. The practicum teachers add valuable context information and understanding, supporting the PSTs in understanding their own actions in the classroom.

Kavanagh, Conrad, and Dagogo-Jack (2020) discuss the possible limitations of a practice-based teacher education and the risk that using Grossman et al.'s (2009) framework of offering representations, decompositions, and approximations of practice can become too instrumental and too focused on the visible part of teaching, that is, the what and how. The invisible part of why risks being overlooked. They see teaching 'as an interplay between knowing and doing, in which teachers are decision-makers who consistently face pedagogical dilemmas and employ professional judgment' (p. 3). The crucial concept is pedagogical reasoning.

The PSTs in our case study have gone through four learning cycles which include representations, decompositions, and approximations of ambitious practices in their mathematics course. Still, we see that their initial reasoning in this case is coloured by reasoning guided by traditional purposes of instruction when they are trying to adapt the 3ACT to a multifaceted and complex classroom of 1st grade students. This illustrates the difficulties PSTs have in developing new ways to attend to, and reason about, instruction (van Es et al., 2017).

Taking a situative perspective, learning to enact 3ACT in classrooms is not about copying the pedagogical actions suggested in the protocol. It is about making it meaningful with the particular students in the particular situation, and articulating the reasons for the choices made (Horn, 2020).

We found that, through engaging in the reflection conversation, the PSTs gradually saw that different paths could have been taken, and they became aware of the pedagogical dilemmas. We see how especially Simon, who is the PST acting as the teacher in the videoclips, changes the way he reasons about the dilemmas, using more elaborate observations and integrating the observations in his reasoning (van Es et al., 2017). We see that his descriptions of the situations go from the superficial to the more nuanced, increasing the level of detail and going deeper into the reasoning about instruction. His revised view shows more responsibility to the students' participation and exploration, which is crucial to dialogic teaching (Alexander, 2020).

Van Es et al. (2017) call for research that investigates how teacher education can create opportunities for PSTs to learn to notice and reason about ambitious instruction. We propose that reflection conversations such as this one could be an answer to that call. The initial phases of representation, decomposition, and approximation of practice are important, but the fourth phase of reflection – not only among the PSTs themselves, but together with both practicum and campus teachers – is what leads to what we interpret as the development of teacher noticing and pedagogical reasoning.

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## **'This activity made me see things from different perspectives...'**

### *Critical intercultural citizenship through rehearsing teacher-in-role*

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**Abstract:** This study analyses six PSTs' reflections on how teacher-in-role can foster their own intercultural citizenship. It is based on video observations, obligatory assignments, video-stimulated recall dialogues and term papers written throughout their first semester. The study integrates diverse definitions of citizenship (Bellamy, 2008) and intercultural learning (Deardorff, 2006) as well as Byram's (2008) 'savoir' concepts into a new model. The video-recorded rehearsing suggests two findings. First, a clear focus on pre-designed (well-planned authentic dilemmas) and open-designed dimensions (improvisations) and the formation of a multitude of teachable moments (used or lost) may develop the PSTs' intercultural citizenship. Second, the PSTs thought they developed their own sense of intercultural citizenship because they questioned attitudes and beliefs, noticed knowledge and comprehension gaps, decentred and adapted communication and behaviour. This study emphasises the importance of video-stimulated reflection after rehearsing as a method to strengthen critical intercultural citizenship in EFL/ESL teacher education.

**Keywords:** teacher-in-role (TiR), critical intercultural citizenship, intercultural learning, culture, citizenship learning

**Sammendrag:** Studien analyserer seks lærerstudenters refleksjoner rundt hvordan lærer-i-rolle kan utvikle deres eget interkulturelle medborgerskap. Datagrunnlaget består av videoobservasjoner, obligatoriske innleveringer, videostimulerte *recall*-samtaler og semesteroppgaver som studentene skrev i løpet av sitt første semester. Studien integrerer ulike definisjoner av medborgerskap (Bellamy, 2008) og interkulturell læring (Deardorff, 2006), samt Byrams (2008) *savoir*-begreper, inn i en ny modell. Videoopptakene av øvingene antyder to funn. For det første kan vektlegging av predesign (godt planlagte, autentiske dilemmaer) og åpent design (improvisasjon), kombinert med mange (brukte eller tapte) øyeblikk med læringspotensial, ha virket utviklende på studentenes interkulturelle medborgerskap. For det andre opplevde studentene at de utviklet sitt interkulturelle medborgerskap ettersom de stilte spørsmål ved holdninger og forestillinger, oppdaget hull i kunnskap og forståelse og desentrerte og tilpasset kommunikasjon og atferd. Studien understreker betydningen av videostimulert refleksjon etter øvinger som metode for utvikling av kritisk interkulturell medborgerskap i lærerutdanning i engelsk.

**Nøkkelord:** lærer-i-rolle (lir), kritisk interkulturell medborgerskap, interkulturell læring, kultur, medborgerskapslæring

## Introduction

International research (Byram, 2021; Huh & Suh, 2018) has argued for the importance of intercultural citizenship being an integrated element of school and teaching. The drama convention teacher-in-role (TiR), which invites teachers and learners to think together as co-participants in a fictive world, is an instructional approach that can help us understand the development of intercultural citizenship (e.g. Rosler, 2008; Stinson & Winston, 2011). Little research has been conducted on how primary school teacher education (grades 1–7) can use TiR to foster their own intercultural citizenship (Cabot et al., 2023; Heggernes, 2021; Nanda & Susanto, 2021; Piazzoli, 2018).

To remedy this lack of research and raise teacher educators’ awareness about the importance of critical intercultural citizenship in English as a Foreign or Second Language (EFL/ESL), this study aims to elucidate preservice teachers’ (PSTs’) reflections on how TiR can hone their own sense of intercultural citizenship. The reflections were based on their analysis of video recordings after rehearsing on campus, and enactment in the practicum schools.

More specifically, this study asked the following research questions:

1. What reflections did the PSTs articulate about the development of their own intercultural citizenship?
2. What influence did the PSTs think TiR had on their development of intercultural citizenship?

## Theoretical framework and literature review

### What is teacher-in-role?

TiR creates a fictive world in which the teacher takes on an engaging role such as a huntsman who refuses to abide by the Queen’s order to kill Snow White. According to Kao & O’Neill (1998), the students are invited ‘to respond actively, to join in and to extend, oppose or transform what is happening’ (p. 26).

To achieve bodily, emotional, and cognitive experiences, TiR can be a unique way of stimulating spontaneous language use in the classroom (Heathcote & Herbert, 1985; Piazzoli, 2018). Various studies (e.g. Rosler, 2008; Stinson & Winston, 2011) have found that TiR is an effective instructional approach to the development of intercultural citizenship (e.g. Huh & Suh, 2018; Porto et al., 2018). One reason for this is that TiR increases students' motivation for production activities that trigger reflections when they take other people's perspectives (Council of Europe, 2018; Galante & Thomsen, 2017).

In Norway, TiR has been used infrequently in education (e.g. Munden, 2010). It is not mentioned in the English subject curriculum, but it could be used to realise the general part of the curriculum, which emphasises that 'the students must learn and develop through sensory perceptions and thinking, aesthetic forms of expressions and practical activities' (NDET, 2019a, p. 8).

Research on process drama and TiR (Hulse & Owens, 2019; Rothwell, 2011) has primarily focused on the students', and not on prospective teachers', outcome of such activities. To fill this research gap, the present case study draws on a PST's perspective to examine how TiR can be used and rehearsed to develop their own awareness of intercultural citizenship.

In this context, it is worth mentioning that TiR presupposes a distinction between open and pre-designed approaches to rehearsing (Grosser-Clarkson & Neel, 2020; Sawyer, 2004). Open-designed approaches instigate the PSTs' creativity, flexibility, and improvisational skills (Kao & O'Neill, 1998; Sawyer, 2004). For example, PSTs learn to spontaneously solve differences in opinion by taking other people's perspectives and showing empathy. However, when a teacher educator asks the PSTs to use authentic dilemmas, rehearsing can be based on a pre-designed approach that offers practicable solutions and helps the PSTs focus attention on certain teaching practices (Kavanagh et al., 2020).

## Unpacking intercultural learning

Culture, in the term *intercultural* learning, is a multifaceted term that is difficult to define. The word is derived from the Latin verb *colere*, which means 'tend' or 'cultivate' in English. Tyler (1920 [1871]) defined culture as a 'complex

whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society’ (p. 1).

Interestingly, the concept relates to issues both on a large scale, such as cultures of different nations (e.g. voluntary work in the UK vs. *dugnad* in Norway), and on a smaller scale, such as different cultures within the same country (e.g. honesty vs. dishonesty).

To analyse the data of the present study, we draw on Kramsch’s (2006) distinction between ‘big C’ (e.g. history, national institutions, literature, and the arts) and ‘small c’ culture (e.g. everyday life, ways of behaving, talking, and dwelling).

The prefix *inter* (meaning *between* in Latin) in the concept of *intercultural* learning, on the other hand, emphasises that culture is not only about the interaction between people in different countries (i.e. horizontal discourses) but also in a particular context between people in the same country (i.e. vertical discourses). Intercultural learning invokes ‘notions of bidirectionality’, while the prefix *trans* (meaning *across* or *beyond* in Latin) in the broader concept of *transcultural* learning includes ‘a sense of multidirectional movement, flow and mixing’ (Thompson, 2011). The present study focuses on intercultural learning as a stepping stone to transcultural learning, since multidirectionality supposes identifying at least two directions, such as bidirectionality.

Concerning research in Norway (e.g. Casoli-Uvsløkk & Brevik, 2023; Rindal et al., 2020), researchers point out that the students’ cultural affiliations must be integrated more into the teaching, and that a clearer focus on ‘little c’ culture might have been underestimated in Norwegian classrooms.

Most research (e.g. Heggernes, 2019) seems to focus on fiction texts as triggers, while little research (e.g. Munden, 2010) looks into drama as a catalyst for intercultural learning, as well as citizenship, which is under scrutiny in the present study.

## Unpacking citizenship

According to Bellamy (2008), citizenship is based on two types of theory: normative theories, which are based on ‘the rights and duties a citizen ideally ought to have’, and empirical theories, which aim to ‘describe and explain how

citizens came to possess those rights and duties they actually have' (p. 27). In this sense, definitions of citizenship can centre around descriptions that present citizenship as a product (what is good or what is bad?) or a process (how did it develop?). Similarly, Kivisto and Faist (2007) described the distinction between normative and empirical theories as having inevitably 'two dimensions: the normative (what should be) and the empirical (what actually is)' (p. 13).

The present study elaborates on a specific form of citizenship in lower primary school (grades 1–7), namely moral and social citizenship at the microlevel, as opposed to political and legal citizenship at the macrolevel (Bellamy 2008, p. 6).

Norway's most recent curriculum (NDET, 2019a) introduced citizenship as an interdisciplinary topic, and uses both a moral and political sense of the concept when stating that:

They [the students] shall train their ability to... deal with conflicts of opinion and respect disagreement [*moral sense*]. The teaching... shall give the students an understanding of the relationship between democracy and key human rights, such as freedom of speech, the right to vote, and freedom of association [*political sense*]. (p. 16)

On the macrolevel, students learn what characterises democratic societies, while at the microlevel, they experience how citizenship works on an everyday basis.

Indeed, an important task is to follow up the curriculum's (NDET, 2019a, b) values and overall goals regarding citizenship at both the macro- and microlevels (Vold & Myklevold, 2023).

In this article, we acknowledge the importance of reflecting on both the macro- (i.e. political/legal citizenship) and microlevels (i.e. moral/social citizenship). Following this train of thought, we consider that critical thinking is an important prerequisite for the development of intercultural citizenship, which will be examined further in the following section.

## Critical intercultural citizenship

More recent scholarship (e.g. Beaman, 2016) suggests that citizenship and intercultural learning have clear intertwining elements, which may explain the coining of the umbrella term *intercultural citizenship* (Huh & Suh, 2018).

Citizenship relates to the rights and duties a citizen ideally possesses or ought to have. However, it is not solely based on laws, but also on socially agreed norms, practices, meanings, and identities, which could be regrouped under the superordinate term culture.

In other words, citizenship is ‘a marker of difference in society’ and should thus be considered ‘as cultural’ (Beaman, 2016, p. 849).

Citizenship and intercultural learning are of particular importance in teacher education. The concept citizenship may primarily refer to a result or competence, while intercultural learning relates to a process.

For example, PSTs can develop the ability to analyse a situation from a perspective other than their own (decentring) when they are in different intercultural situations. However, in the middle of a discussion, PSTs may discover that they do not know enough about other cultures and societies and thus are unable to intervene or adjust themselves to a certain situation (result or competence).

To avoid ‘final vocabulary’ (Rorty, 1989, p. 73), we favour the notion of end-in-view instead of result or competence, because citizenship can represent a lifelong, never-ending process. Both lines of thought (process, and end-in-view) can be brought together when using the term *critical intercultural citizenship* (Huh & Suh, 2018). Indeed, the new model of the Reference Framework of Competencies for Democratic Culture (CoE, 2018) and the Norwegian curriculum (NDET, 2019b) emphasise the importance of critical understanding.

Little research (e.g. Huh & Suh, 2018; Rothwell, 2011) integrates the three previously mentioned approaches, that is, TiR (Kao & Neil, 1998; Piazzoli, 2018), intercultural learning (Kramsch, 2006; Dypedahl & Lund, 2020), and citizenship (Bellamy, 2008; Huh & Suh, 2018), into primary teacher education.

To fill this research gap, the present study examines PSTs’ reflections on how TiR can promote their own sense of intercultural citizenship.

## Design and methods

### Study design and procedures

This qualitative, small-scale case study examines PSTs’ reflections on their use of TiR. The TiR activities were conducted as part of the research project ‘Rehearsing Teaching Professionally’ (ReTPro), funded by the Norwegian Research Council.

The project draws on four different student engagement phases, both at university and during practicum: (1) studying and modelling, (2) repetitive try-outs and simulations, (3) enactments in the classroom, and (4) analysis and reflections on the enactments (McDonald et al., 2013).

### Participants

Informed consent was procured from the participants. All information collected was treated confidentially (NSD 619149).

The participants were recruited in person from a university in Western Norway that offers EFL/ESL courses for PSTs. Table 12.1 provides an overview of the participants.

**Table 12.1**

*Profile of study participants*

|                                |                                                                                                      |
|--------------------------------|------------------------------------------------------------------------------------------------------|
| Participants                   | 6 PSTs (3 males/3 females) with the pseudonyms Claire, Eva, Ruth, Jim, Ken and Tim                   |
| Specification of PST’s studies | 4 students of ‘GLU 5-10’ (lower upper secondary school); 2 students of ‘GLU 1-7’ (elementary school) |
| Age                            | 18–23 years                                                                                          |
| Teaching experience            | None                                                                                                 |
| Participants’ L1               | Norwegian (4); English (1); Other (1)                                                                |
| Academic qualifications        | Upper secondary certificate                                                                          |

As Table 12.1 illustrates, the selection of participants can be qualified as typical sampling (Dörnyei, 2007), because each participant had no EFL/ESL teaching experience.

Indeed, the participants were novice PSTs in their first semester, who were exposed to a novel method at a Norwegian teacher training institution.

All participants had to do their practicum at elementary school (years 1–7).

## Data collection methods

As shown in Table 12.2, the study’s data were derived from both oral and written sources, more specifically from enactments of TiR and (video-stimulated and non-video-stimulated) reflection dialogues, as well as obligatory learning assignments and term papers.

**Table 12.2**

### *Data overview*

| Rehearsing<br>phases 1–4 | Relevance<br>for RQs 1–2 | Data<br>source | Data<br>type | Amount and detailed<br>data description                                                                                 | Number of<br>participants          |
|--------------------------|--------------------------|----------------|--------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Phase 1                  | RQ 1                     | VAC            | EoTiR        | 33 short + 1 long<br>video-recordings of the<br>process drama ‘Black<br>Bird’ on Rosa Parks (11<br>different sequences) | 2 campus<br>teachers<br>– 6 PSTs   |
| Phase 2                  | RQ 1                     | VAC            | EoTiR        | 6 long video-recordings                                                                                                 | 1–2 campus<br>teachers<br>– 6 PSTs |
| Phase 3                  | RQ 1                     | VAC            | EoTiR        | 5 long + 14 short<br>video-recordings                                                                                   | 1–2 campus<br>teachers<br>– 6 PSTs |
|                          | RQs 1 + 2                | DOC            | OLA          | 6 first-draft papers +<br>6 final-draft papers                                                                          | 1–2 campus<br>teachers<br>– 6 PSTs |

| Rehearsing phases 1–4 | Relevance for RQs 1–2 | Data source | Data type | Amount and detailed data description                       | Number of participants                 |
|-----------------------|-----------------------|-------------|-----------|------------------------------------------------------------|----------------------------------------|
| Phase 4               | RQs 1 + 2             | VAC         | RD        | 2 video-recorded and video-stimulated reflection dialogues | 1 campus teacher – 6 PSTs              |
|                       | RQs 1 + 2             | VAC         | RD        | 2 audio-recorded reflection dialogues                      | 2 practice-, 1 campus teacher – 6 PSTs |
|                       | RQs 1 + 2             | VAC         | RD        | 2 video-recordings of oral feedback on term papers         | 1 campus teacher – 6 PSTs              |
|                       | RQs 1 + 2             | DOC         | TP        | 6 term papers                                              | 6 PSTs                                 |

*Note:* Short video-recordings = under 5 minutes; long video-recordings = longer than 5 minutes

VAC – (Oral) video/audio recordings:

*EoTiR* – enactment of *TiR*

RD – (video stimulated and non-video stimulated) reflection dialogues

DOC – (Written) Documents:

OLA – (Written) obligatory learning activities (assignments)

TP – (Written) term papers

For reasons of research scope and limited word count in the present article, the main data presented here focused primarily on the term papers and video-stimulated reflection dialogues in phase 4 of the research project because – as shown in Table 12.2 – the findings seemed relevant for both research questions.

## Analysis of term papers and reflection dialogues

For data analysis of term papers and reflection dialogues, a qualitative code-book using NVivo 11 was developed. In our narrative research, we used a combination of inductive and deductive coding (Saldaña, 2015). Care was taken, as Silverman (2014) recommends, to avoid either imposing prior categories of analysis, or prematurely forming such categories.

The codes ‘teachable moments’ (Table 12.3), as well as ‘moments used’ and ‘moments lost’ (Table 12.4), were added inductively, as they emerged directly from the data. We defined teachable moments as meaningful, critical decision-making moments in relation to topics that stimulated more (moments used) or less successful (moments lost) in-depth discussions based on the number of follow-up questions asked by the PSTs.

However, in relation to research question 2, the use of theories such as the intercultural learning cycle (see Figure 12.1) qualified the coding as predefined and theory-driven. Even though Byram’s (2008) approach has been criticised for illustrating fairly static phenomena and overemphasising ‘the reconciliation of conflicting views’ (Hoff, 2014, p. 514), we integrated Byram’s *savoir* (a French verb meaning either ‘to be able to’ or ‘to know’) concepts and diverse definitions of *intercultural competence* (e.g. Deardorff, 2006) into the following new model.

**Figure 12.1**

*The intercultural learning cycle (adapted from Cabot et al., 2023; based on Byram, 2021; Deardorff, 2006; Dypedahl, 2018)*



As illustrated above, the intercultural learning cycle contains four essential elements: (1) communicative language competence (*savoir communiquer*) and attitudes (*savoir devenir*); (2) knowledge development (*savoir*), expanded understanding (*savoir comprendre*), and skills such as listening, observing, evaluating, analysing, interpreting, and relating (*savoir apprendre; savoir faire*); (3) internal metacognitive outcome (*savoir apprendre à apprendre*), such as critical thinking, intercultural awareness, empathy, and strategy development (*decentring*); (4) the ability to get involved (*savoir s'engager*) or adapt communication (*savoir s'adapter*) to an intercultural situation (Byram, 2021; Deardorff, 2006, p. 256; Dypedahl & Bøhn, 2020, p. 83).

Interestingly, decentring, that is, 'the ability to conceptualise multiple perspectives simultaneously or being capable of observing a situation from more than one point of view' (Fincher, 2012, p. 6), was a predefined code that seemed to play a central role in the present study.

## Findings

Before enactment at the practicum schools, the six PSTs used peers to rehearse and enact TiR in two scenarios with the following opposing characters: (1) an unannounced classroom inspection with a strict principal recommending only behaviourist learning methods, in contrast to a friendly teacher using reform-oriented learning theories; (2) a car auction in which a salesperson commits fraud by showing a new car to a potential customer and eventually selling him an old one, in contrast to a buyer who wants to find a solution.

The findings suggest that integrating such contrasts into TiR activities facilitated the development of intercultural citizenship. Using illustrative examples, the following section presents the PSTs' perceptions of the use of TiR to promote their own sense of intercultural citizenship.

## **The PSTs’ reflections on the development of their own intercultural citizenship**

The findings on the first research question are twofold: First, intercultural citizenship was a result of (a) pre-scribed and (b) open-designed approaches to rehearsing and enactment, according to the PSTs. Second, the PSTs reported on a multitude of teachable moments that were created to stimulate intercultural citizenship.

### **Intercultural citizenship instigated through pre-scripted and open-designed approaches**

The PSTs considered the rehearsing and enactment of TiR as *pre-scripted* (NVivo code in the analysis) because the course instructor had asked them to use authentic dilemmas as a starting point for their TiR activities. Indeed, the PSTs created diverse types of culture-clashes. In the first TiR, they simulated a classroom inspection adapted from a famous scene in the novel *Matilda* (Dahl, 2010). Here, a sweet teacher, Miss Sunny (Miss Honey in the novel), used creative teaching (i.e. a friendship tree), whilst the severe headmistress Miss Grump (Miss Trunchbull in the novel) wanted all teachers to focus on reading and rote memorisation. In the second TiR, the PSTs simulated a dialogue between a buyer and a salesman who sold an old car at an auction. The buyer used disparaging words such as fraudster and stupid, while the salesman used polite language.

The PSTs reported that the *open-designed* approach (NVivo code) to rehearsing and enactment seemed to be more prominent than the pre-scripted approach. Indeed, this was shown in situations where the PSTs utilised improvisation. This phenomenon occurred both on campus, and in the practicum schools.

The participant Jim provides a concrete example of an on-campus improvisation in his term paper:

*While acting the scene, we suddenly understood that we lacked empathy in relation to the fraudulent car salesman and added spontaneously a line about his mother being sick. After the enactment, we started arguing in our group. Some wanted to back the*

*fraudster and others only wanted to back the victim. This was a particularly important learning moment.*

In this case, the PSTs instigated intercultural citizenship when dealing with differences in opinion.

In contrast, Ken describes the need for improvisation at the practicum school.

*In the car auction, I had to talk with the students and try to sell them a car. I was asked questions such as ‘How fast does the car go?’. I had to improvise specifications about the car. ...Someone [a student] bid 1 million dollars right away. I had to improvise and ask the student ‘Do you have enough money for that?’ because I knew that he was lying.*

As shown in this excerpt, the PST felt the need to improvise because intercultural citizenship was challenged morally.

### **Intercultural citizenship stimulated by a multitude of teachable moments**

The data analysis of the reflection dialogues identified six dichotomous topics, presented below in Table 12.3.

**Table 12.3**

*A dichotomous multitude of teachable moments*

|                                           |                                           |
|-------------------------------------------|-------------------------------------------|
| US private health care system             | Norwegian health care system              |
| Truth                                     | Lies                                      |
| Poverty                                   | Wealth                                    |
| British unannounced classroom inspections | Norwegian announced classroom inspections |
| Loyalty                                   | Disloyalty                                |
| Modern teaching                           | Old-fashioned teaching                    |

Indeed, when conducting TiR activities, the PSTs created a myriad of teachable moments, in which one of the PSTs commented:

*I was really amazed by the fact that one single TiR activity could create so many different topics that are important for citizenship. The fact that we unpacked these topics as dichotomies during the video-stimulated dialogue shows that I could have focused my attention much more on the conflict between the topics, that means the ‘inter’ of intercultural learning.*

All PSTs stated that they were surprised to discover how many interesting teaching possibilities had been created. One student wrote all the different topics on Post-its. Her face revealed a real moment of surprise in the video recording of the reflection dialogue.

## **The PSTs’ self-perceived influence on their development of intercultural citizenship**

The second research question relates to the question of what influence the PSTs thought TiR had on their own development of intercultural citizenship when rehearsing and enacting.

In the following subsections, we dive into different possible explanations that can be grouped into intrapersonal processes, and interpersonal end-in view approaches to intercultural citizenship.

### **TiR made PSTs question attitudes and beliefs in challenging situations**

The PSTs reported on the importance of becoming aware of their own attitudes towards the different dilemmas in the TiR sequences. For example, the PST Claire questioned her beliefs (intrapersonal process) when comparing Norway to the UK in relation to typical school and management structures in her term paper:

*This is where the thought about this unspoken hierarchy in the UK schools came to me. In the UK, there is often a strict principal that has more control that creates a more superior feeling towards the other staff. However, control is perhaps a good thing. Perhaps we need more severe teachers and headmasters in Norway?*

Interestingly, the participant questioned her own belief in non-hierarchical management structures in Norway.

Similarly, the participant Jim provided some reflections that facilitated changes in his own attitude:

*The car sale highlighted the question [of whether] it's ever OK to lie or not. ... This got me to think a little extra by myself. I have probably the tendency to call a person 'a liar' right away without thinking too much of the situation and good reasons that may lie behind 'lying'. Are there good reasons for using white lies?*

As shown in the excerpts from the term papers, fixed patterns of beliefs or attitudes were questioned during the PSTs' first term.

### **TiR made them notice gaps of knowledge and comprehension**

In the video-stimulated dialogues after rehearsing and enactment, the PSTs noticed gaps in knowledge, comprehension, and skills.

Indeed, they expanded on teachable moments and distinguished between moments used and lost, that is, moments that were used more or less satisfactorily in their teaching.

**Table 12.4**

*Moments used and lost in teacher-in-role activities (TiR)*

| TiR activities  | Moments used   | Moments lost                                                   |
|-----------------|----------------|----------------------------------------------------------------|
| The car auction | Truth vs. lies | US private health care system vs. Norwegian health care system |

| TiR activities         | Moments used                               | Moments lost                                                      |
|------------------------|--------------------------------------------|-------------------------------------------------------------------|
| The car auction        | Poverty vs. wealth                         |                                                                   |
| A classroom inspection | Loyalty vs. disloyalty                     | Unannounced British vs. announced Norwegian classroom inspections |
| A classroom inspection | Modern teaching vs. old-fashioned teaching |                                                                   |

*Moments used* were coded as topics that triggered in-depth classroom discussions and had more than two follow-up questions. For example, the PSTs used several questions to discuss truth vs. lies, or good reasons for using white lies, such as in the case of the fraudulent car salesman who had to pay the hospital bills of his ill mother.

Conversely, the PSTs mentioned that one of the reasons for using some teachable moments unsatisfactorily (moments lost) could be related to their lack of knowledge. For example, all students performing the unannounced classroom inspection admitted that they did not know enough about how such inspections were perceived and conducted in the UK. They were mostly interested in discussing whether it is right or wrong to carry out classroom inspections in Norway. Similarly, the PSTs in the TiR ‘car auction’ did not know enough about the US private and Norwegian public health care systems. They discussed advantages and disadvantages of both systems, without focusing on the why and how during the discussions.

### **TiR made them develop the ability to decentre**

All PSTs developed strategies to *decentre*, which seemed to epitomise intercultural citizenship as a metacognitive internal outcome. We can find examples in Tim’s term paper:

*The TiR exercise required me to be able to see both sides of the argument and be able to argue with and against both sides. It required me to use my intercultural competence and be able to understand different ways of thinking.*

Interestingly, Tim relates decentring to the phenomenon of intercultural competence. In contrast, Ruth relates decentring more to empathy.

*Throughout this TiR activity, I was able to empathise with both the kind teacher and the strict principal....Indeed, I asked myself and the students in the classroom: Is it fair that Mrs. Grump rejected Ms. Sunny's idea? Is it fair that Ms. Sunny went behind the principal's back?*

As we can see from both examples above, the ability to change perspective seemed to be of particular importance. This was confirmed by all participants in the dialogues.

### **TiR made them adapt communication and behaviour**

One interesting example from the data that describes the enacted adaptation of communication during a TiR activity involving several co-participants (interpersonally) can be found in Ken's term paper:

*It is very important to adjust our teaching when communicating with the students. For example, difficult words such as 'white lies' had to be explained and adjusted.*

On the other hand, adapting behaviour was equally important. Tim described the adaptation of behaviour in the following words.

*I had to work with different types of mindsets..., for example, the moral dilemma, which required me to work with people that thought that lying was OK and people that thought the opposite. Some students were lying right before me, and I had to deal with the situation.*

Unexpectedly, Tim had to adapt to a culture in which lying – that is, showing a new car at the auction and selling an old one – was acceptable and ask good questions to make the students think critically.

To sum up, the term papers and dialogues showed what the PSTs did and why they thought they succeeded in fostering intercultural citizenship. Indeed, our data suggest that TiR helped the PSTs to

- change attitudes in communicatively challenging situations (inspired by dilemmas),
- notice gaps in knowledge and comprehension (‘big C’ vs. ‘small c’ culture),
- develop the ability to decentre (internal outcome),
- use predesigned approaches that can lead to open-designed situations in which they can develop improvisational skills effectively (external outcome),
- distinguish between intrapersonal processes and interpersonal end-in-view approaches to intercultural learning, and
- find and reflect on a good balance between empirical and normative, as well as moral/social and political/legal, approaches to citizenship (critical intercultural citizenship).

## Discussion

This study’s purpose was to elucidate PSTs’ reflections on how TiR can hone intercultural citizenship after rehearsing and enactment.

In the following subsections, we will discuss the findings by linking them to intercultural learning (Deardorff, 2006), theories on ‘big C’ and ‘little c’ culture (Kramsch, 2006), empirical and normative approaches to citizenship (Bellamy, 2008), and theories on critical intercultural citizenship (Huh & Suh, 2018).

## Intercultural learning and the underuse of ‘big C’ culture when rehearsing and enacting

The intercultural learning cycle (see Figure 12.1) distinguishes four phases: (1) attitudes and communicative language competence; (2) knowledge, comprehension, and skills; (3) internal metacognitive outcome; and (4) external outcome. First, the PSTs’ attitudes were questioned in two TiR situations – that is, a classroom inspection and car auction – in which they had to face different dilemmas (e.g. truth vs. lies, creative teaching vs. rote memorisation). These dilemmas resembled what Butterfield et al. (2005), Haseman and O’Toole (2017), and Dypedahl and Bøhn (2018) qualified as ‘critical incidents’, meaning situations that are based on contrasting and conflicting views.

Second, the PSTs developed knowledge and comprehension by observing, evaluating, analysing, and interpreting different ‘cultures’ at both macro- (e.g. unannounced [British] or announced [Norwegian] classroom inspections) and microlevels (e.g. white lies). This led to internal outcomes such as cognitive and metacognitive intercultural awareness (e.g. decentring) and language awareness (e.g. use of hedging expressions instead of the adjective ‘stupid’). In doing so, the PSTs eventually learned to adapt themselves to challenging situations.

This fourth and last phase demonstrated important elements of intercultural learning because the PSTs adapted their communication and behaviour (e.g. improvising and asking good questions when a student is lying). In other words, all four phases were – according to the participants’ reflections – visible in the PSTs’ learning process.

Learning is the most prominent word in the concept of intercultural learning. As such, a key finding of this study is that learning seemed to be elicited through predesigned and open-designed approaches. Indeed, the findings may suggest that the use of predesigned approaches (e.g. use of dilemmas) led to open-designed situations in which the PSTs used improvisational skills. For example, during the car auction one of the PSTs had to improvise and ask the student ‘Do you have enough money for that?’ because he knew that the student was lying. In other words, TiR seemed to instigate the PSTs’ creativity, flexibility, and improvisational skills (Kao & O’Neill, 1998; Sawyer, 2004).

Concerning the word *intercultural* in the concept of intercultural learning, Rindal et al. (2020) warned against an overuse of Kramsch’s (2006) notion

of ‘big C’ culture. The PSTs in this study, however, seemed to focus predominantly on concepts of ‘small c’ (e.g. truth vs. lies in Table 12.3). This may be due to the fact that the PSTs had their practicum at elementary school (GLU 1–7). Indeed, a focus on ‘little c’ culture may be adapted for lower grades because ‘little c’ culture concerns students’ everyday lives, and can be an important building block for ‘big C’ culture.

The present case study suggests that finding a good balance between ‘big C’ and ‘little c’ culture can be a real challenge for PSTs.

Generally, intercultural learning can be addressed by focusing more clearly on the ‘inter-’ of intercultural learning, that is, ‘the intricate, complex and dynamic relationships between ourselves and various others’ (Brown & Habegger Conti, 2022, p. 63). Indeed, one participant emphasised the benefits of unpacking topics as dichotomies during the reflection dialogue, which showed that he could have focused his attention ‘much more on the conflict between the topics’.

The ‘inter-’ in this study somehow was predefined because the PSTs were asked to integrate dilemmas into their TiR activities. According to Dudley et al. (1999), dilemmas are a suggested way to teach critical citizenship because the students are given the opportunity to deconstruct culturally and historically situated conceptions through the exploration of such dilemmas.

Most importantly, the PSTs wrote about the phenomenon of decentring (Fincher, 2012) in their term papers. They understood the need to increase empathy for the fraudster, as one PST noted:

*We somehow understood that it was necessary to create some empathy for the fraudster to instigate a good and interesting classroom discussion in relation to white lies. How could we do that?*

Indeed, the PSTs developed metacognitive strategies to increase empathy. They added a short conversation on the phone about the fraudster’s mother being sick at the hospital. In this context, it seemed as if the PSTs understood the importance of well-planned critical incidents (Butterfield et al., 2005) because this predesigned element seemed to create empathy and, thus, instigate (critical) intercultural citizenship during rehearsing.

## (Critical) Intercultural citizenship as a result of rehearsing and enactment?

The concept of citizenship is difficult to describe and define. There are broad and narrow approaches to the concept (Bellamy, 2008; Kivisto & Faist, 2007). The present study revealed primarily narrow dimensions, namely moral and social citizenship at the microlevel (e.g. loyalty vs. disloyalty), as opposed to political and legal citizenship at the macrolevel (e.g. health care systems). This is in accordance with Norway's curriculum (NDET, 2019a).

More importantly, the study suggests that TiR can facilitate critical intercultural citizenship. Based on this study, it is possible to advocate that being aware of your own (normative, and/or empirical) citizenship, and intercultural (attitudes, knowledge, skills, internal, and external outcome) learning approaches are part and parcel of critical intercultural citizenship. This is illustrated in Figure 12.2.

**Figure 12.2**

*Theoretical dimensions of critical intercultural citizenship (inspired by Huh & Suh, 2018)*

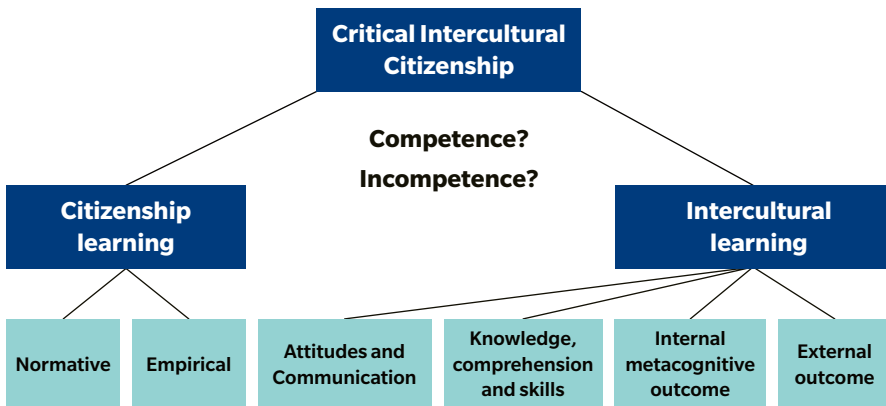


Figure 12.2 shows theoretical insights from the data. Paradoxically, a learner can show critical intercultural citizenship in the very moment of uncovering that (s)he is incompetent in an intercultural situation. Indeed, uncovering your own intercultural (in)competence can be of particular importance in

learning situations (such as rehearsing and enacting of TiR in the present case), especially in teacher education. The discovery of imbalances plays an essential role in the descriptions of critical intercultural citizenship.

For example, our findings show occurrences of Kivisto and Faist’s (2007) and Bellamy’s (2008) notion of normative (what should be) dimensions to citizenship, which stand in contrast to empirical (what actually is) theories. Indeed, the PSTs discovered that they primarily focused on normative issues in relation to loyalty vs. disloyalty, truth vs. lies, or modern vs. old-fashioned rote memorisation, and less on empirical issues concerning the US private and Norwegian public health care systems (see Table 12.4).

Moreover, the internal metacognitive outcomes, such as decentering, may enhance critical intercultural citizenship. Indeed, some examples from the data showed how important it was for the PSTs to develop this ability. The challenge is to describe decentring as an intrapersonal phenomenon (phase 3) and to distinguish it from the interpersonal (phase 4) sphere in the intercultural learning cycle (see Figure 12.1).

This study suggests that PSTs must be able to decentre themselves in their head (intrapersonally) before they can enact empathy (interpersonally) in a situation between people. Huh and Suh (2018) described this phenomenon poignantly as an ‘active consideration of missing perspectives’ (p. 532). The fact that the participant Tim in the TiR ‘car auction’ finally managed to ask the student ‘Are you sure that you have so much money?’ can (interpersonally) represent an external outcome after having (intrapersonally) identified the moral dilemma and left his role of a salesman who wants to sell at all costs.

Similarly, this instance of intrapersonal and interpersonal decentring can be found in the other TiR (i.e. the classroom inspection) when the participant Ruth writes ‘I asked myself and the students in the classroom: Is it fair that Mrs. Grump rejected Ms. Sunny’s idea? Is it fair that Ms. Sunny went behind the principal’s back?’

Both lines of thought (i.e. intrapersonal process and interpersonal end-in view) in intercultural situations are difficult to distinguish but can be brought together when using the term critical intercultural citizenship (process + end-in view). Indeed, the Reference Framework of Competencies for Democratic Culture (CoE, 2018) emphasises the importance of critical understanding, which is a pivotal concept in teacher education. The present study suggests that rehearsing facilitates the development of critical intercultural citizenship.

## Limitations and strengths

To confirm the findings, the term papers were triangulated with the reflection dialogues and the video recordings showing the enactment in the practicum schools. Considering that video recordings were used in all four phases of the research project, the stimulus of the recall in the dialogues and term papers can be qualified as strong (Gass & Mackey, 2017, p. 52).

Two assistant researchers peer-checked the validity of the codes. Only one single course with one teacher educator and six PSTs underwent scrutiny. Thus, the study does not provide an exhaustive picture of Norwegian teacher education in general, or, more specifically, all perceptions of PSTs' own intercultural citizenship.

However, to a certain degree, the present enquiry establishes theoretical validity by relating the study to Bellamy's (2008) distinction between normative and empirical approaches to citizenship, Deardorff's (2006) and Byram's (2021) intercultural learning cycle, and McDonald et al.'s (2017) four phases of reflections in a rehearsal 'cycle for collectively learning to engage in an authentic and ambitious instructional activity' (p. 382).

## Conclusion

Intercultural citizenship is a polysemic concept that needs to be concretised and translated into effective classroom teaching. Rehearsing TiR can be an efficient method for stimulating and facilitating intercultural citizenship.

Pointing at research on process drama, intercultural learning, as well as citizenship, our study contributes to the existing body of knowledge. It represents interdisciplinary research that generated both an overview of intercultural learning practices, and a list of possible factors that shape intercultural citizenship, the latter of which might be a particularly valuable outcome.

Our data showed that TiR can enable PSTs to change attitudes in communicatively challenging situations, to notice gaps of knowledge and comprehension, to develop the ability to decentre, and to use both predesigned and open-designed approaches efficiently. Most importantly, TiR seemed to

elicit critical intercultural citizenship because the PSTs learnt to reflect on a good balance between ‘big C’ and ‘small c’ culture as well as empirical and normative approaches to citizenship.

Our results can be used productively in teacher education. First, at a conceptual level, the study provides teacher educators and PSTs with evidence of a varied range of elements that can foster intercultural learning. Second, from a didactic perspective, the study may broaden discussions on how to hone teaching quality in relation to citizenship by distinguishing between moral/social and political/legal citizenship, as well as intrapersonal processes and interpersonal end-in view approaches, and focusing more clearly on critical intercultural citizenship.

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## Meaningful use of talk moves: Preservice teachers' self-reflections on individual student-teacher conversations

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**Abstract:** The aim of this study was to investigate preservice teachers' (PSTs') reflections on the use of talk moves (O' Connor & Michaels, 2019; Kazemi & Hinz, 2014) after they had conducted individual student-teacher conversations (ISTCs) in practicum. The research questions were: What talk moves did the PSTs articulate in their reflective texts? What reasoning did the PSTs use in their reflections when describing 'used moments' and 'lost moments' in their ISTCs? We used Alexander's (2020) theories of dialogic talk to analyse the data. The results showed that the PSTs reported talk moves such as *saying more* and *challenge* when they were successful in the ISTCs ('used moments'). This shows the supportive nature of the dialogic talk. 'Lost moments' included uncertainty in the use of *wait time* and lack of spontaneous follow-up questions. The reasons behind 'lost moments' were primarily related to lack of cumulative skills (Alexander, 2020). The results of the study may indicate that the PSTs have gained an increased awareness of their own dialogic skills, which may help strengthen their professional development and competence as future teachers.

**Keywords:** teacher education, individual student-teacher conversations, dialogic talk, talk moves

**Sammendrag:** Målet med denne studien var å undersøke lærerstudenters refleksjoner rundt bruk av samtaletrekk (O' Connor & Michaels, 2019; Kazemi & Hinz, 2014) etter å ha gjennomført individuelle elevsamtaler (ISTCs) i praksis. Forskningsspørsmålene var: Hvilke samtaletrekk kom fram i lærerstudentenes refleksjonstekster? Hvilke resonnementer brukte lærerstudentene i sine refleksjoner når de beskrev «brukte øyeblikk» og «tapte øyeblikk» i elevsamtalen? For å analysere dataene brukte vi Alexander (2020) sine teorier om dialogisk samtale. Resultatene viste at lærerstudentene rapporterte om samtaletrekk som *å si mer* og *utfordre* der de lyktes med dialogen i elevsamtalen («brukte øyeblikk»). Dette viser den dialogiske samtalens støttende karakter (supportive). «Tapte øyeblikk» viste blant annet usikkerhet i bruk av *ventetid* og mangel på spontane oppfølgingsspørsmål. Begrunnelsene for «tapte øyeblikk» var først og fremst knyttet til manglende kumulative (cumulative) ferdigheter (Alexander, 2020). Resultatene fra studien kan tyde på at studentene har fått en økt bevissthet i forhold til egne dialogiske ferdigheter, noe som kan være med å styrke deres profesjonelle utvikling og kompetanse som fremtidige lærere.

**Nøkkelord:** lærerutdanning, individuelle elevsamtaler, dialogiske samtaler, samtaletrekk

## Introduction

The claim that oracy is a primary tool for learning is well established in educational science (Kim & Wilkinson, 2019, p. 70; Mercer et al., 2020). Teachers – or in this case, preservice teachers (PSTs) – need to engage with oracy not only in whole-class situations, but also in formalised conversations such as individual student–teacher conversations (ISTCs) (in Norwegian *elevsamtaler*). ISTCs are an important part of the continuous assessment work in schools. As stated in the Education Act,

the student has the right to talk to the teacher at least once every six months about his or her development in the subjects and social development. The purpose of assessment in subjects is to promote learning and contribute to the desire to learn during the course and to provide information about competence during and at the end of education in the subject. (Opplæringslova, 2023, chapter 3, § 3.7)

As described above, ISTCs must be conducted in accordance with Norwegian law. The one-to-one conversation between the student and the teacher plays an important role in discussing the student's needs, requirements, and progress (Tangen, 2019). In our study, PSTs were encouraged to talk about both subject matter and social development. Students' views and thoughts must be valued, as stated in the core curriculum: 'The dialogue between teacher and student and between school and home must be based on mutual respect' (Kunnskapsdepartementet, 2017, p. 9).

In this context, it is important that teachers – or in our case, preservice teachers (PSTs) – understand that dialogues have social and emotional as well as cognitive dimensions (Hennessy et al., 2021, p. 187), and that learning is an interactive process that is built through joint activities between teachers and students such as ISTCs. Therefore, teachers or PSTs need to develop a broad repertoire of conversation-based pedagogical skills and strategies (Alexander, 2018, p. 563). This pedagogical competence in relation to children's participation in matters that affect them is, according to the new Education Act, a requirement for teachers.

Moreover, it is recommended to systematically allow students to give feedback on the perceived benefits of different learning processes, either as a

whole class, randomly selected, or individually through dialogue with their teacher. This means that students can be involved to a greater extent than today in the planning, implementation, and evaluation of their own learning processes (Faannessen et al., 2022, p. 6). This must have implications for teacher education (TE).

The ability to plan and conduct ISTCs with the aim of promoting participation and empowerment is something that PSTs are not traditionally assessed on before they start work as newly qualified teachers. Based on a survey carried out by the PSTs' organisation *Pedagogstudentene* (in English: pedagogy students), 66 % of the respondents claim that TE lacks practice relevance, and that they did not get enough opportunities to carry out ISTCs during their education (Pedagogstudentene, 2021, p. 23). This survey clearly shows the need to focus on ISTCs in TE.

In fact, rehearsing ISTCs – as in the present study – is in line with what the Advisory Council for Teacher Education (2024) calls 'expanded practice'. This new term involves learning situations where PSTs learn through experimentation, active participation, and experiences with authentic situations from future working life.

In schools, many different types of conversations and dialogues take place between teachers and students on a daily basis. There is a lot of research in the field of dialogic teaching that looks at whole-class dialogues (Alexander, 2018; Michaels & O'Connor, 2015). However, there is little research on ISTCs and on how to use talk moves effectively (O'Connor & Michaels, 2019; Kazemi & Hinz, 2014), which is under scrutiny in the present study.

The purpose of this qualitative case study is to explore PSTs' post-practicum reflections after rehearsing ISTCs. Our research relates to the subject 'Pedagogy and pupil-related skills' (UHR, 2017a, b) and the obligatory assessment 'My student'. In this assessment, the PSTs were asked to analyse their dialogue and then identify and transcribe moments that they considered successful in relation to the use of talk moves (used moments), or unsuccessful because they missed the opportunity to follow up the students' responses (lost moment). The study aimed to answer the following research questions: What talk moves did the PSTs articulate in their reflective texts? What reasoning did the PSTs use in their reflections when describing 'used moments' and 'lost moments' in their individual student-teacher conversations (ISTCs)?

## Existing research

There is a growing international research interest in educational dialogue as a form of classroom discourse that supports learning through interaction with others (Alexander, 2020; Hennessy et al., 2021). The research literature on dialogic teaching is extensive. Various definitions are used, such as dialogic pedagogy and dialogic teaching (Kim & Wilkinson, 2019). Researchers from different disciplines have studied dialogue as an important factor in promoting good student-teacher relationships (Limstrand, 2006; Sabol & Pianta, 2012). A good understanding of both communication and relationship is the basis for being able to seize the moment in a conversation (Stern, 2004).

Despite differences in terminology and emphasis, the research draws on common features of dialogues, such as greater student engagement, open exchange of ideas, collaborative inquiry, and knowledge constructions, as well as respectful classroom relationships (Haneda, 2017; Hardman, 2019). Dialogues have social, emotional, and cognitive dimensions, and learners need to feel safe to take risks (Hennessy et al., 2021, p. 187). As explained by Olga Dysthe (1997), a dialogic framework is about how meaning is made ‘in and through language, thinking, communication and action and the products of such processes’ (p. 88).

Some Norwegian research on ISTCs (e.g. Lindset & Aune, 2020; Limstrand, 2014; Tangen, 2019) provides examples of how ISTCs can contribute to improving student learning outcomes.

First, Limstrand (2014) investigated how formal conversations between teachers and students in secondary schools can contribute to the quality of learning. The findings from this research suggest that dialogues between teachers and students can help students both enjoy learning and improve their learning outcomes. The study points out that for these dialogues to be successful, teachers need the skills to conduct such conversations. For example, it is important that students’ suggestions are followed up (Limstrand, 2014, p. 4).

Second, Tangen’s (2019, p. 227) research shows that ISTCs in upper secondary schools provide an opportunity to create safety for students, develop good relationships between teachers and students, and strengthen student motivation and learning. Tangen (2019) suggests some changes with potential for improvement: for example, greater awareness of opportunities for mutual learning. The idea of mutual dialogue seems to clash with established roles and traditions, systems, and structural conditions (p. 236). These findings

from Tangen support the recommendations of Faannessen et al. (2022), and the new Education Act (Opplæringslova, 2023).

Thirdly, a study of PSTs in vocational TE used simulation as a didactic tool to practise communication skills that are relevant for practicum (Lindset & Aune, 2020). The results showed that the vocational TE students found it useful to simulate an ISTC, and that this knowledge was relevant for practicum.

The present thematic review of the above-mentioned Norwegian studies shows that the enactment of meaningful ISTCs requires dialogic skills. However, few studies examined the concept of dialogic talk used in primary schools. Indeed, there is little research on how PSTs can rehearse and perform ISTCs by focusing on talk moves (O'Connor & Michaels, 2019; Kazemi & Hinz, 2014). To fill this research gap, we investigated the enactment of dialogic ISTCs both on campus and in practicum schools.

## Theoretical framework

### Dialogic talk in individual student-teacher conversations

In this article, we draw on the concept of dialogism that has been introduced by Bakhtin (1981). Interestingly, Bakhtin distinguished between 'authoritative' and 'internally persuasive discourses' (pp. 345–346). Authoritative discourses derive their authority from tradition, authorised truths, official authorities, or people approved as authorities. Such discourses position ISTCs as a monological one-way process.

In contrast, internally persuasive discourses come from the outside (another person, for example the teachers in the ISTCs), encounter our own thoughts and experiences, and become 'half-ours and half-someone else's' (Bakhtin, 1981, p. 345). A good dialogue lies in 'the tension, interaction and confrontation between these discourses' (Dysthe, 1997, p. 85).

This concept of dialogism is echoed in Alexander's (2020) concept of dialogic talk. He emphasises the need for every teacher to develop a broad repertoire of talk-based pedagogical skills and strategies. Recognising the uniqueness of each classroom's personalities and circumstances gives teachers the responsibility to decide how to apply their repertoire (Alexander, 2018, p. 3).

ISTCs (*elevsamtalen* in Norwegian) can be organised differently depending on the purpose of the dialogue. In fact, conversations are one of Alexander's (2020, p. 139) five interactive settings that can draw on dialogic talk. Alexander suggests six principles that can guide the conduct of conversations and serve as criteria for judging whether conversations can fairly be called 'dialogic': (1) Collective (students and teachers are willing and able to engage in learning tasks together); (2) Supportive (students and teachers help each other reach common understandings); (3) Reciprocal (teachers ensure that students have ample opportunities to listen to each other, share ideas, and ask questions); (4) Deliberative (students and teachers work towards reasoned positions and outcomes); (5) Cumulative (students and teachers integrate their own and each other's contributions into coherent lines of thought and understanding); (6) Purposeful (talk is directed towards specific learning goals) (Alexander, 2020, p. 131).

Even though Alexander's principles mainly apply to whole class and small group settings, we decided to use his approach to analyse the dialogic dimension of ISTCs. For example, we applied the reciprocal principle to the relation between the student and the teacher (in our case a PST) because teachers must facilitate 'ample opportunities, share ideas and ask questions' (Alexander, 2020, p. 131) in their conversations with each student.

## Talk moves

A key concept in dialogic talk is the idea of repertoire. Dialogic talk requires teachers (in our case PSTs) to have a repertoire of different talk moves to facilitate dialogues (Kim & Wilkinson, 2019, p. 72).

According to Boyd (2012, p. 48), dialogic talk requires time and reflection, as well as flexible planning. It requires teachers to have the skills and expertise (and willingness) to make decisions and revisions to find the most appropriate stepping stones to further students' understanding and allow them the freedom to explore.

Talk moves are different actions that a teacher can use in an ISTC to promote dialogues that are productive for learning (Hennessey et al., 2021,

p. 187). When used appropriately, talk moves can act as a tool for mediation (Michaels & O'Connor, 2015). The ability to follow up on a response is crucial in a conversation (Myklebust & Guadie, 2024).

According to Erickson (2011, p. 130), classroom conversations can be analysed as a form of improvisation. The essential role of improvisation takes place when the teacher, or PSTs in our study, respond effectively to what Myhill and Warren (2005) call critical moments (see similar concepts in Cabot & Brodal, 2025; Myklebust & Tuset, 2025) and make use of them.

One of the goals is to help students to engage with their thinking and allow them to change their own thinking and sharpen their argument (O'Connor & Michaels, 2019, p. 172).

Recent research on dialogic talk suggests key features of dialogue such as questioning (press for reasoning), elaboration, and student participation (Hennessy et al., 2021; Howe et al., 2019).

In line with international research (Kazemi & Hinz, 2014), it is important for the PSTs to be aware of how theories of talk moves can be an important tool both in preparing and enacting ISTCs (Michaels & O'Connor, 2015).

## Methods

### Research design and data collection

This qualitative case study is part of the NFR-funded research project ReTPro (Rehearsing Teaching Professionally). The data consist of texts related to the obligatory assignment 'My student', in which the PSTs identified and reflected on their use of different talk moves during audio-recorded ISTCs.

The PSTs (N = 12) were in their second year of primary (GLU 1–7) and lower secondary (GLU 5–10) teacher education (TE). In line with the 'cycle for collective learning' (McDonald et al., 2013, p. 382), the assignment 'My student' was developed in four phases. Data were primarily collected from the fourth phase.

*Phase 1* began with theoretical input on talk moves (O'Connor & Michaels, 2019; Kazemi & Hinz, 2014), and was followed by getting familiar with examples of guidelines for ISTCs developed at the different practicum schools.

Table 13.1 provides an overview of the talk moves that were presented to the PSTs.

**Table 13.1**

*Talk moves (based on O'Connor & Michaels, 2019; Kazemi & Hinz, 2014).*

| Talk moves          | Examples                                                 |
|---------------------|----------------------------------------------------------|
| EXPLAIN/SAY MORE    | Can you explain your thinking?                           |
| REVOICE             | So, you're saying that... so I understand you correctly? |
| RESTATE/REPEAT      | Could you please repeat in your own words?               |
| PRESS FOR REASONING | Why does it make sense?                                  |
| CHALLENGE           | Does this always apply?                                  |
| ADD ON              | Do you want to add something?                            |
| AGREE/DISAGREE      | Do you agree or disagree? Why?                           |
| WAIT TIME           | Please, take your time...                                |

The PSTs were already familiar with using these talk moves in whole-class discussions carried out in the subjects mathematics, and English as a Foreign Language. They were now asked to reflect on how they could use talk moves in ISTCs.

*Phase 2* included iterative attempts to identify dialogic talk by using a game simulator, 'Snakke med barn' (Talking with Children), developed for people working with children and young people (RTVS, n.d.). The PSTs were asked to test the simulation game in pairs, and to make notes about ways to promote dialogic talk. In addition, they produced their own guidelines for the enactment of ISTCs in practicum schools.

*Phase 3:* The PSTs enacted their individual ISTCs in practicum. Prior to this, the PSTs had observed their student in practicum for about two weeks, and taken notes. In some cases, they had redesigned their guidelines before carrying out the individual ISTCs.

*Phase 4 (Analysis and reflection):* Shortly after completing the ISTC, each PST listened to the recording of the ISTC together with the practicum teacher. First, they were asked to identify the different talk moves they had used in their conversations (RQ1). Then, they transcribed one moment that they

considered successful, and one moment when they missed the opportunity to follow up on what the students were saying. It was interesting to see if the PST could identify so-called critical moments. Myhill and Warren (2005) define critical moments as situations 'where the teacher made good use of an opportunity to develop independent understanding or conversely where the teacher missed or muddled such an opportunity' (p. 59). We have named these opportunities 'lost moments' and 'used moments' (RQ2).

## Participants

The selection of participants was strategic. The PSTs were recruited in person from a university that offers pedagogy courses for PSTs in Western Norway. The selection consisted of 12 participants: seven females, and five males. They were given the following fictitious names: Liv, Evy, Eva, Lilly, Siw, Thea, Mary, Ben, Ola, Ian, Joe, and Sam. They were aged between 19 and 32. Four PSTs studied GLU 1–7 (elementary school), and eight of them studied GLU 5–10 (lower secondary school). As the group includes both GLU 1–7 and GLU 5–10, the ISTCs were conducted with students from grades 1 to 10.

When selecting a student to participate, the PSTs were free to choose one of the students whose parents had signed and approved the assessment 'My student'. The participants were in their second year of TE. Informed consent was obtained from the participants. All information collected was kept confidential (NSD 619149).

## Data analysis

The reflective texts (N 12) form the background of this analysis. For the first research question, we used deductive coding (Saldaña, 2021). We read the informants' reflective texts, and registered the informants' self-perceived report on the use of talk moves (RQ1). For example, a self-perceived use of

a talk move is indicated by a +, while an informant's report of no use of talk moves is indicated by a 0 (see Table 13.2).

Regarding RQ2, we used both a deductive and an inductive method. Indeed, we analysed the PSTs' reports of 'used moments' (see Table 13.3) and 'lost moments' based on Alexander's (2020, p. 131) six principles of dialogic talk. However, we also searched across the data to find repeated patterns of meaning. Thematic analysis 'involves the searching across a data set – to find repeated patterns of meanings' (Braun & Clark, 2006, p. 86).

There was a contiguity between high or low reports of talk moves such as *say more/explain*, *challenge*, and *press for reasoning*. In this context, we introduced the code 'ISTC-friendly talk moves'. For example, based on the participants' reflections, we categorised the 'lost moments' into themes such as 'lost connection with the student', 'lack of time', 'not using *wait time*', 'I asked a negatively charged question', and 'I didn't ask a follow-up question'. We labelled these 'lack of confidence and ability to ask a spontaneous follow-up question' and 'the silence was too long'.

## Findings

### **What talk moves did the PSTs articulate in their reflective texts?**

Using illustrative examples, this section presents the PSTs' reflections on their different use of talk moves during the ISTCs.

We have outlined the following detailed overview of the informants' self-reported use of talk moves.

**Table 13.2**

*Informants' self-reported use of talk moves (based on O'Connor & Michaels, 2019; Kazemi & Hinz, 2014)*

| Talk moves/PST             | Liv | Siw | Ola | Sam | Ian | Joe | Thea | Lilly | Eva | Ben | May | Evvy | Result |
|----------------------------|-----|-----|-----|-----|-----|-----|------|-------|-----|-----|-----|------|--------|
| <i>Say more/ explain</i>   | +   | 0   | +   | +   | +   | +   | +    | +     | 0   | 0   | +   | +    | 10     |
| <i>Revoice</i>             | +   | 0   | 0   | 0   | +   | +   | 0    | +     | +   | +   | 0   | +    | 7      |
| <i>Restate/repeat</i>      | +   | +   | +   | +   | 0   | +   | 0    | 0     | 0   | 0   | -   | 0    | 8      |
| <i>Press for reasoning</i> | +   | +   | +   | +   | +   | +   | +    | 0     | +   | +   | 0   | 0    | 9      |
| <i>Challenge</i>           | +   | +   | +   | +   | +   | 0   | +    | 0     | +   | +   | +   | +    | 10     |
| <i>Agree/ disagree</i>     | 0   | 0   | 0   | 0   | 0   | 0   | 0    | +     | 0   | 0   | 0   | 0    | 1      |
| <i>Add on</i>              | +   | +   | +   | +   | +   | 0   | 0    | +     | 0   | +   | +   | 0    | 8      |
| <i>Wait time</i>           | +   | +   | 0   | 0   | +   | +   | 0    | 0     | +   | 0   | +   | 0    | 6      |

*Note:* Informants' self-perceived estimates were derived from the written assessment. For example, a self-perceived use of a talk move is indicated by a +, whereas an informant report of no use of talk moves is indicated by a 0.

Table 13.2 shows the PSTs' tendency to report using the talk moves *say more/ explain*, *press for reasoning*, *challenge*, *repeat*, and *add on*. Only six PSTs reported *wait time* as one of the moves they used and felt comfortable with, and only one PST reported using *agree/disagree*.

## What reasoning did the PSTs use in their reflections when describing 'used moments' and 'lost moments' in their ISTCs?

### 'Used moments'

In the following section, we examine our findings in relation to RQ2. First, we highlight the PSTs' description of their 'used moments', meaning the moments when they felt that they were successful in the conversation with their student.

Table 13.3 gives an overview of the questions that the PSTs selected and transcribed as a successful move.

**Table 13.3**

*An overview of the PSTs' talk moves and reasoning in relation to 'used moments'*

| PSTs  | The PSTs' reported question (talk move)                                                                            | PSTs' reasoning                                                                                                                             |
|-------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Liv   | Talking about a difficult friendship in class: So why do you think so? ( <i>Press for reasoning</i> )              | I realise that the student is willing to open up a little to me.                                                                            |
| Evy   | Why didn't you like social science? ( <i>Press for reasoning</i> )                                                 | I managed to challenge the student in what ways the social studies classes should be arranged so that he would enjoy this subject better.   |
| Joe   | How do you think we can make grammatical inflection easier? ( <i>Challenge</i> )                                   | As teachers we value and take input from the students so that we can teach in a more adapted way.                                           |
| Thea  | Is it ok for you to read loud in the class? ( <i>Challenge</i> )                                                   | It became a more meaningful conversation.                                                                                                   |
| Eva   | What if you are not so secure then? ( <i>Challenge</i> )                                                           | The student realised that it was not embarrassing to raise his hand.                                                                        |
| May   | Can you elaborate why it is annoying to work together with your friends in group work? ( <i>Say more/explain</i> ) | I used <i>wait time</i> as a talk move, which gave the student the opportunity to reflect on her own attitudes.                             |
| Siw   | How is the learning environment in your class? ( <i>Challenge</i> )                                                | I felt that this very moment set a standard for the rest of our conversation. She opened up more and continued to elaborate on her answers. |
| Ian   | How do you feel about working with the others in the class? ( <i>Challenge</i> )                                   | I elicited the student's awareness of his own attitudes towards group work.                                                                 |
| Ola   | What else do you do in your spare time? ( <i>Say more/explain</i> )                                                | I became familiar with the student at a deeper level.                                                                                       |
| Lilly | Talking about noise in class: What do you mean about that? ( <i>Challenge</i> )                                    | The student put forward his own opinions.                                                                                                   |
| Sam   | What can you contribute to improve the language subject? ( <i>Challenge</i> )                                      | I give the student opportunities to take responsibility for his own learning.                                                               |
| Ben   | How can you then work to get a better attitude towards the subject? ( <i>Challenge</i> )                           | He realises the importance of his own attitudes in relation to relationships.                                                               |

In order to classify the PSTs' reasoning behind their 'used moments', we identified three types of talk moves that the PSTs reported as successful: *press for reasoning*, *say more*, and *challenge*. *Press for reasoning* was identified when the PSTs used the interrogative pronoun 'why', whereas *challenge* included other questions. We classified these talk moves as 'ISTC-friendly talk moves'.

## **'Lost moments'**

Eight PSTs reported on lost moments. Thea, Liv, Joe, Lilly, Ben, and Evy related their 'lost moments' to lack of confidence and ability to ask spontaneous follow-up questions. For example, Liv and Thea used the following phrase to describe the situation: 'I lost the connection with the student'. Evy explained that she felt uncomfortable at the beginning of the ISTC.

*I didn't ask a follow-up question. (We were talking about the 'school road'.) This occurred in the beginning of the ISTC. I got more comfortable later in the conversation with the student. I think this is why it became a 'lost moment'.*

Ola and Sam related 'lost moments' to the talk move *wait time*. Ola expresses the following when reflecting on why it was difficult to use *wait time*:

*I could have given the student more time between each question. This is probably because I felt uncomfortable being silent for too long. I could have given the student more time for each question. Instead, I was probably being a bit directive and leading the student in a certain direction rather than giving him time to think.*

In sum, the PSTs' descriptions of 'lost moments' were situations in which they could not seize the moment (Stern, 2004) and keep the conversation going. The two categories that emerged from the data were: 'Lack of confidence and ability to ask spontaneous follow-up questions', and 'the silence was too long'.

## **Discussion**

### **Reflections on PSTs' use of talk moves**

In the first part of their analysis of their reflective texts, the PSTs were asked to report on their use of talk moves (see Table 13.2), which corresponds to RQ1: What talk moves did the PSTs articulate in their reflective texts? There are some interesting findings here.

First, the high degree of coherence between the talk moves reported in Table 13.2 and the talk moves they highlighted in their successful moments ('used moments') in Table 13.3 (RQ2). The talk moves the PSTs used predominantly were *say more/explain*, *challenge*, and *press for reasoning*. It seems that the PSTs were comfortable to use these talk moves because they both identified them and lifted them forward as successfully used talk moves.

Secondly, it is surprising that only six PSTs reported *wait time* as one of the talk moves they actively used and felt comfortable with. From the first term of TE onwards, the subject pedagogy focuses clearly on *wait time* as a general pedagogical tool of classroom management. Two PSTs mentioned *wait time* as a reason for their 'lost moments'. This may indicate that *wait time* is a difficult conversational tool to pick up and, therefore, important to rehearse (O'Connor & Michaels, 2019, p. 172).

Thirdly, only one PST reported having used the talk move *agree/disagree*. The reason for this may be that this talk move can include questions that students may perceive as leading and directive. On the other hand, *agree/disagree* is often combined with the talk move *revoice*, which may stimulate students to agree or disagree as a way of extending their thinking (Alexander, 2018). Student thinking should have a natural place in ISTCs.

## Reasoning behind talk moves in 'used' and 'lost moments'

The second research question relates to the question of what reasoning the PSTs used in their reflections when describing 'used moments' and 'lost moments' in their ISTCs.

In the following subsections, we explore different possible theoretical explanations that can help understand the PSTs' reasoning.

### 'Used moments' and 'dialogue-friendly talk moves'

As shown in Table 13.4, the PSTs' reasons behind their talk-move choices can be linked to Alexander's (2020) principles of dialogic talk:

**Table 13.4**

*An overview of the PSTs' talk moves and principles in 'used moments'*

| PSTs  | The PSTs' reported question<br>(talk move)                                                                         | PSTs' reasonings                                                                                                                            | Principles<br>(Alexander, 2020) |
|-------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Liv   | Talking about a difficult friendship in class: So why do you think so? ( <i>Press for reasoning</i> )              | I realise that the student is willing to open up a little to me.                                                                            | <i>Supportive</i>               |
| Evy   | Why didn't you like social science? ( <i>Press for reasoning</i> )                                                 | I managed to challenge the student in what ways the social studies classes should be arranged so that he would enjoy this subject better.   | <i>Supportive</i>               |
| Joe   | How do you think we can make grammatical inflection easier? ( <i>Challenge</i> )                                   | As teachers we value and take input from the students so that we can teach in a more adapted way.                                           | <i>Supportive</i>               |
| Thea  | Is it ok for you to read loud in the class? ( <i>Challenge</i> )                                                   | It became a more meaningful conversation.                                                                                                   | <i>Supportive</i>               |
| Eva   | What if you are not so secure then? ( <i>Challenge</i> )                                                           | The student realised that it was not embarrassing to raise his hand.                                                                        | <i>Supportive</i>               |
| May   | Can you elaborate why it is annoying to work together with your friends in group work? ( <i>Say more/explain</i> ) | I used <i>wait time</i> as a talk move, which gave the student the opportunity to reflect on her own attitudes.                             | <i>Supportive</i>               |
| Siw   | How is the learning environment in your class? ( <i>Challenge</i> )                                                | I felt that this very moment set a standard for the rest of our conversation. She opened up more and continued to elaborate on her answers. | <i>Collective</i>               |
| Ian   | How do you feel about working with the others in the class? ( <i>Challenge</i> )                                   | I elicited the student's awareness of his own attitudes towards group work.                                                                 | <i>Collective</i>               |
| Ola   | What else do you do in your spare time? ( <i>Say more/explain</i> )                                                | I became familiar with the student on a deeper level.                                                                                       | <i>Purposeful</i>               |
| Lilly | Talking about noise in class: What do you mean about that? ( <i>Challenge</i> )                                    | The student put forward his own opinions.                                                                                                   | <i>Purposeful</i>               |
| Sam   | What can you contribute to improve the language subject? ( <i>Challenge</i> )                                      | I give the student opportunities to take responsibility for his own learning.                                                               | <i>Reciprocal</i>               |
| Ben   | How can you then work to get a better attitude towards the subject? ( <i>Challenge</i> )                           | He realises the importance of his own attitudes in relation to relationships.                                                               | <i>Reciprocal</i>               |

We found that four of Alexander's (2020) principles of dialogic talk – that is, the 'collective', 'supportive', 'purposeful', and 'reciprocal' principles (p. 131) – can be linked to the PSTs' 'used moments' and 'dialogue-friendly talk moves'. The principles characterise a classroom culture in which good dialogues are most likely to flourish. The learning potential has the best chance of being realised, and students will feel comfortable expressing and discussing ideas (Alexander, 2018, p. 566).

Table 13.4 shows that *press for reasoning*, *say more*, and *challenge* are the three talk moves that the twelve PSTs put forward when asked to present a successful moment in their ISTCs. The PSTs described their 'used moments' by highlighting a question that led to a continuation of the dialogue and stimulated the students to deepen their own reasoning. The data show that most PSTs started their 'used moment' with an open and authentic question, initiated by 'How?', 'Why?', or 'What if?'. According to Alexander (2018), this encourages 'reasoning, speculation and more active cognitive and indeed social engagement' (p. 583).

As Ben puts it in his reflective text: 'An ISTC is a valuable tool to understand and meet the student in the best possible way'. By using 'dialogue-friendly talk moves' he gets better acquainted with the student and has a more solid plan for arranging further learning activities for this student.

The PSTs chose their successful moments ('used moments') because these worked well in their ISTCs, and the student responded positively. Each of the 12 PSTs identified and highlighted a moment that they felt was successful. This may indicate that they had managed to create an atmosphere in which the students felt safe and comfortable, which is essential in any dialogic conversation (Alexander, 2020; Hennessy et al., 2021, p. 187).

*Press for reasoning* and *challenge* are the talk moves that deepen the students' reasoning. Based on O'Connor and Michaels' (2019, p. 174) research, these talk moves are easy to learn. This may explain why most of the PSTs chose one of these talk moves as a 'dialogue-friendly talk move'.

If we look at Ben's 'used moment' in which he asked how the student could work to obtain a better attitude towards a specific subject, he challenges the student to find a solution:

*He (the student) had previously talked about having a bad relationship towards one of his teachers, but after our conversation he (the student) realised that his attitudes reflected on himself. He*

*understood that if he changed his attitudes, he could have a better relationship with the teacher in that subject.*

By using the talk move *challenge*, Ben opens the conversation about the student's attitude. The student could have chosen not to respond. The response suggests that the student felt safe and had a good relationship with Ben, and therefore changed his attitude during the ISTC (Hennessy et al., 2021, p. 187). This corresponds with the *reciprocal principle*, which is based on mutual respect (Alexander, 2020, p. 131).

The *purposeful* was the fourth principle that we identified as 'a dialogue-friendly talk move'. The purposeful is referred to as an open dialogue that is structured with specific learning goals in view (Alexander, 2018, p. 566; Alexander, 2020, p. 131).

Ola's question relates to the student's leisure time. He used the talk move *say more*, which is described by O'Connor and Michaels (2019) as a talk move that provides 'all listeners with more information or clarification', lets 'the student know that the teacher wants to understand', and makes 'the student feel more entitled to participate as the class goes forward' (p. 167). Ola argued that this was important for his own understanding of the student, and for the student's further learning. He described the talk move *say more* as his successful 'used moment': 'I got to know the student at a deeper level, and I think the ISTC can be seen as a tool for classroom management and building relationship' (Ola).

*Say more/explain* can be challenging for both teachers and students, but it also seems to be a talk move that can provide new insights for both. This use of *say more/explain* shows how meanings and understanding are created in and through language (Dysthe, 1997). We interpret that it is important for Ola to know this student at a deeper level, to strengthen the relationship with his student (Sabol & Pianta, 2012; Limstrand, 2006).

The *purposeful principle* is, in the research literature on dialogic talk, mostly related to gaining increased understanding in a specific subject, but it can also have a broader pedagogical goal, as shown in Ola's argumentation here (Kim & Wilkinson, 2019, p. 79).

We have put forward two interesting examples of 'ISTC-friendly talk moves'. Table 13.4 shows that all PSTs were able to use talk moves that we can connect to four of Alexander's (2020, p. 131) principles (the *supportive*, *collective*, *purposeful*, and *reciprocal*) in their texts. In sum, the data show that the ISTCs can fairly be called dialogic.

However, the findings show that the PSTs did not manage to act upon all critical moments (Myhill & Warren, 2005) in their ISTCs, which will be under scrutiny in the following section.

### **‘Lost moments’: Lack of cumulative and deliberative principles**

In our study, we examine, inter alia, lost moments, that is, critical moments ‘where an opportunity to build on a child’s response has been missed’ (Myhill & Warren, 2005, p. 59). The PSTs’ reasons behind ‘lost moments’ can, in one way or another, be linked to a sequence in their ISTCs where the dialogue stopped.

In this context, some PSTs reported a lack of confidence and the ability to ask ‘a spontaneous follow up question’, whilst others reported on the troublesome talk move *wait time*, articulated as ‘the silence was too long’. Their reasoning can be understood as a lack of cumulative skills.

The cumulative principle is explained as a ‘way the participants build on their own and each other’s contributions and chain them into coherent lines of thinking and understanding’ (Alexander, 2018, p. 566). It is a difficult principle to enact because it tests the PSTs’ insights into the students’ understandings and demands interactive skills to take those understandings forward.

As explained by Alexander (2020), *cumulative* means that teachers and students build on the insights they and others already have, so that understanding is extended into coherent lines of thought and questioning. Three of the PSTs linked their ‘lost moment’ to the fact that they did not manage to make ‘a spontaneous follow-up question’. Here is Evy’s reasoning.

*I was not able to ask a follow-up question. (We were talking about the school road). This occurred in the beginning of the ISTC. I got more comfortable with the student later in the conversation. I think this is why it became a ‘lost moment’.*

The PST was not comfortable in the setting and did not build on the student’s experience with the school road. Dialogic talk requires teachers to have the skills to improvise (Erickson, 2011), and to make decisions and revisions to find the most appropriate stepping stones to further students’ understanding, and allow them the freedom to explore (Boyd, 2012, p. 48).

Evvy did not manage to do this. She lost the possibility to extend this dialogue, all of which might be linked to the cumulative principle. The cumulative principle is probably the most difficult to implement, as it requires the teacher to have a good understanding of where the talk is going at any given moment. It needs 'knowledge of the desired outcome and the ability to scaffold children's thinking towards that outcome' (Alexander, 2020, p. 132).

This shows that the *cumulative principle* requires a broader and deeper understanding of the student than it is possible to get during one single practicum period. In other words, more rehearsal will be required in TE to achieve this level of dialogic talk.

### **'The silence was too long'**

Two of the PSTs reported on the talk move *wait time* as a reason for their 'lost moments'. They became stressed and did not manage to give the student a moment to think and deepen his argumentation. In the category 'the silence was too long', the PSTs were not able to listen and wait for the student's next step.

Alexander emphasises that an important part of the dialogue is for the teacher to allow appropriate *wait time* (Alexander, 2018, p. 583). If the PSTs did not master *wait time*, the ongoing dialogue stopped, and the PSTs were unable to ensure the student's needs, requirements, and thoughts (Hennessy et al., 2021).

On the other hand, merely withholding the teacher's response slightly longer than what is natural in the situation may be perceived as a break with expectations of normality, and as potentially detrimental to dialogic ISTCs.

In our findings, we do not have any results that point to the *deliberative principle*. One reason for this may be the given design of the compulsory task, in which the PSTs were not specifically asked to solve a common problem or dilemma, and to elaborate on pros and cons.

## **Conclusion**

Our research shows that the PSTs emphasised the talk moves *press for reasoning*, *say more/explain*, and *challenge* when reporting on successfully 'used

moments'. These talk moves provide a basis for dialogue and mutual participation. Recent research (Howe et al., 2019; Hennessy et al., 2021) has shown that questioning and elaboration are productive talk moves for student participation, and therefore important in ISTCs. The PSTs managed to implement talk moves and could, to some extent, promote a good dialogue. However, not all talk moves that usually play an important role in a dialogue were shown in our data.

More rehearsal during TE is probably needed both in relation to *wait time* and the skills to improvise, for example, to use 'spontaneous follow-up questions'. In other words, the present study uncovered not only the need for PSTs to rehearse and implement 'ISTC-friendly talk moves', but also the need to learn more about interactive conversations in general.

The talk moves linked to 'used moments' demonstrate the supportive nature of dialogic talk, while the reasons for 'lost moments' were primarily related to lack of cumulative skills. In the implementation of ISTCs, it is important to master a repertoire of talk moves that embrace most of Alexander's (2020) six principles of dialogic talk. TE should emphasise this approach in future assessments.

Working with the assignment 'My student' in the various phases helped increase the PSTs' awareness of how they can use talk moves to promote both good student-teacher relationships, and student participation in ISTCs. Moreover, the results indicate that PSTs can gain increased awareness of their own dialogue skills when articulating the possibilities and shortcomings of both conducting and analysing an ISTC. The implication for teacher educators here is to develop their role as a mentor and catalyst for dialogic change when rehearsing and reflecting with PSTs on enacted ISTCs.

Based on these findings, the obligatory assignment 'My Student' represents a possible answer to two important calls. First, TE must focus more clearly on student involvement. In fact, 'student participation should be a specific topic in teacher education and included in PSTs' placement' (Faannessen et al., 2022, p. 7). Second, our study provides an example of 'expanded practice' (Advisory Council for Teacher Education, 2024) in TE. Indeed, the use of the assignment 'My Student' shows that PSTs, through experimentation, active participation, exploration, and rehearsing in authentic situations, developed a repertoire that may help strengthen their professional development and competence as future teachers.

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Part 4

## **Empirical Aspects of Rehearsing Across Teacher Education Programs**



Sfard, A. (2025). The routes we walk are made by walking: What it is that we rehearse and how we do it. In M. A. Cabot, S. M. Høisæter & V. Vangsnes (Eds.), *Rehearsing for teaching: Theoretical and empirical approaches to a practice-based teacher education* (pp. 313–325). Fagbokforlaget. DOI: <https://doi.org/10.55669/oa6005P4>

## Prologue 4

# **The routes we walk are made by walking: What it is that we rehearse and how we do it**

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We usually use the word intuition – sometimes also judgment or even creativity – to refer to [the] ability of experts to respond... almost instantaneously.  
– Herb Simon

My first-ever stint with classroom teaching was a formative experience. I had just completed my first year as a mathematics student when I was asked to replace a secondary mathematics teacher who had unexpectedly quit her job. Seeing this as an opportunity to improve my faltering financial status, I complied. Although I had never taught before, I believed I would manage. I am pretty competent in secondary mathematics, I told myself, and it is surely all I needed to teach.

Little did I know, though. My first encounter with a class was quite a disaster. I remember myself standing speechless in front of thirty youngsters waiting for me to open my mouth. When I was eventually able to emit a sound, sentences came out reluctantly, like water from a broken tap. At that moment, I realised that I had never spoken mathematics with anybody but myself (with my teachers, I corresponded about mathematical objects in a written code).

This traumatic experience put me on the path I have been following ever since then. I began a life-long quest for answers to two simple questions: *What makes the teacher able to act on the spot without deliberating? How does she develop this ability?*

In this book, dealing with the role of rehearsals in ushering prospective teachers into their professional practices, I will try to summarise what we have learned about these two issues so far. In a nutshell, my current answer to the first question may be presented in one word: *routine*. In this paper, this last word is to be understood as referring to a known form of action to which a person returns whenever in a situation, reminding her of its past applications. A rich repertoire of well-developed professional routines is the basis of the expert teacher's smooth functioning.

It is the second query where the hero of this volume, the *rehearsal*, enters the scene: rehearsing may be the best way to introduce a new routine to a future teacher who does not yet have fully fledged access to the school classroom. And yet, the effectiveness of rehearsing as a method for developing a repertoire of routines may be obstructed by the phenomenon known as the *situativity of learning*. Armed with recent insights from cognitive neuroscience, combined with what is known about the workings of social factors, I will try to fathom the mechanisms behind this phenomenon, and propose techniques for maximising the benefits of rehearsing.

## What makes the teacher able to act on the spot without deliberating?

Consider the following general truth: In the majority of familiar life situations, not just in the classroom, we know what to do – we are able to act in an immediate, instinctive manner. Whether we bump into a friend in the street, shop in a supermarket, stand at the whiteboard, or try to rest, we know what to do without being told, and without deliberation.

The first of my above two questions can thus be generalised: *When you are in a familiar situation in which you need to act, what is it that makes you able to decide on the spot what to do?* A moment of thought and you realise that the source of this immediate action is... your *experience*. It is what you, or other people, did in the past in a similar situation that you are likely to repeat now. And to say it in more detail, when you find yourself in a situation in which you feel obliged to act, you tend to recall a past situation sufficiently similar to the present one to justify doing now what was done then, whether by yourself or by others.

To say it more succinctly, let me replace the words ‘situation in which you feel obliged to act’ with the term *task-situation* and ‘a past situation sufficiently similar to the present one to justify doing now what was done then, whether by yourself or by others’ with just one word: *precedent*. What I just said in a long, complex sentence can now be stated in a much shorter and clearer one: *When you find yourself in a task-situation, you tend to recall a precedent.*

Indeed, we go through our lives repeating our own and other people’s past actions. The important conclusion follows from here: The repetitions create patterns of action. It is such a recurring way of doing things that we call ‘routine’. You recognise a routine by its two elements. First, there is the *task*, the set of all those elements of the precedent event that we wish to preserve, or to return to now. Then, there is the *procedure*, something that was done in the precedent situation and is now deemed helpful also in executing the present task. In simpler words, the *task* is something that must happen as the result of the routine performance, and the *procedure* answers the question of how it will happen. In deciding about tasks and procedures, we draw on precedents.

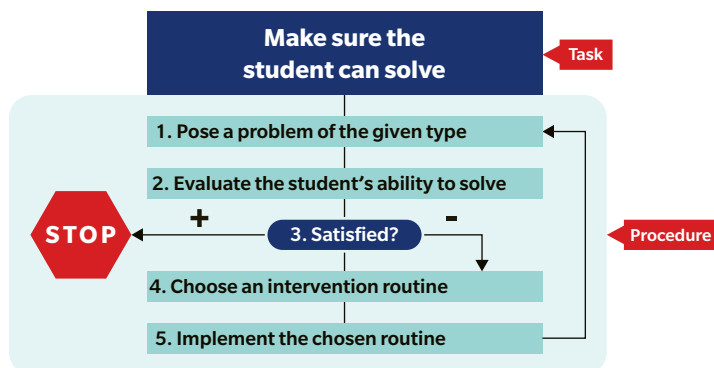
While doing this, we need to remain alert to two facts. First, our performance and its results will always differ from the previous ones in some respects, because the present task-situation, although similar to the precedent one, is

still different. Thus, both the task and the procedure are general *descriptions* of action, detectable in specific performances, but not identical with them. These are general schemes of action, performable in a range of situations. Like any prescription, whether algorithmic or heuristic, they may be applied to numerous inputs.

Second, neither the task nor the procedure is a free-standing construct. These two are products of individual interpretations of task-situations, and as such, they depend on both the situation and the interpreter. Two people faced with seemingly the same task-situation may see themselves as charged with very different tasks.

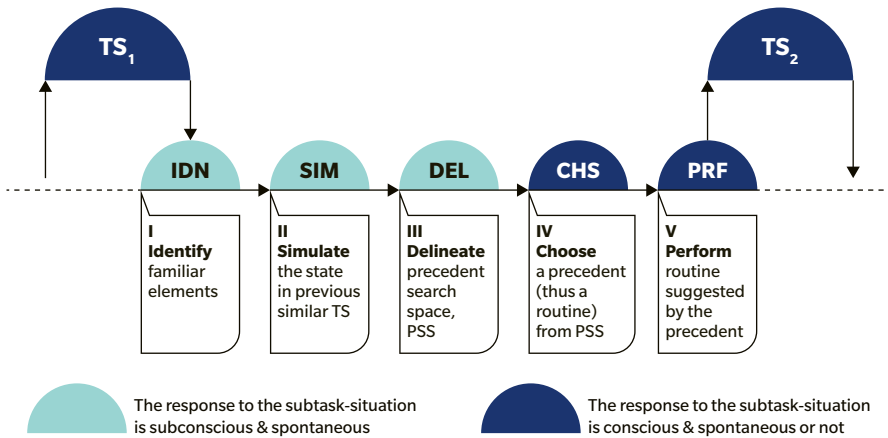
Let me illustrate all this with an example of a teaching routine. Suppose a mathematics teacher is tutoring a student (see e.g. Heyd-Metzuyanim, 2013). The flowchart in Fig. P4.1 presents schematically the sequence of moves the teacher is likely to undertake in this one-to-one interaction. The *task* she probably has in mind is to ensure that the learner becomes capable of solving a certain family of problems. Her *procedure*, implemented every time a new type of problem is to be learned, begins with posing a question (see step 1 in Fig. P4.1), and watching the girl's subsequent actions while also evaluating her ability to solve (step 2). If the teacher feels satisfied with what the student has done (see the left arrow from the diamond shape 3 symbolising the act of decision-making), she stops and moves on to another family of problems, where the routine <1,2,3,4,5> will be performed again. If not (see the right arrow), she chooses a sub-routine for intervention (step 4). It can be a straightforward 'telling' or an attempt at eliciting the student's own ideas. The sub-routine is then performed (step 5), after which the teacher returns to the stage of posing a problem (step 1). She would now choose a question from the same family as the previous one, so as to be able to check whether the desired learning has occurred. If satisfied by the girl's performance in the new implementation of the procedure (step 3), she would move to a problem of a different kind, and apply the routine <1,2,3,4,5> again. If not, she will continue to steps 4 and 5.

Figure P4.1



Let me mention some important features of routines (more can be found in, e.g., Sfard, 2023). To begin with, *routines are recursive constructs*: each of them is built from parts that are routines in themselves, possibly also useful as building blocks of other compound routines. As can be understood from here, *routines come in different sizes*. The smallest, simplest routines, those that cannot be decomposed and are performed in a single step, are called *atomic*. Large ones, such as the one in Fig. P4.1, or those for coordinating whole-class discussions, and monitoring students' group work, are often referred to as *practices*. In professional development (PD) courses, we tend to care about the latter (practices), but not necessarily about the former (atomic).

Further, every teacher has her own constantly developing set of routines, which are usually tightly interconnected and, as such, *constitute a network*. Finally, *the fact that we act in routinised ways does not preclude creativity*. This claim may sound paradoxical, but it becomes more convincing when we realise that *routines are the building blocks of all our activities, including those that are new to us*. This last point will become clearer when some thought is given to the question of how one chooses from her network-like repertoire of routines while building her actions.

**Figure P4.2**

When in a task situation in the classroom, an experienced teacher makes such choices in few very brief steps, of which she remains mostly unaware. The diagram in Figure P4.2 schematically presents these moves in a structure that has been called an *action-cycle*, because the sequence repeats itself time and again as long as a person remains active. In step 1, the teacher automatically *identifies* familiar objects, verbs, and people that, for her, define the task-situation (she notices these characteristics because she perceives them as relevant to her current needs; with Gibson (1966), we call them *affordances*). As we learn from cutting-edge neuroscience, the recognition of all these situational elements instantaneously leads her to step 2, that of *simulation* (Barsalou, 2009). In our present context, simulation means that her whole organism returns to the bodily, cognitive, and emotional state in which she was in her previous encounters with all these elements. It is as if she was predicting that what was done then will also be done now. In step 3, the one of *delineating*, a 'precedent search space' (PSS for short) is determined. It consists of past task situations – or classroom moments – similar to the one in which the teacher is now. These three first steps are usually fully subconscious.

This may change now, in step 4, when the teacher scans PSS, searching for a suitable precedent. The reduction of the search to PSS is what makes this task feasible. The choice can be made automatically, or in a reasoned, conscious

way. Equipped with a precedent, the teacher can now, in step 5, interpret the task-situation, that is, decide about the task she is supposed to perform, and the procedure with the help of which she will do this. The procedure can be complex and may lead her through several interim task-situations, each of which will present her with its own sub-task and will dictate its own round of steps 1 to 5. The sub-tasks, in turn, may also be complex and require the execution of their own sub-procedures. The original task will be completed when the teacher, in this nesting of sub-tasks and sub-procedures, reaches atomic routines, those that she can perform in a single step.

When all this is done, the circle closes. The completed cycle leaves the teacher with some products – for instance, in the form of a new question to be presented to students – and thus in a new task-situation, which will be followed by a new round of actions from 1 to 5. Her overall activity in the classroom will be a long chain of such cycles. The more experienced she is in the performance of the routine, the smoother, and more rapid, the corresponding action cycle. According to neuroscience, the recurrent performances of a routine pave the neuronal path along which these performances are produced. Eventually, the path turns into the king's road, one with which no other trajectory can compete. The iterated pattern of action becomes the default option for a given task-situation. It is now chosen *automatically*, that is, without the need for the deliberative stage 4 ('choose') in the action cycle. It is *an automated* routine that every preservice teacher wishes to be equipped with before completing her PD course. But can it really happen? If yes, then how? To answer this, let me address my second question.

## How does the teacher develop her professional routines?

So, what are the origins of routines? Imagine yourselves in a task-situation in which you have never before participated *as an actor*. Say, you are a novice teacher facing a class for the first time. You have several options. You may seek other people's help, you may try to do what you learned in PD, and you may, if possible, emulate the performance of an experienced teacher whose actions you had an opportunity to observe in a similar task-situation.

But you may also try to invent your own way of acting. Once upon a time, as an accidental and entirely unprepared teacher, I had no verbal advice to rely on and no instructions to follow, but I could either emulate my own teachers or try to derive new ways of acting from my knowledge of mathematics, combined with my own experience as a learner.

But whatever trajectory I chose, I had recourse to my existing routines: I was building new ways of acting from the basic steps in which I was already adept at that time.

So far, I have sketched the different ways in which a new habitual way of doing things may start budding. But how does such an emerging pattern turn into a fully fledged routine? For this, a number of similar performances in similar task-situations is necessary. Research has helped us to assess the approximate number of necessary repetitions: '[S]tudies have shown it takes, on average, 20 separate instances of practice before a teacher has mastered a new skill, with that number increasing along with the complexity of the skill' (Joyce & Showers, 2002). Thus, just like the routes we walk are made by walking, so are teaching routines made by teaching.

When put this way, things appear simple. Once you have a procedure, whether copied from your own teachers, explained to you by others, or invented by yourself, all you must do to fully routinise your actions is implement this procedure again and again. But this is not as simple as it sounds. Indeed, we seem to have a paradox here: on the one hand, to develop a routine, you have to gain much experience in actual teaching; but on the other hand, how can you teach without already having this experience?

This paradox, and the resulting inherent difficulty of the task, may be the reason why teacher preparation, as practised these days around the world, evokes much discontent. This sentiment can be found, for instance, in the already more than ten-year-old, but still relevant, report on PD by the US National School Boards Association's Center for Public Education. According to the *Washington Post* article with the telling title, 'Why most professional development for teachers is useless?'<sup>1</sup>, the authors of the report ventured the diagnosis: 'The reason traditional PD (professional development) is ineffective

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1 <https://www.washingtonpost.com/news/answer-sheet/wp/2014/03/01/why-most-professional-development-for-teachers-is-useless/>

is that it doesn't support teachers during the step of learning with the steepest learning curve: implementation.' The step of *implementation* is exactly the one in which I am now interested: this is the step of practising, that is, of using the budding routine in teaching.

So, how can preservice teachers be helped to turn a budding routine into a fully fledged one? How can we ensure that she can practise when not yet fully competent in identifying the opportunities for using a given sequence of actions, and when her performance of the sequence is still shaky, and potentially full of errors? Letting her enter the classroom may not be in the children's best interest. So, what can she do?

Yes, you guessed it: she may rehearse it in front of her colleagues. The word *rehearsal*, borrowed from the discourse of theatre, where it means 'a private performance or practice session preparatory to a public appearance'<sup>2</sup>, signals that the routine would be performed in circumstances different from those in which it is meant to be used in actual teaching. Thus, rather than being held in a school classroom, it will happen in the university hall, and rather than involving interaction with school children, it will be performed in front of fellow students playing the role of students. Sounds ingenious and simple – but is it?

As I will try to explain now, the change of the audience and scenery is not a benign move and may affect the effectiveness of the rehearsal.

## The challenges of rehearsals

Whereas it is quite obvious that rehearsing a procedure may help you become proficient in its *performance*, it is not at all evident that it will make you fully prepared to *recruit* this procedure whenever appropriate.

Indeed, a long series of research studies has shown a rather disturbing phenomenon: routine developed in task-situations of one type, say in a school setting, is unlikely to be recruited in task-situations of another type, say in your local grocery store, even if it could be helpful. This message has been

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2 <https://www.merriam-webster.com/dictionary/rehearsal>

corroborated time and again in a long series of studies conducted in widely varying social and cultural environments. In particular, it was shown that even those who have graduated from school with a satisfactory command of mathematical routines rarely use these routines in everyday settings, such as supermarkets (Lave, 1988), or workplaces (Scribner, 1997).

Researchers summarised these and similar findings as showing the *situativity of learning*, with this expression signalling that

[t]he activity in which knowledge is developed and deployed... is not separable from or ancillary to learning and cognition. Nor is it neutral. Rather, it is an integral part of what is learned. Situations might be said to co-produce knowledge through activity. Learning and cognition... are fundamentally *situated*. (Brown et al., 1991, p. 32; emphasis added).

Aware of this phenomenon, we seem to have good reason to fear that PD graduates, once they find themselves in school, may tend to shun the routines they learned and rehearsed in the university. This would mean that rehearsals are less effective as a means of teacher preparation than we would wish them to be.

To be able to counter the impact of situativity, we have to understand its sources. For this, let us return to the activity cycle (see Fig. P4.2) and look at the way routines are recruited in task situations. A closer glance will reveal quite a few factors likely to obstruct the choice of the rehearsed routine.

To begin with, the simulation performed in step 2 will prove unhelpful if it filters out the university experiences. You cannot defend yourself against such omission because the simulation, and thus also the act of delineating PSS (step 3), are subconscious and thus cannot be controlled. Unfortunately, in the transition from rehearsals to authentic teaching situations, the chances of ending up with an unhelpful PSS are quite high. The elements that, for the PD graduate, define school situations are quite different from those to which she got used in the university, where she rehearsed the routine. Above all, her task as a schoolteacher is very different from the one she faced while rehearsing. Indeed, in school, the teacher strives to introduce children to something they do not yet know, but when she was in the university and rehearsed a relevant routine in front of her peers, she just aimed to manifest her command of this routine. After all, it was a pretend game, in which the participants acted as if

they were learning something they already knew. Obviously, the university and school contexts evoke different reactions and carry different risks. Because of these differences, the teacher, in the subconscious process of simulation, is unlikely to associate the school task-situation in which she is now with the allegedly 'equivalent' situation in which she was at the time of a rehearsal.

Even if the rehearsed routines did manage to sneak through the filter of simulation and are now a part of the teacher's PSS, in the subsequent step 4 she may fail to opt for any of them because of two principles that tacitly govern her choices.

The first of these principles, to be called here *the Law of Minimising Effort (LoME)*, has been formulated by the recently deceased Nobel-prize-winning psychologist, Daniel Kahneman: *'If there are several ways of achieving the same goal, we tend to opt for the least demanding course of action.'* The primacy of the least onerous option stems from your organism's natural tendency to optimise the expenditure of energy. It means that whenever in the situation of choice, you tend to opt for the shortest, least onerous route. Only too often will the winning candidate be an idiosyncratic shortcut, made possible by the specificities of a given situation and applicable exclusively to this situation. The PD graduate will tend to choose the shortened course of action time and again, and its resulting automation will reduce the appeal of the rehearsed routine even further.

Because of another choice-guiding principle, this time related to our social rather than biological needs, the teacher may favour her colleagues' routines over those she rehearsed in PD courses. Named *the Law of Maximising Acceptability (LoMA)*, this principle may be formulated as follows: 'We tend to choose ways of acting that seem to us likely to maximise social rewards and minimise punishment.' As teachers, we choose what our institution expects us to choose, or what we guess would be the choice of a revered colleague. Above all, we gravitate towards hegemonic discourses, and thus towards routines of those whom we consider as 'the owners' of these discourses. Finally, we tend to opt for what is popular, taking popularity as evidence of the superiority of the given option, and we rarely admit that the reverse may be true: that we consider something superior only because of its popularity.

To sum up, the answer to the previously asked question 'Why situativity of our routines?' can be stated as follows: The main reason is our subconscious reliance on simulation, combined with our tendency to minimise effort and

maximise the rewards for our actions. This insight may help in counteracting situativity.

Thus, one of the self-imposing conclusions is that, to increase the effectiveness of rehearsals, teacher educators may try to make student-teachers aware of the tacit workings of LoME, and LoMA. Future teachers can also be explicitly encouraged to oppose the impact of these two principles. For this, they need to exercise mindfulness, critical thinking, and open-mindedness. All these skills are necessary if the teacher is to be able to counteract the pull of the crowd, and resist the appeal of thrifty, automatic solutions.

Interweaving staged and authentic performances of the desired teaching routines, already from the outset, seems to be yet another action likely to have a positive impact on the effectiveness of rehearsals.

How all this can be done, and whether it will have the desired effect, is still an open question, requiring careful theoretical analysis and rigorous empirical examination. I stop here, leaving the due considerations to other contributors to this anthology.

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Prologue 5

## **Problematizing core practices and approximations of practice (rehearsals) in teacher preparation**

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**Abstract:** It is increasingly recognised that teaching involves more than transmission of knowledge and rather, is viewed as multi-dimensional, where the teacher occupies a number of different roles beyond that of subject expert or preparing students for standardized tests. Initial teacher preparation marks the first stage of an educators' professional journey and aims to prepare preservice teachers to become effective practitioners equipped with the knowledge, skills and attitudes that will serve to meet the increasing demands of the profession. It is within this setting that preservice teachers engage with the complexities of the teaching profession. It is an intensive learning experience requiring preservice teachers to adopt the dual role of learner and teacher simultaneously. For more than a decade, teacher preparation scholars have called for a reconceptualization and reorganization of teacher preparation programs that focus more centrally on the practice of teaching. Practice-based teacher preparation provides preservice teachers with learning opportunities including the enactment of teaching – practice that is mediated and deliberate, therefore, supporting novices in learning how to use knowledge in action. One possible pedagogical enactment of this approach is a focus on core practices and approximations or rehearsals of practice. Teacher preparation programs that adopt these approaches must consider the pedagogies that enable their inclusion. This short prologue sets out to briefly describe and problematize the inclusion of core practices and approximations of practice (rehearsals) in teacher preparation. A brief introduction to practice-based teacher preparation and core practices is advanced by way of context. Next, the inclusion of core practices and approximations of practice in teacher preparation are problematized from three perspectives: selecting and agreeing a set of core practices; strategies and structures to support practice-based teacher preparation; and finally the need for a monitoring and evaluation strategy that captures systematic data regarding the implementation of a set of core practices. Some implications for future practice are considered.

*Keywords:* teacher preparation, practice-based teacher education, core practices, approximations of practice, teacher education reform

**Sammendrag:** Det er i økende grad anerkjent at undervisning innebærer mer enn kunnskapsoverføring, og heller betraktes som flerdimensjonal, der læreren inntar en rekke ulike roller utover det å være fagspesialist eller forberede elever til standardiserte tester. Lærerutdanningen markerer den første fasen av en lærers profesjonelle reise og har som mål å forberede studenter til å bli effektive utøvere utstyrt med den kunnskapen, ferdighetene og holdningene som vil tilfredstille de økende kravene i yrket. Det er innenfor denne rammen at studentene engasjerer seg i kompleksiteten i læreryrket. Det er en intensiv læringsopplevelse som krever at studentene inntar den doble rollen som både elev og lærer samtidig. I mer enn et tiår har forskere innen lærerutdanning etterlyst en nytenkning og reorganisering av lærerutdanningsprogrammer som fokuserer mer på undervisningspraksis. Praksisbasert lærerutdanning gir lærerstuderenter læringsmuligheter, inkludert gjennomføring av undervisning – praksis som er formidlet og tilsiktet, og dermed støtter nybegynnere i å lære hvordan man bruker kunnskap i handling. En mulig pedagogisk gjennomføring av denne tilnærmingen er et fokus på kjernepraksiser og tilnærminger eller øvelser av praksis. Lærerutdanningsprogrammer som bruker disse tilnærmingene må vurdere pedagogikkene som muliggjør deres inkludering. Denne korte prologen har som mål å kort beskrive og problematisere inkluderingen av kjernepraksiser og tilnærminger av praksis (øvelser) i lærerutdanningen. En kort introduksjon til praksisbasert lærerutdanning og kjernepraksiser presenteres som kontekst. Deretter problematiseres inkluderingen av kjernepraksiser og tilnærminger av praksis i lærerutdanningen fra tre perspektiver: valg og enighet om et sett med kjernepraksiser; strategier og strukturer for å støtte praksisbasert lærerutdanning; og til slutt behovet for en observasjons- og evalueringsstrategi som fanger opp systematiske data angående implementeringen av et sett med kjernepraksiser. Noen implikasjoner for fremtidig praksis vurderes.

**Nøkkelord:** lærerutdanning, praksisbasert lærerutdanning, kjernepraksiser, tilnærminger av praksis, reform av lærerutdanning

## Practice-based teacher education

For more than a decade, teacher preparation scholars have called for a reconceptualisation and reorganisation of teacher preparation programmes to focus more centrally on the practice of teaching.

Practice-based teacher preparation ‘attempts to focus novices’ learning more directly on the work of teaching’ (Forzani, 2014, p. 357) and provides preservice teachers (PSTs) with the necessary knowledge and skills to significantly support and advance student learning (Hlas & Hlas, 2012, p. 76).

Practice-based teacher preparation reflects a number of approaches: inclusion of deliberate practice (Ericsson, 2002, 2006) facilitated by rehearsals of teaching (Kavangh & Danielson, 2020); engaging with video recordings of practice to enable review (Van Es & Sherin, 2008); teacher preparation coursework in K-12 schools to scaffold opportunities for novices to observe and enact practice (Von Esch & Kavanagh, 2018); and explicitly naming and teaching sets of core practices (Davis & Boerst, 2014).

Programmes that foreground deliberate and mediated practice stand in contrast to those where PSTs are taught about teaching and are expected to implement what they have learned in subsequent fieldwork through relatively unstructured practice (Ericsson, 2002, 2006; Korthagen & Kessels, 1999).

Previous research has advocated for practice-based teacher preparation that provides PSTs with learning opportunities, including the enactment of teaching (Forzani, 2014; Grossman et al., 2019; Jensen, 2020; McDonald et al., 2013). Therefore, it supports novices in learning how to use knowledge in action (Ball & Forzani, 2009; Grossman et al., 2009a).

Sleep (2009) suggests that teacher preparation focused on practice provides a means to concentrate on what teachers do rather than what they know. Bailey and Taylor (2015, p. 111) offer further clarity in the conceptualisation of practice-based education, suggesting two trends: ‘the first centres around core practices of ambitious teaching and the second focuses on a range of pedagogical practices whereby novice teachers are engaged in representations, decompositions and approximations of practice’.

Consequently, research has begun to emerge which explores methods of focusing teachers’ preparation on ‘core’ practices of teaching (Ball & Forzani, 2009; Forzani, 2014; McDonald et al., 2013).

The rationale for this ‘pivot to practice’ reflects sustained efforts to ensure that PSTs have the competence and capacity to teach independently, and effectively, in a classroom. Simultaneously, those in the field have also turned their attention to developing pedagogies that support and enable PSTs to use core practices. Grossman et al. (2009a) recommend three approaches to support understanding of the pedagogies of practice in professional education: representations, decompositions, and Approximations of Practice (AoPs).

Including pedagogical approaches that emphasise representations of practice provides PSTs with opportunities to engage with various ways practice can be presented, and what such representations make explicit and visible.

Therefore, the nature of these representations reflects choice, decision-making, and the resulting consequences. Engaging in decomposition of representations of practice provides PSTs with opportunities to review, deconstruct, and analyse practice into its constituent parts.

AoPs refer to opportunities for students ‘to engage in practices that are more or less proximal to the practices of a profession’ (Grossman et al., 2009b, p. 2058) and therefore provide opportunities for ‘deliberate practice’ (Ericsson, 2002, p. 21). AoPs provide novice teachers opportunities to rehearse or enact episodes of teaching, pause to engage with feedback from peers or tutors, and explicitly discuss instructional choices (Kavanagh et al., 2020; Lampert et al., 2013; Schutz et al., 2019).

It is important, therefore, that teacher preparation programmes consider and discern pedagogies that enable exploration of core practices. This is particularly relevant when set against a policy and legislative context where teacher preparation providers are mandated to include and reflect various competences and standards within their programmes.

## Core practices

Prior research has explored ways of focusing teachers’ professional education on core practices of teaching (Ball & Forzani, 2009; Davis & Boerst, 2014; Dinkelmann & Cuenca, 2020; Forzani, 2014; McDonald et al., 2013; Gotwals & Birmingham, 2016; Lampert, 2001; O’Flaherty et al., 2024; Windschitl et al., 2012).

Grossman (2018) defines core practices as ‘components of teaching that teachers enact to support learning. These components include instructional strategies and the subcomponents of strategies and moves. Core practices can include both general and content-specific practices’ (p. 184). Others have suggested that selecting a common set of core practices may provide a curricular framework for teacher preparation (Hlas & Hlas, 2012).

Examples of core practices include: leading a classroom discussion (Hlas & Hlas, 2012), the use of video as a prompt for decomposing practice (Ball, 2013), eliciting student thinking (Grossman et al., 2009a; Janssen, Westbroek & Doyle, 2014), anticipating student misconceptions and errors during planning (Ball & Forzani, 2010), facilitating whole-class discussions (Lampert, 2001), redirecting off-task behaviour (Grossman, 2018), and modelling (McDonald et al., 2013).

When selecting core practices for inclusion in teacher preparation, they are linked to student outcomes of interest, used frequently in teaching and learning, research-informed and evidence-based, implemented broadly across the curriculum, and transferable to novices (Forzani, 2014; Grossman et al., 2009a; McDonald et al., 2013).

A number of issues need consideration to support PSTs’ development of core practices. Firstly, there needs to be an explicit focus on an agreed set of core practices across foundation and methods courses, and clinical sites of practice. This necessitates collaborative planning and the ability to identify pedagogical approaches that align with different areas in teacher preparation.

Teacher educators must therefore embrace a role of responsibility and accountability, and be willing ‘to legitimate the language of professional responsibility by self-consciously choosing to articulate understandings of what prospective teachers need’ (Solbrekke & Sugrue, 2014, p. 19), what this looks like in teacher preparation, and how PSTs can be supported in achieving these outcomes.

Second, strategies and structures to support practice-based teacher preparation require attention and collaborative planning.

Finally, a monitoring and evaluation plan must be developed that captures systematic data regarding the enactment of core practices, the supporting pedagogies used, and the learning environments – meanings and lexicon that are imbued across various representations, decompositions, and enactments.

Each of these shall be elaborated below.

## Considerations and Implications for Future Practice

### Selecting and supporting inclusion of core practices

A significant challenge for any programme is selecting and agreeing a set of core practices for inclusion in teacher preparation (O’Flaherty & Beal, 2018; O’Flaherty et al., 2024), avoiding reductionist approaches. It may prove challenging to reach a consensus with regards to what practices are included (Cohen, 2015).

McDonald et al. (2013, p. 379) suggest this may be mitigated by establishing stronger relationships between research on teaching and the work of teacher preparation:

Bridging research and the practice of teacher education has the potential to help the field: (a) articulate a common language for specifying practice, which would facilitate the field’s ability to engage in collective activity; (b) identify and specify common pedagogies in teacher education; and (c) address the perennial and persistent divides among university courses and between university course work and clinical experiences.

While achieving consensus across all teacher preparation providers is not the primary objective, it is important that there is some agreement on the core practices of the beginning professional, informed by the particular national or state context, and the continuum of teacher education (Muñiz-Rodríguez et al., 2017).

Therefore, selection and inclusion of core practices in teacher preparation should be framed by a clear understanding of teaching that is transparent to all stakeholders, and serves the needs of the beginning professional. Additionally, there should be supporting evidence justifying the inclusion of these practices.

Given that initial teacher preparation constitutes only a brief period within a teacher’s overall career trajectory, it is essential to select a limited number of practices to strategically incorporate across the curriculum. Windschitl et al. (2012, p. 885) advocate that core practices ‘should be few in number to reflect priorities of equitable and effective teaching, and to allow significant time for novices to develop and receive feedback on approximations of each of these practices’ (p. 883).

While practitioners in the field exercise caution when it comes to prescribing a specific set of core practices, McDonald et al. (2013, p. 381) argue that we should be wary of letting ‘a thousand flowers bloom’. Instead, they propose reaching a consensus on a set of criteria for identifying, labelling, and choosing core practices.

Grobart and Zepp (2024, p. 3) suggest selecting core practices to embed in teacher preparation that reflect ‘prioritisation’, and promotion of deeper learning of the particular practices. Markelz et al. (2021) proffer an individualised approach, which may involve a reduced number of faculty reflecting a number of core practices included in their coursework, if there is limited interest and opportunity for wider implementation.

Moreover, it is crucial that methods and pedagogy courses/modules scaffold the practices selected for inclusion, thus requiring targeted teacher preparation pedagogies specifically designed to equip PSTs with these practices.

Some authors query what gets excluded implicitly or explicitly when teacher preparation turns towards practice (Kennedy, 2016; Zeichner, 2012). Philip et al. (2018), amongst others (Anderson, 2019; Horn & Kane, 2019; Philip, 2019; Souto-Manning & Martell, 2019; Stillman & Beltramo, 2019), question the explicit commitment to social justice education evident in practice-based teacher preparation.

Equally, some core practices may be difficult to observe through field/coursework observations. For example, collaboration among professionals may be difficult to observe. Grobart and Zepp (2024, p. 5) offer a number of suggestions to support making this practice ‘more visible, PSTs ‘could share about and reflect on the co-planning process in their written reflection and in the subsequent triad meeting with their field supervisor and mentor teacher ... Additionally, PSTs could submit artefacts aligned with each core practice area’. This would enable field supervisors the opportunity to regularly and explicitly discuss the critical role less visible core practices play in high-quality instruction, and student engagement (Grobart & Zepp, 2024).

## **Strategies and structures to support practice-based teacher preparation**

The structure of teacher preparation programmes in higher education is frequently fragmented, thus inculcating PSTs into a cumulative rather than recursive model of learning to teach (Hammerness et al., 2005). Many teacher preparation programmes are organised into foundation courses, methods courses, and clinical practice. PSTs frequently take courses that are organised by separate academic units, rather than pursuing a course of study that is conceptually integrated.

This fragmentation can lead to challenges for the inclusion of core practices – for example, a lack of opportunities for teacher educators to collaborate across areas of specialism, a disconnect between theoretical knowledge and teachers’ practical work in classrooms, and a relegation of issues pertaining to the practices of teaching to particular courses/modules rather than integrating them throughout teacher preparation programmes. This positioning of knowledge and content potentially places, either implicitly or explicitly, the focus of learning to teach on the conceptual foundations of teaching, rather than practices new teachers may need to enact when they begin teaching – practice is, therefore, not at the core of the curriculum (McDonald et al., 2013).

The historical divides between the foundational, methodological, and clinical components within teacher preparation programmes warrant careful consideration. These divisions can result in assumptions about roles and purposes, underscoring the importance of fostering communication and collaboration across various sites of practice. While foundation courses traditionally provide the conceptual tools to support PSTs to frame and interpret practice, they may not include solutions for negotiating the practical dilemmas that arise. Methods courses tend to focus on supporting PSTs to develop strategies and instructional practices for the classroom (Grossman et al., 2009a). The higher education setting is often removed from sites of professional practice, thus accentuating the perceived theory–practice divide.

It is imperative, therefore, for teacher educators to carefully consider the interplay between various sites of learning during teacher preparation, the relationship between theory and practice, and the broader context of professional competences and standards. Including a set of core practices in an integrated, cyclical, and incremental manner can be beneficial (Mathews et al., 2023).

Equally, we must acknowledge that eliciting a shared definition of core practices is not in and of itself sufficient for enactment. Including core practices in teacher preparation requires a scaffolded approach with opportunities for application, feedback, and reflection (Windschitl et al., 2019). Kavanagh and Danielson (2020) suggest that we need to consider and explore variations in how teacher educators teach about different elements/practices of teaching – the lexicon used, and the meanings imbued.

One approach to mitigate these challenges is to develop a common language that reflects consideration of the enactment of pedagogy, where a set of pedagogies are identified and mapped onto different areas of content across sites of practice (McDonald et al., 2013). Careful planning is essential to identify, explore, and investigate core practices across multiple sites. There are challenges in attempting to connect the sites of practice. Ledger and Fischetti (2020) highlight the need for knowledgeable mentors who can support the development of core practices and link theory and practice.

These considerations have significant implications for how teacher educators effectively navigate school–university partnerships and collaborate with teachers to ensure that sites of practice work in tandem to support PSTs. If executed successfully, PSTs could be systematically guided to implement core practices with students during their placements (Grossman et al., 2009a; McDonald et al., 2013). This approach would enable them to focus on specific aspects of their practice at different stages in a well-structured manner.

Grobart and Zepp (2024, p. 4) developed a seven-step model to support the inclusion of core practices in teacher preparation across sites of learning. Steps include: 1) review the link between core practices and professional standards, 2) align core practice with course work, 3) pre-assessment (PSTs self-assess with regards to their understanding of the practice and perceived competence to implement), 4) develop scaffolded supports (plan monthly activities aligned with focal standards and core practices), 5) observe fieldwork (providing feedback on the implemented practice), 6) reflective practice, and 7) evaluation (practice usage, strengths, and areas for improvement).

## Monitoring and evaluation of approaches

There remains a paucity of evidence evaluating the inclusion of core practices in teacher preparation programmes. A number of studies question whether core practices included in teacher preparation are making their way into classrooms (APA, 2014; Aslan & Zhu, 2016; O’Flaherty & Beal, 2018; Ping et al., 2009). Gathering evidence as to the effectiveness of including core practices in teacher preparation must be prioritised.

In order to examine the inclusion of a set of core practices, and the supporting pedagogies used, we need to explore the learning environments – the lexicon and meanings imbued across representations, decompositions, and enactments. Conducting baseline assessments enables teacher educators to explore which core practices are being taught, and how they are being taught in coursework (Markelz et al., 2021). When exploring practice, one must question what aspects of practice are visible and invisible. Representations of practice provide opportunities to reflect upon and investigate practice.

In the decomposition phase, we must be mindful that PSTs may not yet have a deep knowledge and understanding of the constituent parts of practice. Grossman et al. (2009b, p. 2075) suggest that ‘the ability to decompose practice depends on the existence of a language and structure for describing practice... a grammar of practice’. Decomposition of practice enables facets of the practice to become more visible, as PSTs observe and participate in the feedback process with peers and teacher educators.

It is, however, important that we do not assume that all teacher educators have a well-developed, disciplinary understanding of the practice or constituent parts of that practice under investigation. It is important that we plan for, and focus on, building knowledge and understanding of these practices for both PSTs and teacher educators. This has implications for professional development for those involved.

The inclusion of AoPs and rehearsals during campus-based elements of teacher preparation can provide learning opportunities that are absent in the practicum, allowing PSTs greater freedom to experiment and reflect. It is also important that we explore the pedagogical approaches that teacher educators use to facilitate PSTs’ enactment of core practices. Teacher educators need time and space to engage in professional dialogue to explore their rationale for inclusion of such pedagogical approaches, thus facilitating a developing

understanding of core practices. McDonald et al. (2013, p. 381) suggest that 'such a dialog requires researchers and practitioners to be mutually engaged to wrestle with the choices they have made and the ways in which those choices influence teacher learning and development. Variation in core practices within and across content areas offers rich opportunities to grapple with ways of parsing practice that support learning'. Therefore, engagement in professional dialogue, peer observations, critical reflection, and gathering systematic evidence as to the effectiveness of core practices need to become essential components of exploring and evaluating teacher preparation programmes.

In conclusion, it is also important to acknowledge the limitations of core practices and AoPs. Grossman et al. (2009b, p. 2090) suggest they have the potential to 'distort the features of practice in various ways, either by allowing students to focus on one primary component or by encouraging students to experiment with its features, they risk representing too narrow a view of what the work entails'. Therefore, educators must consider how we can facilitate the integration of core practices and AoPs so that they are more reflective of the needs of the novice teacher, and the demands of the professional role.

This challenge consolidates the need for educators to plan and map opportunities for practice across various courses (foundations, methods), and sites of professional learning (campus and clinical practice). Providing opportunities for PSTs to analyse and reflect upon their rehearsal/practice supports them to chart their professional development, pose problems, problematise theory and practice, and challenge common routines (Cochran-Smith & Lytle, 2001). If this work is to gain traction, the integration of core practices and the supporting pedagogical approaches need to be embraced across programme curricula and sites of learning – thus repudiating the view that teaching cannot be specified or taught.

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## The role of microteaching in a university initial teacher education (modern languages) context in Scotland

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**Abstract:** This article will discuss the use of microteaching as a particular aspect of rehearsal in the preparation of teachers of modern languages. The context is a university course in Scotland preparing preservice teachers for secondary school teaching. The course tutor has always used microteaching as a preparation tool for preservice teachers but has more recently increased its use in response to feedback from preservice teachers. This article will look at the history of microteaching and its potential advantages and drawbacks. It will go on to describe how the university course has adapted it for use in its own specific context and for its own preservice teachers. It will also examine preservice teachers' responses to their experiences of microteaching. These show a very positive evaluation of their involvement with the microteaching activities. Finally, the article will consider how the tool of microteaching can be developed in the future.

*Keywords:* microteaching, modern languages, initial teacher education, secondary schools

**Sammendrag:** Denne artikkelen vil diskutere bruken av mikroundervisning som et spesielt aspekt ved øving i forberedelsen av lærere i moderne språk. Konteksten er et universitetskurs i Skottland som forbereder lærerstuderenter for undervisning i videregående skole. Kursets veileder har alltid brukt mikroundervisning som et forberedelsesverktøy for lærerstuderenter, men har nylig økt bruken som svar på tilbakemeldinger fra lærerstuderenter. Artikkelen vil se på historien til mikroundervisning og dens potensielle fordeler og ulemper. Den vil videre beskrive hvordan universitetskurset har tilpasset det for bruk i sin egen spesifikke kontekst og for sine egne lærerstuderenter. Den vil også undersøke lærerstuderenter sine reaksjoner på deres erfaringer med mikroundervisning. Disse viser en svært positiv evaluering av deres deltakelse i mikroundervisningsaktivitetene. Til slutt vil artikkelen vurdere hvordan verktøyet mikroundervisning kan utvikles i fremtiden.

*Nøkkelord:* mikroundervisning, moderne språk, grunnleggende lærerutdanning, videregående skoler

## Introduction

### Context of and rationale for the microteaching

Initial Teacher Education (ITE) in a university setting always faces the challenge of balancing more theory-based inputs with more practical, teaching, and placement-oriented activities. This leads to talk of a theory–practice divide, and ways to overcome or bridge it (Anderson & Freebody, 2012; Gravett, 2012). Such is the desire in some cases to eliminate this divide that it is said to not exist. Jones, for example, states ‘the divide is false and unnecessary’ (2016, p. 15). A driver for this focus on balancing theory and practice as much as possible is preservice teachers’ wish for practical experiences in teacher education (Resch et al., 2022).

In the context of the current project, the author, tutor for the PGDE modern languages secondary course, had always used in the course of his teaching the approach of microteaching as a way of integrating a very practice-based focus into the university-based teaching block. Eraut (2009) talks of different types of knowledge in academic/educational and workplace settings and transfer as ‘the learning process involved when a person learns to use previously acquired knowledge... in a new situation.’ (p. 10). He notes that transfer from an education setting to a workplace is ‘particularly difficult’ (p. 10).

It is argued here that microteaching can play an important role in facilitating that potentially quite challenging transfer. In response to preservice teachers’ feedback, the tutor increased the number of microteaching activities from two to four.

### Literature pertaining to the topic of microteaching

Microteaching has been used by the author as a way of incorporating practice into the university-based course in order to develop teaching skills (Remesh, 2013). One of the attractive elements of microteaching is its ability to scale down the teaching encounter into more manageable component parts, on the one hand, and to target an increased amount of feedback to the preservice teachers (PSTs) on this particular area (Allen & Eve, 1968). The former element resembles what Grossman et al. (2009) describe as decomposition after modelling.

Microteaching is listed by Schutz et al. (2018) as an example of an approximation of practice in teacher education, alongside role plays, rehearsals, and simulations. As with microteaching, approximations of practice are an opportunity for the PSTs to ‘take on and enact the role of the teacher... and to receive immediate feedback’ (p. 58). They also ‘try to target specific elements of practice and create conditions of reduced complexity... while reducing the consequences of failure’ (p. 57).

It is noted by Grossman and McDonald (2008) that opportunities can be missed in approximations of practice for the interactive element of teaching, due to the complexity being reduced to such a large extent. In the author’s microteaching exercise, it was made sure that the very practice itself included interaction, and PSTs were also encouraged to include pairwork and groupwork in their short section of teaching.

There is one element which Schutz et al. (2018) suggest may also be pertinent, but which was not included in the author’s execution of microteaching, namely the pausing of PSTs at strategic points. This was because the author did not wish to interrupt PSTs’ flow and make the exercise too artificial. It would also risk highlighting, in front of peers, elements of practice which needed to be amended, and this had the potential to unnerve preservice teachers.

## **Important benefits of microteaching**

The choice of the author has always been that the microteaching should be conducted among a group of peers, as advocated by Pauline (1993), rather than as a ‘real teaching situation’ (Remesh, 2013, p. 158), or as a micro class with a small number of school students (Cooper & Allen, 1970). The reason for this is that this ensures the focus can remain on the techniques specifically aimed for the modern languages classroom, without distraction into other related areas, such as behaviour management. This ties in with what Allen and Eve (1986) call ‘seemingly limited parameters’ (p. 181).

Microteaching also places an emphasis on ‘repetitive practice’, which is aimed at helping preservice teachers to become proficient in the teaching

skills required (Amobi & Irwin, 2009, p. 29). This element of rehearsal is an important one in skill acquisition (Fountouki et al., 2021).

Microteaching amongst peers offers the security of a safe practice environment, and a less threatening environment for preservice teachers (Allen & Eve, 1968), in a low-risk situation (Cooper & Allen, 1970). Ralph (2014) also talks of a 'safe/trusting milieu', and 'supportive atmosphere' (p. 22).

The microteaching is an opportunity for valuable feedback (Dayal & Alpana, 2020; Higgins & Nicholl, 2003). The latter study is in the context of nurse education, but the principle still applies.

Microteaching in such a safe and supportive environment also has the potential to increase PSTs' confidence (Remesh, 2013). Crichton et al. (2021) found increased confidence to be an overwhelming outcome of their study into microteaching in modern languages.

A dimension highlighted by Donnelly and Fitzmaurice (2011), albeit in the context of a microteaching scheme for academic staff, is the benefit of observing colleagues and getting new ideas from them. Aarsal (2014) also talks about the opportunity for 'knowledge sharing' (p. 454), and Ralph (2014) the benefits of being able to learn from observing peers' teaching.

## **Caveats in the implementation of microteaching**

One, more historic, model of microteaching makes use of checklists to record steps met in the course of the teaching sequence. Remesh (2013) talks of the elimination of errors through microteaching.

The approach proposed in this article, however, advocates a more holistic way of working, which prioritises teacher confidence and a positive experience of techniques, rather than a perfecting of techniques; the latter might suggest a rather inflexible way of teaching, and the idea that errors in delivery cannot be tolerated.

Additionally, the format for the microteaching does not include a re-planning, re-teaching, and re-observing phase as advocated by Remesh (2013) and by Fernandez (2010), who suggest repeated cycles of microteaching les-

son study through which PSTs can adjust their lesson. There are a number of reasons for this non-inclusion, most importantly the limited amount of time available for the university and placement preparation aspects of the course.

Furthermore, an insistence on re-running the microteaching may shift the focus more onto a performance element of the practice, and less on the autonomous, lesson-learning aspect, and may even be associated with a behaviourist approach to learning, unhelpful in this instance.

A key feature of microteaching is the importance one gives to modelling. Remesh (2013) advocates not only the re-plan and re-teach phase mentioned above, but also an observation of a demonstration of the skill. This latter is a phase the author considers to be particularly apposite for preservice teachers, as it sets up a model for them to follow.

Mergler and Tangen (2010) also emphasise the need ‘to be exposed to skilled others’ (p. 200) as part of the microteaching process, and Boyd (2014) notes the value of explicit modelling of practice with links to theory. Schultz et al. (2018) note that such modelling ‘develop[s] a shared understanding of teaching’ (p. 80). Certainly, the author is aware that he has used the modelling phase to communicate to PSTs a particular approach to the teaching of modern languages.

There are dangers here, of course: that the emphasis is placed too much upon checking up on the precise replication of the model, and that the microteaching becomes ‘an exercise in fault-finding’ (Singh, 2011, p. 292); that it becomes behavioural rather than cognitive, and that teaching is being quantified as in the first incarnation of microteaching, through use of a checklist.

It does, however, mean that the priority can become more of a process of reflection, stimulated by feedback (Singh, 2011, pp. 292–3).

## **Potential drawbacks to microteaching**

Microteaching does not, of course, come without its potential drawbacks. As alluded to above, there is a risk that the microteaching can become overly performance-oriented, with a focus on errors made in a behaviourist way. Bell (2007, pp. 25–26) notes its possible stressful nature, and on how it can become a ‘high stakes event’. As a teacher educator, one is very aware of how

the school visit by the visiting university tutor inevitably takes on this nature, so it is important to avoid any additional pressure, and certainly not to create a situation where participants see the exercise in the terms Higgins and Nicholl (2003, p. 224) report, such as ‘very scary’, ‘daunting’, and ‘nerve-wrecking’.

## **Procedure for microteaching**

The procedure for the microteaching is one the author has inherited from colleagues, and is based on Mace (1996). The microteaching exercise as originally implemented by the author involves the preservice teacher in the presentation and practice of new language (one key question, one key structure, and a few accompanying items of vocabulary), using a selection of techniques presented to preservice teachers previously. Ideally, pairwork is used in the practice phase too. If they can, preservice teachers are encouraged to teach items from a language unknown to the rest of the group in order to give the event a bit more authenticity in terms of language learning.

In response to feedback from PSTs in recent years, further microteaching exercises have been added to offer preservice teachers more experience in this area, as it is an aspect of the course which they particularly value. The first additional exercise is where PSTs produce a slide for a starter activity. Another involves the teaching of a grammar point, and the final one focuses on the teaching of culture using a ‘cultural artefact’ (an item such as a souvenir or a photograph).

Preservice teachers are asked to plan a short input of 3–5 minutes in small groups. The remainder of the teaching group acts as both the school students and the observers. If they wish, preservice teachers can ask a peer to video record their session for future personal viewing. Following the microteaching, the teacher is asked to identify what went well, and then the rest of the group is asked the same. Next, the teacher suggests possible improvements, followed by others in the group. At the end, the course tutor adds their comments, including both positive aspects and suggestions for improvement.

The above discussion leads naturally to the drawing together of strands to elaborate how microteaching connects to a theoretical perspective on teaching

and learning in general. The author considers it important that the practice of microteaching mirrors good practice in teaching and learning as a whole. Crucially, the microteaching experience is built on the notion of rehearsal as a key element in the learning process, as per Rosenshine's (2012) principles of instruction relating to the review of learning, and also to the importance of the concept of the automatising of knowledge in second language acquisition (Johnson, 2013). The initial step of providing a model of practice aligns with Rosenshine's (2012) fourth principle of instruction. The provision of a live setting where preservice teachers can experience the interactional, contingent nature of teaching reflects the key teaching and learning strategy of scaffolding, with its emphasis on responsive teaching (Wood et al., 1976), as well as Ellis' (2005) eighth principle of instructed language learning, namely the need for interaction.

This links further to the need for an inclusive experience for the preservice teachers, as well as their learners. This means that the microteaching – whilst built on certain shared principles – can be in line with preservice teachers' own choices as professionals and 'educational thinkers' (Lawes, undated), and not overly prescribed via a checklist. The experience can be set up to minimise stress, in keeping with the need for a positive learning experience in teaching and learning (Bao & Liu, 2021).

Finally, the opportunity for preservice teachers to give, receive, and reflect on feedback exhibits best practice in teaching and learning, in line with the principles of Assessment for Learning (AfL) (Priestley & Sime, 2005), and Visible Learning (Hattie, 2012).

## Methods

### **Mini project to gain feedback from preservice teachers**

The author decided that it would be helpful to obtain feedback on the microteaching process, both formally and in the context of a small research project. Whilst the main objective was to obtain feedback overall, the research question to be answered was:

To what extent do preservice teachers of modern languages find the microteaching sessions useful?

The open-ended nature of the question was designed to elicit feedback from PSTs to help improve the microteaching elements of the university-based teaching, and to ensure that PSTs could be as free as possible in their opinions, without being overly guided in their responses. This would help to determine whether the principles on which the sessions were constructed resonated with the PSTs' experiences.

Using the university's ethical approval procedure, the author submitted an application to approach PSTs for their views on the microteaching process, using an online Microsoft form with fields for open-ended responses, and this was approved. As it is not permitted to undertake research with PSTs one is currently teaching due to a potential conflict around assessment, links were sent out to former PSTs shortly after their completion of the course. The project covered two cohorts of PSTs. The first of these completed the course entirely online. Whilst this was not during the lockdown period of the COVID-19 pandemic, it was at a time when some restrictions were still in place, and the course had already been set up as an online one due to ongoing uncertainties about restrictions at that time. The second cohort was a face-to-face one, the first to return to this mode of teaching and learning post-pandemic.

PSTs were sent a summary of the mini project so that they could give informed consent, and were told that they could withdraw their consent at any time. Assurances around anonymity and storage of data were given.

The questions asked in the form were as follows:

1. What did you enjoy most about the microteaching sessions and how did you benefit from them?
2. What did you like least?
3. What would you like to improve?
4. To what extent were you able to apply what you learnt in school?
5. Please add anything else you would like.

The questions were kept deliberately open-ended so that preservice teachers could express their opinions in their own words.

The data were analysed qualitatively using a thematic coding approach (Braun & Clarke, 2022). Responses were in the form of reflective texts, and

answers varied from one to ten sentences per question. For every question asked, each individual free-text response was read several times in order to engage with it fully. Initial codes were then assigned according to the subjects raised, to represent the important features of the data. For example, one PST, when answering the first question (about what they enjoyed most about the microteaching sessions and how they benefited from them), attracted the initial code categories of improvement in planning, effective teaching, immediate feedback and adjustment, experimentation, building confidence, and reducing anxiety. The codes were subsequently grouped into meaningful patterns, which gave rise to the broader themes, which were present within individual questions but also reached across questions. For example, different aspects of planning were categories which became a theme of impact of planning in its own right.

The themes identified for questions 1–3, and to be explored in the findings section below, are as follows:

Question 1. What did you enjoy most about the microteaching sessions, and how did you benefit from them?

1. Impact on planning
2. Identification with future learners
3. Value of feedback
4. Ability to experiment
5. Impact on confidence
6. Authenticity of the exercise
7. Impact of watching others teach

Questions 2 & 3. What did you like least? What would you like to improve?

1. The format
2. The authenticity of the exercise
3. The demands of the planning
4. The online environment

The online and face-to-face groups' responses were analysed separately, but no noticeable differences emerged between the two groups' responses, apart from a few specific ones which are commented upon in the findings section below.

The relatively small number of participants (six online and seven from the face-to-face group, giving thirteen in total), coupled with the limited number of questions (five), means that the data analysis was manageable and can only provide a very specific snapshot of impressions.

The fact that only questionnaires were included means that answers could not be interrogated further, and answers have to be interpreted at face value.

## Findings

### **Data from PSTs: enjoyment and benefits**

In terms of the first open-ended question, about enjoyment and benefits, the themes which emerged, using the process described above, are as follows:

1. Impact on planning
2. Identification with future learners
3. Value of feedback
4. Ability to experiment
5. Impact on confidence
6. Authenticity of the exercise
7. Impact of watching others teach

The collected feedback from PSTs will now be considered below, under the headings given above.

### **Impact on planning**

PSTs comment that the microteaching has helped with organisation, planning in general, and in detail in particular, and that the opportunity to not have to plan for an entire lesson also helped. This chimes in with Allen and Eve's (1968) 'scaled down teaching encounter' (p. 181).

### **Identification with future learners**

The comments around the benefits to teaching cluster around the notion of being able to put oneself in the position of one's future learners in school.

Two PSTs comment on the tutor's modelling of presenting new language in Scottish Gaelic, saying how this learning of an unfamiliar language helped them get a feel for how learners feel and made them feel similar to future learners. This emphasises the affective side of learning, and the need to understand one's learners (Williams & Burden, 1997) but also speaks to the need to appreciate, or appreciate anew, the challenges of language learning.

Indeed, three PSTs comment on how the exercise helped them to see the effect of their teaching, see what PSTs would potentially find confusing, and, in the case of a grammar point, how the teaching of it should be broken down in order to avoid possible problems of understanding.

### **Value of feedback**

Several PSTs commented on the value of the feedback, from both tutor and classmates. One noted that it was the immediate nature of the feedback which was helpful and allowed adjustment. Another spoke of the trust and respect built up in the group, which allowed for the feedback to be honest.

This relates to the literature reviewed earlier, which notes the importance of a supportive environment, and this will be discussed again below.

It is interesting how I'Anson et al. (2010) place the focus in their initial teacher education programme's microteaching on reflection and deliberation in the widest sense 'through a critical process of personal as well as social reconstruction' (p. 192).

The focus on the author's course is much more on feedback around the technicalities of the particular teaching activities under review. This focus is intended as a way to enhance practice as efficiently as possible, but it may well be that there is scope for this wider reflection, too.

### **Ability to experiment**

A few PSTs spoke of the ability to experiment, to experiment in real time, to try out teaching techniques, and to have a practice run.

This ties in with the literature on how the microteaching exercise can provide a ‘safe practice environment’ (Allen & Eve, 1968, p. 182), and this will be expanded upon in the section on confidence below.

In terms of experimentation itself, Gwyn-Paquette and Tochon (2003) make the very interesting point about how experimentation in the classroom can make preservice teachers ‘extremely vulnerable’ (p. 175), both in the face of a mentor teacher and pupils perhaps unused to certain approaches.

In the author’s view, this is a key consideration, and experimentation should be managed carefully, ensuring it is appropriate to, and supported by, any given placement context.

### **Impact on confidence**

A number of PSTs spoke of how the exercise boosted or built confidence. This links in very much with Crichton et al.’s (2021) findings. One PST is specific about how this will help confidence once in school, and another about how teaching classmates is not as intimidating as teaching ‘real learners.’ Another noted how it reduced anxiety. One is clear that there was ‘no added pressure,’ and another that there was no judgement but really useful advice and praise. One PST provides a summary statement that the microteaching was conducted in a ‘low stakes setting.’

This contrasts with Bell’s (2007) observation noted earlier that one of the potential issues with microteaching is that it is a ‘high-stakes event’ (pp. 25–26). The fact that PSTs comment specifically on this suggests that the conduct of the microteaching in a ‘safe practice environment’ (Allen & Eve, 1968, p. 182) or ‘safe/trusting milieu’ and ‘supportive atmosphere’ (Ralph, 2014, p. 22) is important.

### **Authenticity of the exercise**

Perhaps surprisingly, some PSTs commented on the authenticity of the setting. This is despite no attempt being made by the tutor to set this up as a stand-in for a classroom experience.

PSTs comment on the exercise being similar to a classroom experience, more like a real-life setting, and invaluable as a ‘teaching simulation.’

### **Impact of watching others teach**

A large number of PSTs commented on the value of seeing other PSTs' approaches and ideas in the microteaching sessions. This included seeing the tutor's modelling, and one says that the modelling helped as they found it difficult to visualise a teaching approach in the abstract.

PSTs said that seeing others was fun, and that it was good to learn from classmates, see approaches they would not have thought about, as well as to build up a bank of resources and ideas. One also said that planning in groups was a useful way to learn from others.

This echoes Ralph's (2014) findings, and Crichton et al.'s (2021) research, which shows PSTs appreciate the benefits of peer-assisted learning.

PSTs did not give much detail about the specifics of the teaching approaches they have practised. One PST did comment about how useful it was to have ideas for teaching using culture and literature, and another about how the dual coding approaches were helpful. The latter are the use of both verbal and non-verbal inputs (Paivio, 2014).

## **Data from PSTs: Potential issues**

In terms of the answers to questions two and three, concerning the less positive aspects and areas for development of the microteaching exercise, students' comments are grouped around the following themes:

1. The format
2. The authenticity of the exercise
3. The demands of the planning
4. The online environment

These will be considered in turn below.

### **The format**

One PST said that they found the exercise repetitive, and three would have liked more examples and/or guidelines from which to work. Two PSTs wanted to change groups more, due to the desire to work with different class members. Two PSTs felt that the exercise was too short. This is an element highlighted by Donnelly and Fitzmaurice's (2011, p. 342) feedback, where one participant found the limited time available 'stressful'.

A further two would have preferred to have done the microteaching in a language they were going to teach in school.

### **The authenticity of the exercise**

In contrast to the comments above, two PSTs questioned the authenticity of the microteaching setting. One said it was difficult to replicate the real-world classroom due to the controlled nature of the environment. Another said it was 'a bit staged', although still valuable due to the supportive nature of the class.

Again, this is something noted in the feedback received by Donnelly and Fitzmaurice (2011) that the set-up was artificial. In the light of this, one may argue that microteaching is perhaps not such a useful tool after all. The author would contend, however, that, on the flip side, it is precisely the controlled nature of the microteaching and the opportunity for extended feedback (Allen & Eve, 1968) which outweigh the artificial nature of the task in terms of usefulness and effectiveness.

### **The demands of the planning**

Many students commented that the group nature of the task meant that planning was difficult as a group online, in terms of agreeing on a theme, and of the time that the process took as this had to take place online.

The frustration and difficulties experienced during planning, although not necessarily in groups, are commented on by Karlström and Hamza (2019).

### **The online environment**

Four of the online respondents regretted the fact that the microteaching had to take place online rather than face to face.

One specifically noted that the online microteaching placed too much focus on manipulating the PowerPoint slides as opposed to the teaching process.

### **Data from PSTs: Transfer to the school setting**

In response to question four about applying the microteaching activity to their placement school setting, PSTs were positive about their ability to do this. The responses are quite individual, and it is hard to theme them. Overall, they spoke of how they could apply the microteaching directly, how it improved confidence when teaching in class, gave lots of ideas for placement, and was helpful for speaking. Another commented specifically on the usefulness for introducing grammar and breaking down grammar explanations for an S1 class (aged 11–12 years), as well as the successful transfer to teaching culture lessons for S3 and National 5 examination students (aged 13–15 years), motivating more reluctant learners. One PST said the microteaching reinforced the importance of practice and repetition for preservice teachers' confidence and pronunciation, and another said they could apply the microteaching in the introduction of a new unit for S1 and S2 classes. Two PSTs noted how the activity had helped with planning both full lessons and a sequence of lessons. One PST comment gives a real feel for how the microteaching activity had given them a chance to rehearse something which could then be replicated in the classroom: '...invaluable experience for teaching lessons to PSTs during placement as I already had an idea of what kind of teaching and activities I was going to try out in the classroom.' Two PSTs responded at length with very reflective answers on how the microteaching has supported their practice. One of these said it was useful in each of the areas around which microteaching was used (i.e. presentation of new language, teaching of starters, grammar, and culture) and reflected on this. Another talked of the modelling in the Scottish Gaelic lesson by the tutor as a basis for her own lessons.

Linked with this more technical side is the affective side, a feeling of reassurance and confidence: 'It was comforting having a formulaic strategy to stick to while gaining confidence and techniques.'

## Data from PSTs: Additional comments

Some PSTs took the opportunity to add additional comments for the last question on the form. Three wanted even more opportunities for microteaching, one because it was their favourite part of the course, and one because they had found the session on songs useful and wanted to see if other PSTs had used songs, and which ones. Another wanted to extend it to practice of a whole teaching period. One found it really effective in formulating ideas and experimenting with technology.

In terms of comments for changes, one PST wanted more preparation time in class, and another did not think the microteaching helped with the planning of full lessons or a sequence of lessons.

Two comments show the overall usefulness of microteaching:

... very fun, useful, and imperative for us to get used to standing up in front of a crowd and teaching prior to going into school.

I believe that microteaching provides invaluable teaching experience and offers a practical way to try out different techniques and activities, and therefore should be a key element of any teacher training programme, no matter the subject being taught.

In summary, the above findings show significant benefits to microteaching, such as improvement in planning, identification with learners, useful feedback, the chance to experiment, to experience an authentic teaching setting, and gain ideas from others, as well as an increase in confidence.

On the flip side, there were issues highlighted around the brief nature of the exercise, the demands of planning, and, in contrast to the above, the lack of authenticity of the exercise.

## Discussion

Perhaps the aspect of the data which stands out the most for the author is the benefit PSTs said they gained from the observation of other PSTs' microteach-

ing exercises. Whilst much of the literature focus tends to be on the individual and the process in which the individual is engaged, Mergler and Tangen (2010) do note the value of ‘observing what others do’ and ‘both vicarious and mastery learning experiences’ (p. 200). This is a significant point as it demonstrates something evident to all educators – the valuable contribution the PSTs, and not just the tutor, make to the learning of the whole group. This echoes Slimani’s (1989) findings about how listeners (fellow group members) benefit from the initiations of other members of the teaching group.

It is also helpful for PSTs to understand the learning from the school students’ viewpoint. Watching, and just as importantly, participating in the microteaching activities of others adds an important dimension to the experience. On a postgraduate course, it is also clear that PSTs will have a reservoir of experience and expertise which they bring and can share with their peers.

Linked to this is the value placed by PSTs on an initial modelling phase by the tutor. Not all writers acknowledge this phase, although Remesh (2013) does talk specifically about a ‘knowledge acquisition phase’ (p. 159) which involves demonstration and analysis of the skill. In the author’s opinion, this stage is crucial for preservice teachers in order for them to have a model from which to work. The choice by the tutor of a language unfamiliar to the PSTs (Scottish Gaelic) also reinforces that experience of just how clear the teaching steps need to be for their own school students.

It is interesting how one PST says that the group was ‘vulnerable’ when talking about their lack of knowledge of Scottish Gaelic (and other unfamiliar languages in the microteaching experiences) and how this put them in a similar position to future learners. A limitation of questionnaires, of course, is the inability to follow up on the meaning of what is written, for example by means of short interviews. One can only speculate. The word ‘vulnerable’ may suggest that not being an expert in a language and ‘having the tables turned’ was potentially challenging. This may well, however, have been a positive if it helped PSTs see the learning from their school students’ point of view.

In terms of the overall benefits of microteaching, these fall into two distinct categories. On the one hand, there is the acquisition of planning skills, ideas, resources, and approaches (overall and to specific aspects such as grammar teaching), both from their own and others’ microteaching experiences. A part of this is the feedback, which contributes to the improvement

in practice. On the other are the more affective benefits, such as the boost in confidence, and the practice of teaching to a group in real time.

As for the drawbacks of using microteaching in the author's course, the potential negative affective ones highlighted by Bell (2007) and Higgins and Nicholl (2003) seem to have been avoided. The only potentially stressful aspect which comes across is the difficulty of working in a group. This could be avoided by asking PSTs to work singly, but would then also present the challenge of allocating longer in the course timetable for the inputs, but would also remove the benefits of collaborative working.

It may be possible to rotate groupings, but this would be dependent on there being enough PSTs focusing on the same language to enable this. The issue of the microteaching exercises being too short is also hard to change without reducing other important aspects of the course.

## **Potential developments for the microteaching aspect of the course**

One possible development is the formalising of the activity more through more consistent and systematic use of technology. This could include, for example, that PSTs and/or the tutor review a recording of the microteaching exercise. The risk here, however, is that this will change the nature of the activity for PSTs and make it a higher-stakes activity.

Such a change may work well on a course where there is more significant time for the preparation and the microteaching, and where this is a main focus of the course, for example, as formative or summative assessment. In the case of the tutor's course, where the microteaching is one informal element of the course, any formalising of the activity could be counter-productive. On the other hand, it would also give the preservice teachers access to the 'raw data' of their own 'performance', and this would enhance the element of self-evaluation.

The same argument as above could apply to a possible change whereby PSTs submit written reflections afterwards (Karlström & Hamza, 2019), or watch the video of their microteaching and submit a self-evaluation (Benton-

Kupper, 2001). Once again, there is a fear that this formalising of the process might take away the spontaneity and enjoyment from the learning.

## Conclusion

This has been a very small-scale project looking at preservice teachers' impressions of a series of microteaching exercises as part of their modern languages initial teacher education course. Responses in the study suggest that this is a worthwhile and valuable component of the course.

Firstly, it provides PSTs with a worked tutor example of how to present new language and, due to the unfamiliar nature of that language, an understanding of what it is like for the school students to learn a language from scratch.

Secondly, PSTs benefit from the process of planning and drawing together ideas and resources, but also from insights gained through observing their peers' approaches.

Thirdly, there are some less tangible gains, such as an increase in confidence and, related to this, PSTs comment on the supportive nature of the exercise which, in the tutor's view, is an essential prerequisite for the successful conducting of microteaching activities.

There are inevitably some less positive aspects, such as the need to facilitate group planning as much as possible, and to enable face-to-face sessions, which may be a challenge for purely online courses. There is also the need to integrate this activity – which can be time-consuming in terms of PSTs' preparation, liaison time, and curriculum time – into what may well be an already full programme.

Overall, microteaching can be a very positive aspect of an initial teacher education programme. Its outcomes may well be enhanced by a tutor's success in identifying key areas that PSTs need to practise, and the ability to create a supportive environment.

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## Teaching rehearsals in English subject didactics courses in primary teacher education

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**Abstract:** This paper explores the effectiveness of on-campus teaching rehearsals in teacher education, with a focus on grammar instruction in English teaching in Norway. Despite supported field placements in teacher education, preservice teachers often feel unprepared for the practical realities of the classroom, particularly when it comes to teaching English grammar. This study illustrates how rehearsals of a specific core practice – explicit grammar instruction – enhance preservice teachers’ ability to integrate instructional methods fluidly into their teaching repertoire. The findings underscore the importance of rehearsing relational skills that balance content delivery with the dynamics of classroom interactions. By engaging in structured practice-oriented teaching, preservice teachers can better align their theoretical knowledge with practical application, thereby improving their readiness for real-world teaching challenges. The paper argues that on-campus teaching rehearsals are particularly effective in preparing preservice teachers for grammar instruction, as they highlight the critical transition from understanding instructional methods to enacting them proficiently in the classroom.

*Keywords:* teaching rehearsals, grammar instruction, English teaching, teacher education, practice-oriented teaching

**Sammendrag:** Denne artikkelen utforsker effektiviteten av øving på undervisning på campus i lærerutdanningsemner med fokus på grammatikkundervisning i engelsk i Norge. Tross veiledet praksis i alle lærerutdanningsprogram føler lærerstudenter seg ofte uforberedte på klasseromsrealiteter, spesielt i forbindelse med undervisning i grammatikk. Denne undersøkelsen illustrerer hvordan øving på bruk av en spesifikk kjernepraksis – å undervise eksplisitt grammatikk – forsterker lærerstudenters evne til å integrere forskjellige undervisningsmetoder sømløst i deres undervisningsrepertoar. Våre funn viser viktigheten av å øve på å kunne balansere innholdsformidling med dynamisk samhandling i klasserommet. Ved å delta i strukturerte praksisorienterte undervisningsmetoder kan lærerstudenter få bedre samsvar mellom deres teoretiske kunnskap og praktiske anvendelse, noe som igjen forbedrer deres evne til å takle utfordringer de kan møte i klasserommet. Vi viser at øving på undervisning på campus er en effektiv metode for å forberede lærerstudenter på grammatikkundervisning fordi den fremhever den avgjørende ferdigheten av å kunne anvende teoretisk forståelse av undervisningsmetoder i praktiske undervisningssituasjoner.

**Nøkkelord:** øving på undervisning, grammatikkundervisning, engelskundervisning, lærerutdanning, praksisorientert undervisning

## Introduction

Preservice teachers in Norway have many opportunities to rehearse teaching during their education, including 100–110 days of practice in their 5-year Master's Programme in Teacher Education, level 1–7 and level 5–10 (hereafter referred to as GLU 1–7 and GLU 5–10). However, preservice teachers (PSTs) often experience that their on-campus training does not fully prepare them for classroom realities. Often content-focused, campus subject teaching can seem remote from the classroom.

While PSTs receive education in instructional methods and tools during their classes, they find during their field placements that they often have to focus on classroom management instead of subject didactics. Our experience also suggests that practicum teachers provide classroom-management feedback, but that it is very rare for the PSTs to receive feedback on the subject didactics of teaching during their practice period.

Furthermore, studies of teacher education programmes and preservice teachers' preparedness for the profession show that the connection to practice should not be limited to the practice in schools (Jenset et al., 2018). Teacher education programmes should also aim to build preservice teachers' competence to rehearse and analyse teaching during on-campus training (Hammerness et al., 2020), including opening up for their instructional decisions being discussed by peers, and faculty (Kazemi et al., 2016).

While a practice/theory gap has long been cited as a weakness in teacher education programmes (see among others Broekkamp & van Hout-Wolters, 2007; Jahreie, 2012; Meld. St. 19, 2023–2024; Norwegian Agency for Quality Assurance in Education, 2024; Ottesen, 2006), this project identifies not only the gap between research/theory and practical application mentioned in these studies and reports, but also one between subject teaching and the management of relational transactions in the classroom.

We argue that the perception of a gap between the content-focused instruction on campus, and the classroom-management focus of the teaching practice, disguises another gap – that between the acquisition of what Grossman et al. (2009) identify as the difference between 'learning about instructional methods and learning to enact such practices fluidly' (p. 275). In order to be successful subject teachers, preservice teachers must be given multiple opportunities to practise the discrete skills connected to specific core practices

required for successful classroom teaching alongside their subject-specific practices. Many of these skills involve developing a relational practice that balances content instruction with the abilities of PSTs, both as individuals and as groups, and which must be rehearsed in order to become an organic faculty, capable of adapting to classroom realities. For example, preservice teachers are rarely provided the opportunity to lead group discussions on core subject content within their on-campus subject classes, or provide explicit grammar instruction, and they often struggle with metalinguistic descriptions of the language they use.

By breaking down teaching into the kinds of relational skills connected to specific core practices that allow for the transmission of content knowledge, and allowing preservice teachers to practise those skills on campus, teacher training programmes can better prepare teachers for their practice period.

This paper describes the teaching sequence we employ in teacher training classes at a university in Norway to provide preservice teachers enrolled in English studies with the opportunity to rehearse teaching grammar on campus in preparation for their teaching practice in local schools. It identifies some of the techniques the preservice teachers employ when preparing their grammar teaching.

Ultimately, we argue that on-campus teaching rehearsals are particularly valuable when preparing preservice teachers to teach English grammar in schools, because they make the PSTs aware of the gap between their instructional knowledge and their ability to enact this knowledge in grammar instruction in the classroom.

## **Theoretical background**

In most teacher-training programmes, on-campus teaching is theoretical, and the practicalities of classroom teaching are usually addressed mainly, or only, during field placements (Hammerness et al., 2020; Janssen et al., 2014). There are certainly limitations to how much practical training preservice teachers can receive during their on-campus teaching, and some instructional practices are perhaps best developed with real students in authentic teaching situations.

However, preservice teachers must be given opportunities to rehearse core practices regularly and systematically, in addition to the situational learning during the field placements.

Furthermore, some core instructional practices must be practised repeatedly with guidance (Grossman et al., 2009; Janssen et al., 2014; Windschitl et al., 2012) until teaching these practices becomes second nature. Only then will preservice teachers develop the ability to adapt their practices to the dynamic environment of the classroom.

Jenset et al. (2018) define eight practices which can be integrated into on-campus training to help ‘ground coursework in classroom practice’ (pp. 185–186). While some are frequently integrated into teacher training programmes. While some are frequently integrated into teacher training programmes (e.g. taking students' perspectives, or studying teaching materials), others are rarely presented, most notably practising or rehearsing teacher role(s), seeing models of teaching, or analysing students' learning (Jenset et al., 2018, p. 192).

Planning classes as part of the coursework has long been a central component of teacher training courses, and it is also often labelled as one of the practical activities that can be performed on campus. However, planning itself is not sufficient to prepare PSTs for conducting the planned classes. Several scholars argue that PSTs must have opportunities in their coursework ‘to practise and rehearse teaching, not just read about teaching’ (Grossman et al., 2009; Hammerness et al., 2020, p. 2; Jenset et al., 2018; Loewenberg Ball & Forzani, 2009).

Recent recommendations from the Norwegian Advisory Council for Teacher Education 2025 also mention on-campus teaching rehearsals, as well as other on-campus practice-related activities, as an important part of the preparation process for school teachers (Advisory Council for Teacher Education 2025, 2024; see also Njå & Forsström, 2023). Such practical engagement with teaching practices has often been missing in university teacher training courses; thus, teaching rehearsals can help integrate learning theories into teaching practice.

## **Why grammar?**

Grammar was selected as the disciplinary focus of our rehearsals for both pragmatic and theoretical reasons. As primarily language teachers, we have access to classes where grammatical instruction is in focus, and where teaching rehearsals connected to grammatical content would fulfil some of the course aims. Both the GLU 1–7 and 5–10 courses require PSTs to develop varied teaching methods geared towards language instruction, and both courses also require PSTs to develop their own English language knowledge and abilities.

From a theoretical standpoint, a form-focused instructional programme (FFI) such as that described by Spada (1997) helps students acquire language skills in the English classroom. For example, Kang et al. (2019) reviewed 54 scientific articles arguing for the effectiveness of FFI in language instruction over the past 35 years. And while many of the articles reviewed by Kang et al., as well as a recent contribution by Lloyd and Lee (2023), identify a number of factors which contribute to the efficacy of FFI, a general consensus has emerged that FFI requires bringing linguistic form to the attention of learners otherwise engaged in content learning.

As such, it is a fruitful technique in the primary and lower secondary classroom, where lessons are typically conducted based upon thematic content units.

## **Fear of grammar**

The teaching rehearsals described in this paper are not specifically focused on improving preservice teachers' grammatical skills, although such improvement is always a benefit. Rather, the rehearsals aim to reduce teacher insecurity when teaching English grammar, an insecurity which does not necessarily indicate poor personal mastery of grammar.

It is important to note here that the studies mentioned below survey the grammar teaching practices in L1 courses, where the role of grammar and metalinguistic knowledge might be different than in typical L2 instruction.

However, the content of L2 English instruction in Norway, as exemplified by the national curriculum (Norwegian Ministry of Education and Research, 2019a), is actually more comparable to the content of Norwegian L1 instruction (Norwegian Ministry of Education and Research, 2019c) than to the instruction in the additional foreign languages (Norwegian Ministry of Education and Research, 2019b). While the curriculum for foreign languages (typically Spanish, German, and French) focuses more on communicative competence in everyday situations, the curriculum in English also includes a focus on literacy, literature, intercultural competence, and critical reflection (Rødnes et al., 2014). Therefore, it can be argued that English instruction in Norway, especially in higher grades, resembles L1 instruction to a large degree. Similar conclusions are presented by Rindal (2015), based on a survey of Norwegian adolescents' attitudes towards English, and Kabel and Svarstad (2019), and Hanghøi et al. (2022), based on examinations of national curricula and language teaching practices in Denmark.

While PSTs differ in terms of the skills and competencies they enjoy teaching, a recent survey of our current GLU 1–7 and 5–10 PSTs showed that 33 % do not feel comfortable teaching grammar. Lack of confidence in teaching grammar is frequently reported in the literature among both native- and non-native-speaking English teachers (Borg, 2005). Cajkler and Hislam (2002), for example, report high levels of grammatical insecurity among British primary school teacher trainees, and their follow-up study of a smaller British cohort of teacher trainees (Hislam & Cajkler, 2005) reported that 46 % lacked confidence in teaching grammar to their students. Watson (2012) found that approximately half of the practising secondary school English teachers in their study lacked confidence in teaching grammar. Watson (2012) links the lack of enthusiasm for teaching grammar to both mixed messages in textbooks and earlier British national curricula and to prevalent feelings among teacher education students suggesting that teaching grammar necessarily implies the use of old-fashioned lectures and drills (or 'teaching as one has been taught,' see Oleson & Hora, 2014). No matter what the root cause of grammatical avoidance might be, Watson argues that teachers 'need support in order to develop the linguistic and pedagogical subject knowledge which can translate this into successful classroom practice' (p. 27).

In Norway, Rødnes et al. (2014) report that newly educated English teachers, while feeling competent in most areas of the English subject, are

often taken aback by the high level of English proficiency of their students, and they struggle with teaching the more advanced aspects of the English language, especially connected to formal writing.

Askland (2020) has noted that while all the English teachers interviewed in her study affirmed the importance of grammar teaching, many did not include grammar in their lesson plans. Askland speculates that the reason might be that ‘teachers had little formal education as far as grammar is concerned and thus found grammar a difficult topic to teach’ (p. 93). If true, this speculation would be in line with that reported in the British studies.

In a similar vein, Raade (2023), although focusing on the teaching of oral skills, found that the teachers in her study were often ‘terrified’ of their own English proficiency and thus avoided some elements of English-language teaching.

While many researchers have studied the mechanisms through which practising teachers in Norway conduct their instruction (Burner, 2016; Horverak, 2016), and Norwegian researchers have studied teachers’ beliefs in the English classroom (Burner & Carlsen, 2022), to the best of our knowledge, no Norwegian studies have directly investigated a relationship between teachers’ grammatical proficiency and their attitudes towards teaching grammar in the classroom.

Grammatical avoidance is not, of course, necessarily linked to grammatical competence. In a 2012 interview, Borg noted that the issue is ‘not just about what teachers know; it is how much they believe they know’ and that some teachers with shaky grammatical competence ‘teach inaccurately but very comfortably’ (Birello, 2012, p. 93).

Hislam and Cajkler (2005) reviewed the grammar audits completed by 28 British teachers to see if there was a relationship between perceived grammatical knowledge, as expressed through a self-reported confidence level, and proficiency on the grammatical test portion of the audit. Of the 28 teachers in the study, 9 reported high confidence in their grammatical knowledge but demonstrated poor abilities on the test portion (p. 299). This number was equal to the number of teachers reporting low confidence and low grammatical scores. Of the 28, 18 teachers scored poorly on the grammatical test.

Anecdotally, we believe that our PSTs often overestimate their own grammatical knowledge, and it is worth noting that the self-reported confidence level in English grammar of our PSTs is higher than that routinely reported by

British teachers. As yet, no research in Norway has tested teachers' personal English-language grammatical competence and indexed that competence to their attitudes toward teaching. While the L1 evidence cited above cannot uncritically be transferred to the Norwegian context, it is suggestive, and follow-up studies are needed in the Nordic context.

## Teaching rehearsals

Research conducted across teacher training programmes in different countries shows that opportunities to rehearse and study teaching practices are scarce (Hammerness et al., 2020; Jensen et al., 2018), despite the continuous call for more practice-oriented teacher education.

It seems to be difficult to combine the theoretical focus of university coursework, whether it concerns subject matter or didactics, with a more practical, student-active approach, as has been pointed out in several reports (Meld. St. 19, 2023–2024; Norwegian Agency for Quality Assurance in Education, 2024). The prevalent practice aimed at making teacher training programmes practice-oriented seems to be lecturing, discussing, or testing examples of activities, and studying teaching materials (Jensen et al., 2018).

Microteaching (Allen & Clark, 1967; Allen & Eve, 1968; Arsal, 2014; Bell, 2007; Griffiths, 2016), teaching rehearsals (Hammerness et al., 2020; Kazemi et al., 2016), approximations of practice (Grossman et al., 2009; Janssen et al., 2014), or enacting teacher roles or classroom practices (Canrinus et al., 2019; Janssen et al., 2014; Jensen et al., 2018) are all terms which could describe the same practice in teacher training courses: letting the preservice teachers prepare, conduct, and evaluate a teaching session in a low-stakes environment.

While some advocate making the teaching situation as realistic as possible by teaching real students in controlled environments, for example teaching labs (among others Allen & Clark, 1967; Arsal, 2014), others argue for more gradual 'approximations' to reality by letting the PSTs rehearse specific aspects of teaching using their classmates as 'students' (among others Bell, 2007; Griffiths, 2016). What is common to all these practices is that the teaching situation is 'scaled down in terms of time and number of students' (Allen &

Clark, 1967, p. 75) or ‘the complexities of the normal teaching encounter have been reduced and the level of feedback to the teacher has been greatly increased’ (Allen & Eve, 1968, p. 181).

Although several studies report positive results connected to implementing microteaching or teaching rehearsals in teacher training programmes (Allen & Clark, 1967; Arsal, 2014; Bell, 2007; Fernandez & Robinson, 2006), this practice is also criticised for not being realistic enough (Griffiths, 2016, p. 228), or for being just a ‘performance’ or an ‘educational requirement’ and not real teaching (Bell, 2007, pp. 25–26).

However, given that PSTs across programmes and national curricula have only very few ‘opportunities to rehearse multifaceted aspects of teaching’ (Hammerness et al., 2020, p. 12), an approximation of practice in the form of teaching rehearsals might be the best option teacher educators have during on-campus training.

The function of teaching rehearsals can be seen as ‘a kind of utilitarian make-believe (...) performed out of [its] usual context’ with the understanding that ‘the original outcome of the activity will not occur’ (Goffman, 1974, p. 59). However, it can still be perceived as a useful experience for the PSTs (Griffiths, 2016, p. 228), especially because it combines the communication of a challenging subject matter, grammar, with subject didactics and classroom management. This combination facilitates the development of pedagogical content knowledge (Shulman, 1986).

Bell (2007) argues that the status of microteaching as a performance instead of an authentic classroom situation might bring other benefits, such as the opportunity to be playful, and try out different teaching styles and methods (p. 37).

## **Self-efficacy in a teaching situation**

Arsal (2014) argues that microteaching activities develop PSTs’ self-confidence and self-efficacy because they let them experience an authentic teaching situation in a complexity-reduced context, which increases their chances of mastery (p. 454).

Zimmerman (2000), building on Bandura (1997), shows that ‘students’ beliefs about their academic capabilities play an essential role in their motivation to achieve’ (p. 82). He claims that self-efficacy, or the belief whether one can successfully perform a specific action, depends on several factors, among others, on the context of the performance and perceived mastery, and it is shown to influence future functioning (Zimmerman, 2000, pp. 83–84). In other words, if the students believe that they can successfully perform a specific action in a specific context, and have also, in the past, successfully mastered this action, it is quite likely that they will be willing to try again, even if they consider that specific performance difficult.

Research also shows that enactive mastery experiences, that is, performing the specific action oneself, and vicarious experiences, that is, witnessing a model performing the targeted action, are more influential sources of self-efficacy than verbal persuasion, or improvements in physiological reactions such as fatigue or stress (Arsal, 2014; Bandura, 1997; Zimmerman, 2000). In a teacher training situation, this means that performing in a grammar teaching rehearsal, or playing a student in such a rehearsal, should have a stronger effect on perceived self-efficacy than learning about the same techniques from a textbook or a lecture. This should eventually lead to PSTs feeling capable of, and willing to, engage in explicit grammar instruction in the classroom.

## Method

The goal of this paper is to evaluate the use of teaching rehearsals as a method to prepare PSTs for teaching grammar in the ESL classroom, while at the same time giving them an opportunity to connect the theoretical perspective of language didactics with practical applications before they are put in charge of real students.

The PSTs enrolled in the teaching programmes who have selected English as one of their subjects normally receive instruction in separate courses devoted to English language and didactics, and literature and culture didactics. As part of our interest in incorporating teaching rehearsals focused on grammar, these were naturally integrated into the language didactics classes.

Much of the previous research on the effects of teaching rehearsals and microteaching in higher education focuses on STEM subjects. Because teaching methods in STEM subjects differ from those commonly employed in language teaching, the techniques described in these studies did not seem immediately transferable to the kinds of teaching experiences common among our PSTs. Our study is, therefore, exploratory, relying on qualitative analysis of field notes taken by the instructors during observations of teaching rehearsals in language didactics courses for GLU 1–7 and GLU 5–10 PSTs. The PSTs' rehearsals were not recorded, as this could add unnecessary stress to the learning situation.

The PSTs were asked to rehearse teaching assigned grammatical features in groups roughly equivalent to their field placement groups. The grammatical topics were selected to be appropriate for the grade levels covered by the respective programmes, such as irregular verbs, some/any distinctions, adjective/adverb distinctions, mass nouns, agreement, homophones, or simple expletives.

The 1–7 student groups were asked to select a topic from the list, decide on the appropriate grade level for the instruction, and design a mini-lesson to present to the class based on the topic. After their presentations, the PSTs received feedback from their instructor, and comments from the class.

The 5–10 PSTs were asked to develop a full lesson based on a given grammatical problem, which would include both content-focused and language-focused elements. This teaching sequence happened after they received instruction in different ways to incorporate grammar in communicative teaching (see Loewen, 2015) and learned about the importance of noticing relevant language features in language input (Schmidt, 1990, 2010). Student groups were then paired, and they taught their prepared lesson to each other, with one group acting as the teachers and the other (including the instructor) playing the role of students. This procedure was repeated with GLU 5–10 groups in four consecutive years (i.e. approx. 100 PSTs, or 25 practice groups).

During the rehearsals, the instructors took notes which serve as the main data set for our discussion below. In addition, a short survey was distributed to several student groups within the GLU programme, including, but not limited to, the PSTs participating in the rehearsals, mapping their experience with different teaching activities which they have employed during their field placements (e.g. working with texts, teaching grammar, teaching culture, etc.).

## Results

The teaching rehearsals were conducted with two groups of PSTs, GLU 1–7 and GLU 5–10. The 1–7 rehearsals took place after their field placement period, during which they had all served as teachers in 2nd or 3rd-grade classes. By the time of the rehearsals, the PSTs (the majority in their 4th semester, with a couple repeating the course from the previous year) were well-versed in breaking down complex material for young children.

The rehearsals in the 5–10 group were purposefully scheduled prior to their field placement because these PSTs were relatively inexperienced, with only one previously completed practice period of four weeks. Most of the PSTs have never led a language class. During their field placements, the PSTs are typically placed in the entire span of their programme, that is, 5th to 10th grade.

The 1–7 course has a strong didactic component, and only four lessons were exclusively devoted to grammatical instruction. Because the 5–10 PSTs are expected to complete 60 credits in English, and have the option to choose English as their master specialisation, their English language didactics course includes more theoretical basis in grammar and phonetics than the 1–7 group, in addition to language didactics.

The rehearsals in the two student groups shared some common features, which are described below.

### Difficulty level and level of instruction

The 1–7 rehearsal groups were asked to describe the appropriate grade level for a lesson based on their assigned grammatical feature. All the groups selected a class at or near the top of their 1–7 grade range, despite having recently completed a practice placement in 2nd or 3rd grade. The PSTs expressed a belief that grammatical instruction was necessarily difficult, and thus more appropriate for older learners.

The topics the 5–10 PSTs were assigned to teach to a large degree corresponded to the topics covered in the grammar instruction in the course, but they were asked to adapt them to a grade of their choosing. Many rehearsal

groups attempted to teach the topics as they had been taught by the instructor in the course, which was often not appropriate for the intended grade level. The PSTs also struggled with selecting relevant, age-appropriate example structures, and generally attempted to cover too much content in their rehearsals.

During the post-rehearsal reflection conversations, they often expressed that they did not want to forget to include something important, and they were not confident in making the choice of what is important themselves – they preferred to be told precisely what they should include.

## **Embedding in contextualised activity**

Both courses strongly emphasise embedding language instruction in activity-based learning to facilitate incidental learning (cf. Schmidt, 1990). The 1–7 groups all selected either a game (Alias, for example) or a picture book to introduce their features to the class. The PSTs used noticing strategies (cf. Loewen, 2015) to highlight the grammatical features before asking for any production from their imaginary students.

In the 5–10 groups, despite being asked to embed their grammar instruction in relevant and, if possible, authentic language, most of the rehearsed lessons contained decontextualised grammar instruction, often in the form of a PowerPoint presentation. Some groups chose to use texts, songs, or pictures to illustrate the grammar point before they explained the rules, but for the majority of the groups, the language-focused task and the content-focused task had little overlap.

## **Worksheets and exercises**

When it came to productive activities, the rehearsal groups in both courses frequently relied upon worksheet activities easily found on the internet.

On the one hand, gap-fill activities have a place in the teaching of grammar, particularly among students too young to produce extended prose. On the other

hand, the vocabulary used in these materials is often divorced from the language used in the introductory activity. These worksheets are also often created for English first language students and contain language Norwegian students at the same grade level would not have encountered previously (e.g. a writing exercise describing preparations for the prom used in a 7th-grade Norwegian classroom).

Two of the 1–7 rehearsal groups developed their own worksheets based upon models found online but using vocabulary from the introductory lesson.

One of the 5–10 groups used a worksheet with examples which the rehearsing PSTs were not able to analyse or explain when questioned by their colleagues who were playing students.

## **Verbalising grammar explanations**

The majority of the 5–10 PSTs struggled with grammar explanations. It was very clear to the observers that many of them had memorised rules from textbooks and did not have an understanding of the underlying language system. This was apparent mainly when they used examples which were ambiguous (or, in some cases, incorrect) and then struggled to apply the rules they just recited to these examples.

On the other hand, those PSTs who chose to freehand the grammar explanation, usually of simpler topics such as, for example, simple past tense, often underestimated the need to prepare relevant examples beforehand, and struggled to find simple enough examples on the spot.

Some PSTs mentioned in their reflections that they did not realise previously how much background understanding and preparation is needed to conduct a simple grammar-focused activity.

## **Summary of the observations**

The 1–7 PSTs clearly understood general FFI principles and showed sensitive awareness of the learning styles common among young children. The

ease with which the PSTs incorporated noticing strategies into their games and picture book reading suggests that these are techniques they frequently employ during their field placements.

During the conversations after the rehearsals, the class discussed the use of generic worksheets. The PSTs reported that they generally used activities in textbooks designed to accompany thematic units to teach grammar. All agreed that adapting worksheets was a better tactic than simply using online content in class.

The 5–10 PSTs showed less understanding of FFI and communicative grammar teaching principles than the 1–7 groups. They struggled to find relevant texts (in the wide sense) which could effectively illustrate the target language structures, perhaps with the exception of the topic of past tense.

It is necessary to note that these PSTs had very little teaching experience at the time of the rehearsals (only one practice period), and most of them had no experience teaching languages. The post-rehearsal reflections often revealed their insecurity in teaching grammar, and a lack of deeper understanding of English as a language system.

## Discussion

The PSTs in the 1–7 group all judged grammar instruction, in contrast to, for example, vocabulary learning, as a more advanced skill, and selected grades 5–7 for their rehearsal target level. This decision reflected their own insecurity about grammar learning, which is also reflected in, for example, Watson's (2012) study of British teacher trainees.

The post-rehearsal discussion also indicated that PSTs often relied on internet teaching sites, or textbook/workbook grammatical explanations, although the use of thematic vocabulary in those materials justified their inclusion in their instructional plans. The PSTs' own relative lack of confidence in their grammatical knowledge likely led to the coding of grammar as an advanced topic in schools.

The 5–10 group did not show a preference for the more advanced grades when they prepared their lessons, and generally picked the grade which they

were going to teach in their upcoming practice period. This might have been a purely pragmatic decision on their part, since the teaching rehearsals took place prior to their field placements. As with the 1–7 group, the 5–10 PSTs also relied heavily on textbooks, and showed low independent understanding of the topics in question.

All of the 1–7 groups incorporated content learning into their grammatical lesson, and showed particular felicity in finding books, nursery rhymes, and other authentic texts to use during the introductory phase of their rehearsal. On the other hand, the 5–10 groups struggled with integrating grammar instruction into a communicative context. The more successful groups chose texts or pictures which illustrated or prompted the target structures, but several of the groups simply conducted a language activity combined with an unrelated text-based activity.

In our own survey of PSTs enrolled in our GLU classes Spring 2024, 44% of the PSTs reported reading a literary text to their students about once a week. However, it is possible that the 5–10 group, who were in their second semester, simply have not had enough experience teaching language yet, and their lack of ability to successfully integrate language learning and content instruction is due to a lack of exposure to such practices. The 1–7 group all reported such reading as a weekly experience in their most recent field placements in lower primary school. All the groups reported preferring to integrate language learning – often vocabulary – through the medium of fictional texts, and rhymes.

To practise the introduced grammar points, worksheets were used both with and without adaptation as a way for students to practise target forms, and for the teachers to evaluate the students' knowledge of the correct use of these forms. Unaltered internet sources were commonly used during school placements, the PSTs reported, often as the result of time pressure on the teacher. The PSTs reported that students like worksheets and seem to gain a sense of mastery by getting the answers right. In their overreliance on generic worksheets, the PSTs mostly reveal that they have not fully mastered the core competences involved in developing grammar lessons.

This is not to say that worksheets should not be given to students, but these worksheets should be integrated into larger communicative frameworks within the classroom. Arguably, the short preparation time given for the microteaching assignment also pushed the PSTs towards the use of generic

worksheets, although during the discussion, they acknowledged that they sometimes relied on such sheets when in the field placement schools as well.

Although the aim of English instruction in Norwegian schools is predominantly communicatively oriented (Fenner, 2020), some formal grammar instruction is usually necessary, even in the lower grades, to avoid communication breakdowns, and increase the students' understanding of English as a system (Askland, 2020). Our goal with the integration of teaching rehearsals in our language didactics classes was for the PSTs to experience what it takes to do this well. PSTs may distrust practices which they have not experienced as successful in the past. The first issue is that they may have experienced ineffective grammar instruction as learners and, as a result, they may believe this to be the standard to attain (Oleson & Hora, 2014).

In order for them to embrace a different instructional approach to grammar, they must first be aware of the different ways to integrate grammar instruction into communicative teaching practice and then believe that it is possible for them to conduct them (Janssen et al., 2014, p. 204). If the PSTs are only told by their instructors, or coursebooks, that other ways of teaching grammar are possible, they may still avoid implementing them, because they may believe that they would not be able to conduct them successfully. If, on the other hand, they experience teaching grammar themselves and being taught grammar by their peers, they may experience both enactive mastery and vicarious experience, which are considered the most influential sources of self-efficacy (Bandura, 1997; Zimmerman, 2000).

The integration of grammar teaching into a meaningful communicative context with young learners in a foreign/second language classroom is presumably a rather complex task, which can quickly become overwhelming for the novice teacher. By using teaching rehearsals as approximations of practice, we aim to deconstruct this situation, and practise its components in a non-threatening environment on campus, with reflection and direct feedback from instructors and peers (Janssen et al., 2015; Janssen et al., 2014). This should give the PSTs opportunities to develop resources and strategies which they can later employ with real students.

Also, the rehearsals themselves are a type of FFI, encouraging PSTs to notice grammatical forms in the context of a didactics content assignment (Schmidt, 1990, 2010), which should eventually help them design effective learning tasks for their students.

Despite many similarities, there were also some clear differences between the two groups of PSTs who conducted grammar teaching rehearsals in our English language didactics courses. The 1–7 PSTs were much more successful in integrating grammar instruction in meaningful, communicative contexts than the 5–10 PSTs.

One plausible explanation is that this is simply due to a natural maturation process. They were already in their second year of the program, compared to the first-year 5–10 PSTs. A second, related factor could be that they have already completed four practice placements (two of them focused on English) prior to the teaching rehearsals session. One could thus argue that they have already acquired the necessary experiences via trial and error in real classrooms.

This suggests that the best placement of teaching rehearsals as an instructional technique in teacher training programs is prior to the relevant practice placement period. This would afford the PSTs the opportunity to commit the trials and errors in a safe and simplified environment of a peer group.

## Conclusion

The instructional activities described in this paper aimed to address two weaknesses in the instruction currently offered in English teacher training courses in Norway: the perceived lack of connection between content-focused on-campus instruction and experiences during field placement, and the PSTs' abilities and willingness to vocalise language descriptions and grammar explanations.

The goal was to explore and evaluate the potential to use teaching rehearsals to provide PSTs with the opportunity to practise grammar teaching in a supportive environment, where direct feedback and immediate post-teaching reflection would be provided (Allen & Eve, 1968). By allowing them to focus on conveying grammatical instruction, a source of insecurity for many of the PSTs in these groups, in a simplified context (Allen & Clark, 1967), we aimed to enhance their self-efficacy and, consequently, their willingness to engage in explicit grammar teaching in real classrooms (Zimmerman, 2000).

The rehearsals allowed the PSTs to practise vocalising grammar explanations, a task they rarely get to rehearse in schools because practice teachers tend to de-emphasise explicit grammar instruction. By experiencing both the teacher role and the student role in these situations, the PSTs should develop an understanding of the preparatory work they need to employ to provide quality grammar instruction and increase their repertoire of different grammar teaching strategies.

The post-rehearsal reflections also facilitated discussions of common, but perhaps not ideal, teaching practices, such as using unadapted material found online, or the struggle to find relevant and age-appropriate examples of the focused language structures.

One of the central differences between the two groups of PSTs who conducted teaching rehearsals was that the rehearsals seem to have a stronger effect on PSTs without much teaching experience, and we, therefore, recommend implementing teaching rehearsals as an instructional technique early on in teacher training programmes.

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## Preservice teachers' role-plays of discussions promoting students' mathematical reasoning

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**Abstract:** Learning to lead discussions that promote students' mathematical reasoning is challenging for preservice teachers. In such discussions, the teacher needs to involve students and help them to express and extend their reasoning. At the same time, the teacher needs to promote the building of mathematically accurate arguments. To support preservice teachers' learning, we used role-plays of discussion where a teacher was to support some students' reasoning. The discussions were to be planned by groups of preservice teachers, and they played all the roles. We observed different challenges during planning: superficiality, too demanding mathematical complexity and unequal participation. Here, we analyse what characterises teachers' communication moves and the structure of arguments developed in the enacted role-plays in three groups that displayed challenges during planning. Our findings indicate that the planning challenges clearly impacted both the teachers' moves and the structure of arguments in the enactments of the role-plays. The results indicate a need to find a way to strengthen the planning phase, particularly when working with complex mathematical content as reasoning.

*Keywords:* mathematical reasoning, role-plays, teacher education, mathematical discussions

**Sammendrag:** Å lære å lede diskusjoner som fremmer elevenes matematiske resonnering er utfordrende for lærerstudenter. I slike diskusjoner må læreren involvere elevene og hjelpe dem til å uttrykke og utvide resonnering. Samtidig må læreren fremme oppbyggingen av matematisk korrekte argumenter. For å støtte lærerstudenters læring brukte vi rollespill av diskusjoner der en lærer skulle støtte noen elevers resonnering. Diskusjonene skulle planlegges i grupper, og lærerstudentene spilte alle rollene. Vi observerte ulike utfordringer under planleggingen: overfladiskhet, for krevende matematisk innhold og ulik deltakelse. Her analyserer vi hva som kjennetegner lærernes kommunikasjonsgrep og strukturen til argumenter utviklet i de gjennomførte rollespillene i tre grupper som viste utfordringer under planleggingen. Våre funn indikerer at planleggingsutfordringene tydelig påvirket både lærernes kommunikasjonsgrep og strukturen til argumentene. Resultatene viser et behov for å finne en måte å styrke planleggingsfasen på, spesielt når man jobber med komplekst matematisk innhold som resonnering.

*Nøkkelord:* matematisk resonnering, rollespill, lærerutdanning, matematiske diskusjoner

## Introduction

Mathematical discussions are crucial for students' learning, and when orchestrating them, teachers should actively build on students' reasoning and allow students to engage in conjecturing and justification (Shaughnessy et al., 2019). Hence, mathematical discussions involve positioning students as sense-makers when working on mathematically rigorous content. The teacher must ask questions that elicit and promote the students' thinking, which is contrary to the teacher explaining and doing all the mathematical work (Drageset, 2014).

Moreover, allowing students to engage in conjecturing and justifying entails emphasising mathematical reasoning (MR), which involves processes for developing and validating mathematical statements (Jeannotte & Kieran, 2017). Emphasising MR in school mathematics is essential to provide students with opportunities to learn what mathematics is about, and for deep learning of mathematics (e.g. Ball & Bass, 2003). However, MR, particularly developing mathematically valid arguments, is a known challenge for students, teachers, and preservice teachers (PSTs) (Stylianides et al., 2017). Consequently, leading mathematical discussions to support students' MR is challenging, due to the improvisational work of teaching (Lampert et al., 2013) and the complexity of the mathematical content.

Previous studies on orchestrating mathematical discussions show that teachers and PSTs tend to use 'low potential' moves, such as simplifying tasks, focusing on facts, procedures, or asking closed questions (Drageset, 2014; Ellis et al., 2019; Skott & Valenta, 2022). However, by taking a practice-based approach to teacher education, and implementing learning cycles (Lampert et al., 2013; McDonald et al., 2013), PSTs can learn the practice of leading discussions in a less complex setting than authentic classrooms. In the learning cycle, PSTs investigate, plan, and enact a mathematical discussion before reflecting on the enactment (McDonald et al., 2013).

Studies have investigated, and broadly positively reported on, the implementation of learning cycles in teacher education (e.g. Lampert et al., 2013; Wæge & Fauskanger, 2023). Still, of the few studies that explicitly focus on MR, the overall conclusion is that learning to support students' mathematical reasoning remains challenging (e.g. Buchbinder & McCrone, 2020). Buchbinder and McCrone (2020) particularly point to PSTs' challenges in using precise mathematical language and predicting students' strategies.

To support PSTs in learning to lead mathematical discussions emphasising students' MR, we designed lessons in which we implemented learning cycles where the PSTs planned and enacted role-plays of mathematical discussions. Role-plays are here understood as simulations of authentic practice, in which PSTs take on roles as teachers and students in a hypothetical scenario (Buldu, 2022; Stürmer et al., 2024).

We investigate the enactments of the role-plays in terms of the communicational moves the PSTs enacted to position students as sense-makers, in addition to the structure of the mathematical arguments developing during the discussions. The study builds on observations made during the PSTs' planning phase, where we noticed various challenges emerging. We investigate the enactments of the role-plays in three different groups, based on three observed planning challenges: superficiality, too demanding mathematical complexity, and unequal contributions by the PSTs in the group. The research question is:

*What characterises role-plays of discussions promoting MR in terms of teachers' communication moves and the structure of arguments developed, for three groups of PSTs who displayed challenges during planning?*

## **Planning and enactment in learning cycles in teacher education**

In a practice-based approach to teacher education, the curriculum centres around doing practice instead of learning about practice (Ball & Cohen, 1999). An example of doing is to enact certain aspects of practice through approximations of practice (Grossman et al., 2009). Different approximations of practice offer different support and complexity for the PSTs, allowing the enactment of different aspects of practice.

In the learning cycle (McDonald et al., 2013), practice can be enacted in school, in rehearsals, role-plays, or animations, to mention some examples. Rehearsals, role-plays, and animations are less complex than enactments in school in terms of authenticity. However, they allow for focusing on aspects of practice

that can be overshadowed by aspects like classroom management (Grossman et al., 2009). Thus, O'Flaherty et al. (2024) argue for approximation in the context of teacher education programmes to provide opportunities for experimenting and learning from mistakes in the safety of the teacher education context.

In rehearsals, a teacher educator closely guides a group of PSTs using time outs as they enact a mathematical discussion (e.g. Lampert et al., 2013), while in animations, practice is enacted through comics, often in software programmes (Amador, 2017). Role-plays, being the focus of this study, differ from rehearsals in terms of less support from the teacher educator, and from animations, in terms of being enacted in real time.

The literature provides evidence of different scenarios of how the relation between planning and enacting discussions plays out. For example, Mendes et al. (2022) found that PSTs faced challenges during planning and enacting discussions to promote students' mathematical reasoning, partly because they struggled to solve the task themselves. In contrast, Buchbinder and McCrone (2020) found that PSTs successfully planned for mathematical reasoning in their lesson but faced challenges implementing the plans.

Regarding the relation between predicted student responses and enacted teacher moves, Hallman-Thrasher (2017) showed that PSTs tended to lower the cognitive demand of their questioning when they responded to the anticipated student contributions, while Orr and Bieda (2023) found that PSTs lowered the academic rigour of their questioning when they faced unexpected situations.

Studying the moves that PSTs in our study planned and enacted, Ødegaard (2023) found that the PSTs planned and enacted several moves related to MR, and that the proportion of MR moves increased from the plans to the enactments. Hence, the literature shows differing results regarding relations between planning and enactment. This study further elaborates on various challenges PSTs face during planning, and how their enactments reflect these challenges.

## Theoretical framework

We analyse two aspects of the discussions played out in role-plays: 1) the structure of the mathematical argument constructed through discussions, and

2) the acted teachers' use of communication moves for supporting students' MR. The two aspects are central to discussions aiming to support students' MR (Ellis et al., 2019; Yackel, 2002). Attending to both aspects gives insight into opportunities and challenges associated with cycles of investigation and enactment in mathematics teacher education.

Before presenting the frameworks used to analyse the structure of arguments and the communication moves to support MR, we provide central notions of MR.

## Mathematical reasoning

We conceptualise mathematical reasoning as processes for developing or validating statements about mathematical objects and their properties (Jeannotte & Kieran, 2017). Developing statements involves identifying patterns, looking for similarities and differences, classifying, generalising, and conjecturing.

For example, third-grade students can explore the number sequence 8, 16, 24, 32, 40, .... By comparing the numbers, they can observe the pattern that all the given numbers are even. This observation can be extended to a general conjecture that 'all multiples of eight are even.' However, it is not evident in third grade that this statement is generally true (for all multiples of eight), and an argument is needed to show that.

Other types of statements can also require argumentation, for example, conjectures about single cases (e.g. '103 is a prime number') and finitely many cases (e.g. 'all primes below 20 have a twin prime') (Stylianides & Ball, 2008).

There are different arguments for the validity of mathematical statements, ranging from (informal) justifying via proving to formal proving (Jeannotte & Kieran, 2017). Proof is a mathematically correct argument, and in school mathematics, it is a deductive argument that refers to statements and techniques that are known and appropriate to the given community (Stylianides, 2007). Hence, in primary school, proofs can be built on concrete examples and visual representations instead of algebraic notation.

For example, proof of the validity of 'all multiples of eight are even' can be based on using  $3 \cdot 8$  as an example. One can argue that since each 8 can be

divided into two, the multiple  $3 \cdot 8$  can be divided into two. In this example, it did not matter that it was three eights – we could have done the same with any number of eights. Thus, the statement is true for any multiple of eight.

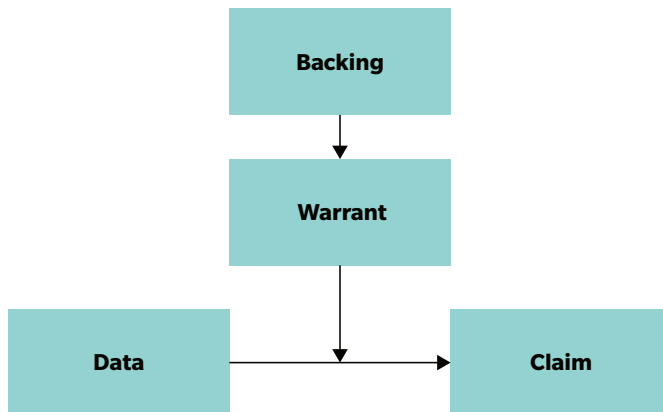
## Structure of arguments

Toulmin's (1958) model of argumentation has been frequently used to analyse different aspects related to the structure of mathematical arguments (Krummheuer, 1995; Rø & Arnesen, 2020). We follow Krummheuer (1995) and consider an argument to consist of four elements: claim, data, warrant, and backing.

The *claim* is the conclusion of the argument. A claim is derived from *data*, that is, some known facts, and the justification for how the claim follows from the data is called a *warrant*. In some cases, a warrant needs further support, which is the *backing*. This layout is often presented in a diagram, as in Figure 16.1.

**Figure 16.1**

*Toulmin's (1958) diagram with the four basic elements of an argument*



In a mathematical argument, the warrant and backing should call upon axioms, rules of inference, and mathematical techniques. However, Toulmin's model is insufficient to reveal the mathematical validity of an argument. Instead, using the model provides insights into the argument's structure, allowing the researcher to study what characterises the warrants being made.

Furthermore, using Toulmin's model to analyse collective argumentation – that is, the construction of an argument during the class discussion – gives insight into the role of the teacher (Krummheuer, 2007; Yackel, 2002). Yackel (2002) points out that the teacher's role is to challenge students to identify what is known (data), what the rationales are (warrants and backings), and how statements follow from each other.

## **Communication moves supporting students' MR in discussions**

We build on the inductive analyses of discussions made by Ødegaard (2023). In her work, teaching practices that support students' MR were identified by operationalising Jeannotte and Kieran's definition of MR; all teacher contributions were linked with the processes for MR they could potentially support. Thus, the more extensive practice of leading classroom discussions aiming to promote students' MR was decomposed into categories of moves reflecting MR processes.

The four categories were *moves for developing mathematical claims*, *moves for validating*, *moves for exemplifying*, and *non-MR moves*. In the first category, most moves were intrinsic to a specific MR process, such as 'Ask students to generalise.' Moves for validating held prompts and support to prove various types of conjectures, while moves for exemplifying were asking students to use a conjecture on an example or finding examples fitting a conjecture. Non-MR moves included more general moves such as revoicing and eliciting answers, asking for explanations, or confirmations of strategies.

## Methods

We report from a study situated within a larger project on mathematical reasoning and proving in primary education (ProPrimEd<sup>1</sup>). We implemented role-plays of mathematical discussions aiming to promote students' MR in learning cycles. Twelve lessons were designed and implemented in the first mathematics course in the teacher education programme for grades 1–7 across three student groups of 30–40 PSTs each. The mathematical focus was mathematical reasoning across division, fractions, and measurement.

Each lesson started with the teacher educator introducing a classroom situation, focusing on a particular mathematical task and fictional students' work. The PSTs worked in groups, analysing the mathematical content of the task and the students' work. Next, they planned a discussion with the same fictional students, with a specified goal of promoting the students' MR. They used Ellis et al.'s (2019) framework of teacher moves as support during the planning. After planning, role-play was enacted in small groups or whole class.

The stated research question is answered through three intrinsic cases (Stake, 1995). For this study, these cases are groups of first-year PSTs in the 1–7 teacher education programme in their planning and execution of role-plays. Using Stake's (1995) terminology, the cases were given (rather than chosen) due to the groups' unique challenges during planning discussions promoting students' MR. Their challenges were identified as superficiality, overly demanding mathematical complexity, and unequal contributions by the PSTs in the group.

For further details, see separate sections introducing the cases in Findings. Data were collected through audio and video recordings of the groups' planning and enactment, which were subsequently transcribed and anonymised. While data from the planning phase form the basis for deciding which cases are to be further studied, the upcoming analysis and results are based solely on data from the groups' role-plays.

The analysis methods consisted of two analytic approaches, each detecting aspects of challenges that emerged in the PSTs' enactment of discussions

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1 ProPrimEd – *Reasoning and Proving in Primary Education* is a collaboration between the Norwegian University of Science and Technology (NTNU) and Trondheim municipality, funded by the Norwegian Research Council. <https://www.ntnu.edu/ilu/proprimed>

aiming to support students' MR. The first analytic approach concerned structural aspects of the mathematical arguments built through the discussions. Using Toulmin's (1958) model, we thus studied how mathematical arguments were constructed, expressed, and elaborated on in the role-plays. More specifically, we identified mathematical claims stated in the discussions and searched for data, warrant, and backing leading to these claims.

The second analytic approach focused on the communication moves for eliciting and promoting MR performed by the PSTs acting as teachers. We built on the analyses by Ødegaard (2023) for teacher questions and students' responses. Indeed, two role-plays were analysed previously in Ødegaard (2023), while the third role-play was analysed deductively using the same set of codes.

Combining the two analytic approaches, we could determine whether the arguments produced were mathematically valid – that is, if they were grounded on valid and explicitly stated warrants, and if the discussions led to strengthened or more detailed mathematical arguments. Moreover, we elicited details on who produced the arguments (teacher, students, or both), and assessed whether the teacher's moves were instrumental in producing the arguments.

## Findings

For each case, we provide an introduction to the task and the observed challenges for the given group during planning. This is followed by the analysis of the role-plays.

### Introducing case 1: Superficiality during planning

We follow the PSTs Marius and Ane. During their planning, we observed challenges in terms of superficiality and a lack of in-depth discussion of the

mathematical content. The given scenario was a 6th-grade teacher intending to make the students discover a relationship between the divisor and the quotient when the dividend is constant. Given a list of pairs of division problems below, the task was to determine which problem would yield the largest number, without performing the calculations. The fictive students were supposed to be supported in expressing and justifying a conjecture regarding the general relationship described above.

- a)  $24:12$  or  $24:4$
- b)  $18:4$  or  $18:10$
- c)  $5:1$  or  $5:0.5$
- d)  $3:4$  or  $3:7$
- e)  $238:15$  or  $238:16$
- f)  $7:3$  or  $7:0.3$
- g)  $12:0.2$  or  $12:0.01$
- h)  $2.4:1.1$  or  $2.4:0.11$
- i)  $21:0.3$  or  $21:0.0000001$

The PSTs were asked to plan a discussion between a teacher and two students who had solved the problems but did not express the general relationship. Marius and Ane soon agreed that the conjecture is 'when the divisor is smallest, the answer is largest.' However, when discussing the task, they mainly engaged in off-topic talk. Moreover, they spent some time on which communication moves to use, but did not discuss the mathematical content in detail.

Marius said: 'I find this example [c)] hilarious. First you divide by a person, then you divide by half a person', but Ane and Marius did not seek to make further sense of division when the dividend is a rational number.

### **Analyzing case 1: Superficiality during planning leads to a superficial role-play**

The analysis revealed that the discussion did not include an argument for the general conjecture. Also, the teacher did not probe into the students' reasoning. We present an excerpt of the role-play where Marius played the teacher, asking the student (Ane) for answers to a) to h).

*Marius: What have you found out for problem a)?*

*Ane: For a), I've found out that 24:4 gives the largest answer.*

*Marius: Yes, it's largest for 24:4, but what about problem h)?*

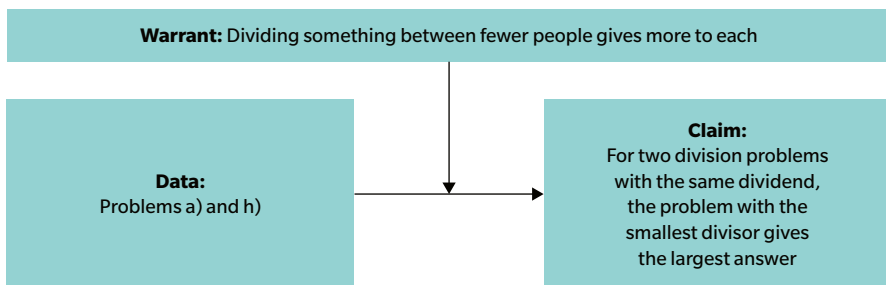
*Ane: For h), it's 2.4:0.11.*

Marius further asked about a relationship between the problems, and Ane replied: 'When the divisor is smallest, the answer is largest.' Marius asked why, and Ane briefly explained using a practical context: 'When you divide something between fewer people, for example, they will get more each.' The argument is displayed in Figure 16.2.

The discussion continued with another pair of examples, but the structure of the argument remained the same as in Figure 16.2, with the warrant repeated, but not strengthened.

**Figure 16.2**

*The structure of the mathematical argument developed in the role-play in case 1*



The discussion was short, containing 11 utterances. Marius, acting as the teacher, made six utterances. He first asked for the student's answer to two tasks, and then for a relationship between the two tasks. He did not ask Ane to justify her conclusions. Next, Marius asked the student to validate the general conjecture, but with no attempt at highlighting relationships and properties. Finally, he asked the student to exemplify with another pair of division problems, which does not extend the justification already given.

We recall that the PSTs did not spend time on in-depth discussions of the mathematical content in their preliminary work. This was reflected in

the role-play through the fast pace of the teacher's actions, and the restricted warrant for the claim. In particular, they did not adequately discuss the case of rational numbers. In the role-play, they used problem h), which includes rational numbers, seemingly without noticing that the justification provided by Ane does not make sense for this problem.

## Introducing case 2: Too demanding mathematical complexity

In the second case, we follow Arya, Oline and Omar, whose main challenge during planning was the demanding mathematical content of generalising and proving that one divided by a fraction is the inverted fraction. The given classroom situation was a video on division of fractions (Boaler & Humphreys, 2005). The pupils use various model-based strategies solving  $1:\frac{2}{3}$ , before the teacher introduces a contextualisation, asking how many  $\frac{2}{3}$ -foot-long pieces of lumber one foot of lumber can be divided into. We added a student, 'Martin' (not in the video), who said:

*I thought that if I'd got  $1:1/3$ , it would have been 3 because there's room for three-thirds in 1 foot of lumber. But we're to find  $1:2/3$ , so we'll make pieces of lumber that are  $2/3$  of a foot long. Those pieces are twice as long as those that are  $1/3$  of a foot, so then it's half as many pieces as in  $1:1/3$ . Then it's 3 divided by 2, which is  $3/2$ . We get  $3/2$  pieces of lumber.*

The PSTs were asked to plan a whole-class discussion continuing where the video stopped, using Martin's strategy to develop and prove the general conjecture that 1 divided by a fraction is the inverted fraction (expressed as  $1:\frac{a}{b}=\frac{b}{a}$ ). Oline and Arya worked together during planning, and expressed that they did not understand the mathematical content at stake:

Oline: We are to make a general rule from what he [Martin] says. That's the stuff none of us understood (Arya laughs). So that's going to be exciting.

They planned to probe further into Martin's strategy, and to include other students, but they were unable to write the students' explicit answers to their questions. Thus, we consider the main challenge of Oline's and Arya's planning to be the struggle to grasp the mathematical content. The group entered the role-play with some questions and a general plan of the structure of the discussion, but with the students' input missing.

### Analysing case 2: Mathematical challenges are reflected in the role-play

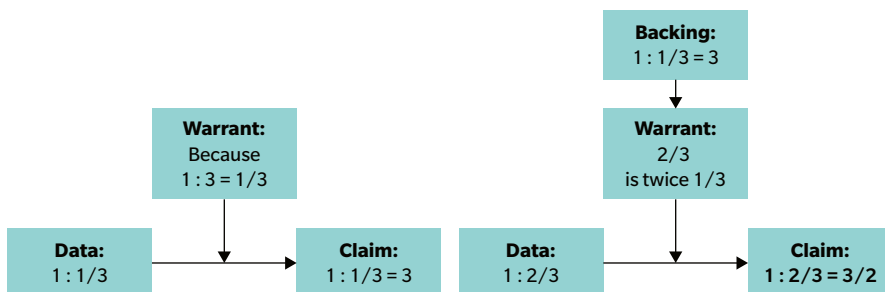
The analysis revealed that the arguments constructed during the discussion were incomplete. Arya took the teacher's role, Omar played Martin, and Oline played another student.

Although we do not have data showing Omar's participation in the preliminary parts of the lesson, we can assume that he, like the two girls, was unable to give a sufficient argument for the general claim. Arya, in the role of the teacher, consistently accepted the students' input and did not dwell on important mathematical aspects.

The discussion included several arguments. The first two of these involved Martin repeating his previous utterance, which was elicited by the teacher (Figure 16.3). The warrant is incomplete; it points to some property but does not explain the inference.

**Figure 16.3**

*The structure of the first two mathematical arguments in case 2, in which the character Martin is repeating previous utterances*



Arya did not dwell on Omar's explanations, but progressed by asking him what would happen if one divides 1 by  $\frac{4}{7}$ . Omar answered:

Omar If I use the same method, then I have to begin with 1 divided by 7, that is  $\frac{1}{7}$ . Then, like last time, you get seven equal parts, so the answer is 7. And then we should have how many,  $\frac{4}{7}$ . We know that  $\frac{4}{7}$  is four times as large.

Here, data and claim are centred around a single fraction computation. The warrant (why the answer is correct) is partly the vaguely described idea that  $1:\frac{1}{7} = 7$  and  $\frac{4}{7}$  is four times  $\frac{1}{7}$ . Arya tried to back Omar's warrant by adding: 'Yes, because it's three times bigger than, no four times bigger.' Omar answered: 'It is four times larger, so you can divide in 4, so the answer is seven divided by four, or  $\frac{7}{4}$ .' This warrant points at some mathematical properties, but it does not suffice as mathematically valid.

Arya engaged another student, played by Oline, to look for a pattern in Martin's work (the computations were written on the board). After some hesitation, Oline said, 'I see that one divided by a fraction will be the inverse fraction', which is the conjecture the PSTs were asked to prove. However, the role-play ended here, as the PSTs went out of character trying to prove Oline's conjecture.

The role-play was about 30 utterances long, and about half were Arya's utterances. Several of them were short validations of the students' thinking. However, the general structure of the moves was that she started the discussion by eliciting the students' thinking before she focused on generalising the strategy: 'If you swap the numbers in a fraction with a different fraction. What happens then? If you, for example, take 1 divided by...  $\frac{4}{7}$ ?' Furthermore, she asked explicitly about the general pattern, which she eventually asked Oline to validate: 'It will always be like that. But why is that?'

### **Introducing case 3: Unequal contributions by the PSTs in the group**

In Case 3, the challenge was unequal contributions by the PSTs Lilja and Karen during the group work, which led to them entering the role-play with

different levels of mastering the mathematical content at stake. The fictional scenario was students arranging the following fractions from smallest to biggest:

$$\frac{7}{8} \quad \frac{2}{3} \quad \frac{5}{4} \quad \frac{8}{9} \quad \frac{4}{3}$$

Moreover, the fictional students should identify what the fractions have in common, which can help compare fractions. The given fractions were all one 'part' away from 1 (e.g.  $7/8$  is  $1/8$  away from 1), and the size of this part can be used to determine the order of the fractions.

Two fictional students' works are displayed in Figure 16.4. The PSTs were asked to plan a discussion with each student, eliciting their thinking, and aiming to reach a claim that the 'missing parts' can be used to determine the order of the fractions.

**Figure 16.4**

*Two fictional students' works studied in Case 3*

**Vegard's solution**

$$\frac{2}{3} \quad \frac{7}{8} \quad \frac{8}{9} \quad | \quad \frac{4}{3} \quad \frac{5}{4}$$



They are below 1   They are above 1  
The fraction with the largest denominator is largest

**Kevin's solution**

$$\frac{2}{3} \quad \frac{7}{8} \quad \frac{8}{9} \quad \frac{5}{4} \quad \frac{4}{3}$$

All the fractions are one part from 1, but have different sizes

Lilja and Karen solved the task and discussed the students' work with two other PSTs. Lilja explained the solution of the task several times to the group, for example: 'This one [ $8/9$ ] has nine parts, meaning it is only a small ninth left over, right? Here [ $7/8$ ], it's  $1/8$ , and  $1/8$  is larger than  $1/9$ . That eight-part' In contrast, Karen's contributions to the discussion were either off-topic or faulty

reasoning, such as: 'But if you draw them [the fractions] and divide them into parts, this in nine [parts] and this in eight [parts], and colors eight and colors seven, they [the fractions] will be equal.' Moreover, Karen initially thought that Vegard's solution was correct, leading to guidance from Lilja. During planning, Karen's contributions often focused on general pedagogical aspects of teaching, while Lilja focused on the students' mathematical reasoning.

### **Analyzing case 3: Unequal contributions during planning lead to quality differences in teacher enactments**

The analysis reveals two arguments with a similar structure, based on the idea of a missing part. However, the discussions differed in how the students were supported. When Karen played the teacher, she did most of the reasoning herself instead of promoting the student's reasoning. Lilja, on the other hand, elicited and promoted the students' reasoning.

In the first role-play, Karen took the role of the teacher, and Lilja acted as Vegard (see Figure 16.5). Their discussion consisted of 11 utterances. The teacher initiated the discussion by focusing on two fractions, namely,  $\frac{2}{3}$  and  $\frac{7}{8}$ , and asked Vegard to draw a model. The discussion went on:

Karen: Now you can demonstrate, with the model, whether it's true that  $\frac{2}{3}$  is less than  $\frac{7}{8}$ .

Lilja: (draws) So, now I've drawn  $\frac{2}{3}$  here and  $\frac{7}{8}$ , and then the remainder is less coloured than that one.

Next, Karen asked Lilja to make an illustration for the fractions that were above 1. Lilja, with the support of Karen, concluded that Vegard's initial assumption on  $\frac{5}{4}$  being larger than  $\frac{4}{3}$  was wrong, 'because  $\frac{1}{3}$  that is extra here, is larger than  $\frac{1}{4}$  that is extra here.' Again, an argument was constructed for a comparison of two given fractions, where the warrant was based on comparing the part that makes the fraction 'one away from 1' and using a visual model. Karen made the final comment:

Karen: So, we have found out you've been thinking correctly on that side with those [fractions] that are below 1, but you need to think a bit reversed when you come to that side which are above 1.

Applying Toulmin's model, the new claim is that, when you compare fractions one part away from 1, you need to use different strategies for fractions below and above 1. There is no explicit warrant supporting this generalised claim, maybe apart from an implicit, empirical warrant following from the two examples they had just discussed.

Karen made six utterances acting as the teacher. Two times, she asked Lilja to make a drawing to validate a specific comparison. Once, she asked 'What did you see now?', to support Lilja in rejecting her first ordering of  $\frac{4}{3}$  and  $\frac{5}{4}$ . Moreover, Karen asked Lilja to explain what she observed using the drawing, as seen above. Finally, Karen made a summary of the student's thinking.

In the second role-play, also 11 utterances long, Lilja played the teacher, and Karen played Kevin (see Figure 16.5). Lilja started by asking about the conjecture, which Karen read from Kevin's worksheet. Lilja repeated the conjecture and asked how the student used it to order the fractions. Karen repeated the ordering: 'I chose to put  $\frac{2}{3}$  at the bottom, then  $\frac{7}{8}$ ,  $\frac{8}{9}$ , and then I chose  $\frac{5}{4}$  and  $\frac{4}{3}$ .' Lilja asked Karen to elaborate on her reasoning, and Karen explained:

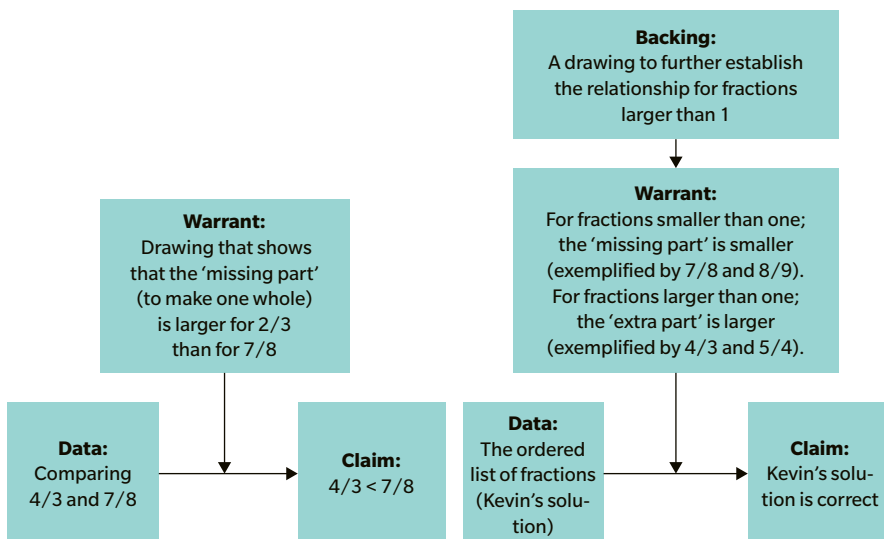
Karen: ...if you divide that one into eight and nine parts, then it's like one part is smaller, so, therefore, they get bigger in a way, because you miss a smaller part to make one whole.

Lilja asked about what happens with fractions larger than 1, and Karen explained how to compare  $\frac{4}{3}$  and  $\frac{5}{4}$ . Lone asked her to make a drawing following her explanation, which Karen did, and the discussion ended.

The two structures of the two arguments developed in the role-plays in case 3 are as below.

**Figure 16.5**

*The structure of the mathematical argument developed in the first (left) and the second role-play (right) in case 3*



Lilja used her first three utterances to elicit Kevin's thinking. She asked for the conjecture, which she repeated in clarifying language, before asking how the student solved the task. When Karen just gave the ordering of the fractions, Lilja requested her to explain her reasoning. After Karen explained her reasoning for fractions below 1, Lilja asked about fractions above 1. Finally, Lilja asked for a drawing to illustrate the comparison of  $5/4$  and  $4/3$ , and Karen's explanation ended the discussion.

The two role-plays included many of the same elements: comparisons of fractions above and below 1 based on the comparable sizes of the 'missing/extra' part. Yet, there were quality differences in teachers' enactments, which we argue originate from the PSTs' unequal contributions to the group.

In the first role-play, the teacher provided the main argument (based on Vegard's examples) with only an implicit, empirical warrant. Lilja stayed close to the character Vegard and needed the teachers' support before correcting the mistake in Vegard's solution. However, Karen did not seek to extend Vegard's reasoning and provided the explanations herself.

In the second role-play, the student provided the warrants in response to the teacher's (Lilja's) prompts.

## Discussion

This study contributes to research on practice-based approaches to teacher education by investigating the enactment phases of the learning cycle in light of challenges identified during planning. In addition, the presented findings display characteristics of the enactments regarding positioning students as sense-makers and reaching a valid mathematical argument. The analysis of the structure of the mathematical argument constructed through the discussions offered more profound insights into the nature of the discussions played out.

In Case 1, the PSTs did not plan the discussion sufficiently. As a result, the enactments lacked attention to properties and relationships, and the teacher did not follow up on students' utterances. Here, the resulting mathematical argument was incomplete, and the students' contributions were not the source of further discussion.

In Case 2, the PSTs struggled with solving the task themselves, and, similar to Mendes' (2022) study, they also faced challenges in the enactments. Here, the enacted discussion was characterised by incomplete arguments, and teacher moves that did not build upon the students' contributions. Thus, Case 2 demonstrates the importance of predicting students' responses during planning, as Buchbinder and McCrone (2020) highlighted.

Case 3 provided insight into the importance of mathematical knowledge through two different PSTs' contributions during planning and enactment. The PST, who expressed challenges in understanding the mathematical content, enacted a teacher-centred discussion and did not ask the student for explanations. In contrast, the PST, who appeared more knowledgeable in mathematics, enacted a student-centred discussion.

Participating in the learning cycle allowed the PSTs to practise important characteristics of leading mathematical discussions. Studying the teachers' communication moves revealed that the overall structure of the discussions

was usually adequate, as they followed Ellis et al.'s (2019) recommendation of first eliciting, then responding, and further extending students' reasoning.

For example, in Case 2, the teacher elicited Martin's thinking, and she sought to make him generalise it before turning to the other student(s) to establish a general conjecture from the pattern observed in Martin's examples. Finally, she tried to make the students justify the conjecture.

In particular, the discussion held a more appropriate structure than the initiate–response–evaluate pattern (for more details, see Drageset, 2014), or the pattern observed by Drageset (2014), where teachers followed up students' utterances with closed questions, and simplified the tasks such that the teacher's wording shaped the students' responses.

Case 3 shows an example of a role-play where the teacher successfully centres the student's thinking and positions her as a sense-maker.

Despite the observed opportunities for PSTs' learning to teach, previous research shows that leading discussions is a complex practice (Shaughnessy et al., 2019; Buchbinder & McCrone, 2020; Stylianides et al., 2017), that predicting students' responses is challenging (Buchbinder & McCrone, 2020), and, not the least, that reasoning and proving in mathematics is difficult (Stylianides et al., 2017). When using role-plays, it is essential to be aware of these different dimensions of complexity.

In Case 2, the complexity of the mathematical content led to challenges in both planning and enactment. Predicting that generalising the division of fractions would be demanding for the PSTs, we provided a strategy from which an argument could be constructed. However, the fictive student Martin's single utterance was insufficient for the PSTs to utilise the strategy. More robust scaffolding, such as providing additional dialogue with in-depth strategy discussion, could have helped the PSTs build their argument.

Moreover, role-play is an approximation to practice in which the PSTs are responsible for planning and enacting, and where the teacher educator does not guide the PSTs closely. Thus, challenges of superficiality during planning and enactment, as in Case 1, can be expected to occur.

The PSTs could have discussed the mathematical content in more detail if a teacher educator had supported them. However, having a teacher educator take a more prominent role requires more resources for implementing the learning cycle. Consequently, it might be implemented less frequently. As we believe that PSTs need repeated experiences with enacting practices, we call

for continued effort to find ways to support PSTs adequately during planning and enactments.

To conclude, we emphasise that role-plays provided the PSTs opportunities to sequence and enact moves that promoted MR, thus making role-plays of mathematical discussions a promising approach in teacher education. Yet, the challenges we identified in PSTs' planning impacted the enactments of the role-plays. Thus, more innovations in teacher education are needed to address challenges related to MR, and other mathematically complex content.

In particular, we encourage research initiatives that focus on integrating the mathematical content (e.g. MR), and the didactical content (on orchestrating discussions) the PSTs engage with, within a practice-based approach to teacher education.

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## **Role-play as an arena for preservice teachers' development of mathematical knowledge?**

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**Abstract:** The cycle of exploration and enactment, where preservice teachers and a teacher educator collaboratively plan an instructional activity, rehearse it, implement it in schools and discuss it, has proven beneficial for learning to teach mathematics. In particular, the approach has been shown to provide opportunities for developing mathematical knowledge. However, organising such cycles can be challenging practically. This study investigates preservice teachers' development of mathematical knowledge in a similar but less challenging context: work on role-plays. Here, preservice teachers work in groups without continuous supervision and enact instructional activities in role-plays, assuming the roles of teachers and students. Analysis of the three groups' work shows that while they had opportunities to learn mathematics, the utilisation of these opportunities varied. It seems somewhat arbitrary whether the PSTs discuss the mathematical content during their group work and how they do that. Our findings suggest that new mathematical content needs to be thoroughly worked on before or during work on role-plays and that the teacher educator needs to guide that.

*Keywords:* mathematical knowledge, preservice teachers' learning, role-plays

**Sammendrag:** Syklus for utprøving og utforskning der lærerstudenter og en lærerutdanner sammen planlegger en aktivitet, øver, prøver ut med elever og diskuterer det, har vist seg å være nyttig arbeid med matematikklærerstudenter. Spesielt, tilnærmingen har vist seg å gi muligheter for deres utvikling av matematisk kunnskap. Imidlertid kan det være praktisk utfordrende å organisere slike sykluser. Denne studien undersøker lærerstudenters utvikling av matematisk kunnskap i en lignende, men mindre praktisk utfordrende kontekst: arbeid med rollespill. Her jobber lærerstudenter i grupper uten at lærerutdanner er i gruppen hele tiden. I tillegg, aktiviteten prøves ikke ut med elever, men i rollespill, med lærerstudenter i rollene som lærer og elever. Vår analyse av tre gruppene arbeid viser at selv om de hadde muligheter til å lære matematikk, var det stor variasjon i hvordan de utnyttet disse mulighetene. Det virker noe vilkårlig om lærerstudentene diskuterer det matematiske innholdet under gruppearbeidet og hvordan de vil gjøre det. Resultatene tyder på at nytt matematisk innhold må jobbes grundig med før eller under arbeidet med rollespill, og at lærerutdanneren må veilede det.

*Nøkkelord:* matematisk kunnskap, læring hos lærerstudenter, rollespill

## Introduction

Ball and Cohen (1999) emphasised that teaching must be learned through practice, not just through preparation for practice (p. 12; also see Grossman et al., 2009; Charalambous & Delaney, 2019). This highlights the necessity for practice-based approaches in teacher education.

One such approach, which has significantly influenced, and been implemented in, Norwegian teacher education (e.g. Rø et al., 2019; Hovtun et al., 2021), is the cycle of exploration and enactment proposed by Lampert et al. (2010, 2013). In this cycle, a group of preservice teachers (PSTs) and a teacher educator work together to plan an instructional activity. They rehearse the plan before implementing it with a group of students and subsequently discuss the implementation. In addition to learning more general pedagogical aspects of practices, studies show that such joint planning and rehearsals can be an arena where PSTs develop mathematical knowledge and learn to utilise it in practice (Hovtun et al., 2021; Ghousseini, 2017; Rø et al., 2019; Silver et al., 2007).

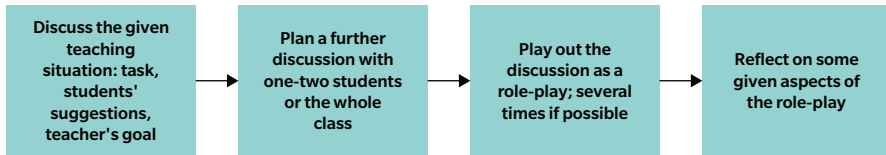
The role of the teacher educator appears to be significant here. The way teacher educators facilitate discussions and engagement with mathematical content is emphasised in Ghousseini's study (2021), and implicitly in several other studies, too (Lampert et al., 2013; Rø et al., 2019; Hovtun et al., 2021). Hovtun et al. (2021) conjecture that the guidance of teacher educators in the PST groups is one of the crucial factors for providing opportunities for PSTs' development of mathematical knowledge and learning to utilise it in practice during the work on cycles of exploration and enactment.

However, the practical organisation of cycles of exploration and enactment is challenging within teacher education programmes that accommodate a large number of PSTs. Ensuring the presence of a teacher educator in each PST group throughout the whole work cycle and securing sufficient school classrooms for the enactment of planned activities, can be difficult. Therefore, we suggest that other practice-based approaches in mathematics teacher education be tried out, and their potential for PSTs' learning investigated.

Recently, our teacher education programme initiated a trial focusing on role-plays. Our approach diverged from the traditional exploration and enactment cycles, as Lampert et al. (2013) proposed. In the role-play work, PSTs worked in groups without continuous supervision from a teacher educator. Moreover, our role-play work did not incorporate enactments in real school

environments. Instead, it revolved around role-plays enacted within the groups. The various stages of the group work on role-plays are depicted in Figure 17.1.

**Figure 17.1**



The teacher educator designs and presents a teaching situation. This typically involves a mathematical task that an imagined school class is tackling, written solutions or comments provided by a few students in the class, and the teacher's objective for further discussion with some or all the students. The presentation can also involve a brief discussion of the mathematical content in the given teaching situation.

The PSTs then work in groups (comprising 3–5 PSTs) on each of the four stages in Figure 17.1. During the group work, the teacher educator circulates among the groups, supporting the PSTs. Between the stages of the group work, the teacher educator initiates brief whole-class discussions about certain aspects of the work. One of the role-plays may be performed in front of the entire class between the final two stages.

To deepen our understanding of the potential for PSTs' learning within the context of role-plays in mathematics teacher education, we pose the following research question in this study:

*How can PSTs' group work on role-play serve (or not) as an arena for developing mathematical knowledge and learning to utilise such knowledge in practice?*

To answer the question, we closely examine one of the sessions in which some new mathematical content was included in the role-play. The teacher educator briefly introduced the new mathematical ideas and notions before

the PSTs worked on role-plays within groups. We recorded the work of three groups, examining how they approached mathematical ideas, expanded their knowledge, and applied it. The analysis provides more knowledge about role-play's potential for fostering mathematical understanding in teacher education.

## Mathematical knowledge for teaching and its development

Lee S. Shulman (1986) identified two main categories of knowledge specifically related to teaching a particular subject: *subject matter knowledge* and *pedagogical content knowledge*. He emphasises that the two aspects are closely linked. Based on Shulman's work, Ball and Bass (2003) introduced the term 'mathematical knowledge for teaching' as an overarching term to describe the competencies required to teach mathematics. In this study, we are primarily interested in subject matter knowledge. Ball et al. (2008) identified Common Content Knowledge and Specialised Content Knowledge as the main components of such knowledge. They define the first as mathematical knowledge that is used not only by teachers, but also by others who work with mathematics. It involves being able to solve a mathematical problem and evaluate whether an answer or notation is right or wrong. This is an essential element in mathematics teacher competence but is also a knowledge many others who work with mathematics have.

Specialised Content Knowledge, on the other hand, is mathematical knowledge that is particularly relevant for mathematics teachers. It involves, for instance, awareness of the advantages and disadvantages of using different representations in explanations and argumentation. In work on division, for example, specialised content knowledge includes knowing about two different models for division: partitive and quotative. In partitive division, the total is divided into a given number of groups, and the question is how much it will be in each group, as in the question '33 metres rope is to be shared equally by six persons. How much does each person get?'. In quotative division, the total is divided into groups of a given size, and the question is how many such groups there are, as in the question '33 metres of rope are to be cut into pieces

of 4,50 metres each, how many pieces is it?’ (see, e.g. Fosnot & Dolk, 2001, for more about the two division models). Understanding the appropriateness of different models in the context of division is a crucial aspect of Specialised Content Knowledge. For instance, it can be challenging to interpret division by a decimal number using the partitive model.

Both Shulman (1986) and Ball et al. (2008) point out that subject matter knowledge is a crucial base for pedagogical content knowledge. However, studies show that PSTs often overlook the importance of profoundly delving into the mathematical content when planning or analysing teaching (e.g. Enge & Valenta, 2010; Santagata et al., 2007; Star & Strickland, 2008). Such omission can lead to rather general discussions of students and teaching.

Many researchers have claimed that rehearsals are fertile ground for PSTs’ learning of subject matter knowledge (e.g. Silver et al., 2007; Hovtun et al., 2021). Silver et al. (2007) showed that collaborative case analysis, lesson planning, and discussions gave teachers opportunities to ‘work on and learn mathematical ideas’ (Silver et al., p. 261). Similarly, Dışbudak-Kuru & Isıksal-Bostan (2023) emphasise that, through a sequence of initial and revised lesson planning for teaching mathematical connections (i.e. between concepts and procedures), PSTs could make inquiries about their content knowledge, as well as pedagogical knowledge.

In the studies mentioned above, as well as other studies examining learning of content in practice-based teacher education (Ghousseini, 2017; Rø et al., 2019; Lampert et al., 2013), the teacher educator is working together with PSTs in a group, and it seems that this is crucial for PSTs’ opportunities to learn. As we point out in the introduction, there is a need to investigate learning potential in PSTs’ group work where there is no teacher educator to steer and guide the discussion about and/or rehearsals of teaching. Therefore, we study how PSTs engage with mathematical content knowledge during group work on role-play.

## Method

### Context and data

The data we analyse in this paper is collected within the Mathematics 1, 1–7 course in Norwegian teacher education for teaching grades 1 to 7. The

course is compulsory, has 30 credits, and combines topics within mathematics, its teaching, and learning. At our university, the course is spread over three semesters: PSTs' second, third, and fourth semesters in their five-year teaching program.

Recently, an intervention was conducted in the first part of the course (PSTs' second semester) to investigate work on role-play as a possible approach to work on mathematical reasoning. Several lessons involving role-plays were jointly designed by teacher educators teaching the course and researchers. The starting point of each role-play was an imagined teaching situation, as a task some students in some grade work on (often with some of their solutions or utterances), and a goal the teacher had for her discussion with some of the students or the whole class. The work on role-play was a central element in each lesson. The intention was that PSTs, through such work, could get the opportunity both to develop their mathematical knowledge for teaching and practice using such knowledge in planning, enactment, and reflections of discussions.

In this study, we want to investigate PSTs' engagement with the mathematical content during work on role-play and see whether, and how, it can serve as an arena for PSTs' development of more profound mathematical knowledge. We choose, therefore, to analyse data from one of the designed lessons where the mathematical content involved some aspects within such knowledge that were rather new for the PSTs: different models of, and reasoning within, division. Our experience as teacher educators is that PSTs are unfamiliar with this content from their earlier education.

The lesson started with the teacher educator's short presentation of several moments that were new for PSTs. These included the need to use some models to reason about division, the existence of two models (often, students and PSTs think only about partitive division as division), and how they can be used. Examples of the two models were given: 238 kroner are to be divided between 15 persons – how much money to each, as a partitive model, and 5 metres of material to be cut in 0.5 metres to make scarves – how many scarves, as a quotative model. As teacher educators, we know that PSTs need to work on such aspects in different ways, be challenged to design contexts, make drawings, and reason. Here, the hope was that this would happen during the work on the following role-play task:

### Part 1

Which gives the greatest answer? Find out **without calculating**.

- |                  |                             |
|------------------|-----------------------------|
| a. 24:12 or 24:4 | e. 238:15 or 238:16         |
| b. 18:4 or 18:10 | f. 7:3 or 7:0.3             |
| c. 5:1 or 5:0.5  | g. 12:0,1 or 12:0.01        |
| d. 3:4 or 3:7    | h. 2.4:1.1 or 2.4:0.11      |
|                  | i. 21:0.3 or 21:0.000000001 |

### Part 2

In a grade 6 class, students have worked in pairs with this activity. The teacher's goal for the lesson is that students discover, through the exploration of these tasks, a correlation between the divisor and the quotient (when the dividend is unchanged).

Two students have done the calculation but could not find the correlation. The teacher comes to their table.

- Plan a discussion in which the teacher elicits, responds to and promotes the students' reasoning.
- Allocate roles in the group and conduct the discussion: two are students, one is a teacher, the fourth is an observer.

### Part 3

Reflection based on the role-play in the group and in the whole class:

- What processes within mathematical reasoning come into play, and when?
- What teaching moves are used, and how did they support students' mathematical reasoning?

PSTs worked in groups on the task, but there were whole-class discussions during the work. During work on part 2, the teacher educator pointed out that the observer should make notes during the role-play, and that the group should discuss the teacher's questions and possible responses before trying out

the role-play again and refining it. To end part 2, one group of PSTs enacted their role-play for the whole class.

The data we analyse in this study are the transcriptions of the three PST groups' work on all three parts above (it was video recorded). In other words, we analyse all the stages of their group work on role-play (Figure 17.1). This includes their discussion of the task imagined students work on, their planning of discussion between a teacher and two of the students, their enactment of the planned discussion as a role-play, and their reflections on their own role-play and the one which has been enacted in front of the whole class.

## Method of analysis

In this study, we are interested in how PSTs work with mathematical content, discuss mathematical problems and ideas, and develop and use their mathematical knowledge. We conducted a thematic analysis (Braun & Clarke, 2006) of the transcripts. The first step was identifying excerpts in which PSTs discussed mathematical content.

The next step of the analysis was deductive, led by the notions of Common Content Knowledge and Special Content Knowledge, and what they entail for the case of reasoning on division: In each excerpt where mathematical content was discussed, we noted which division problems the PSTs talked about, what questions they discussed, how they proceeded to find the answers, which model (partitive or quantitative, if any) they used and how – which context (money, scarves, cakes) and how (clarity of the context and questions).

In the end, we made an overview of the different excerpts for each group to get a complete picture of how the mathematical content was treated throughout the group work.

## Analysis

We present our findings for the three PST groups' work.

### Group 1

The group consists of Mia, Siri, Marie, and Emilie. Ole and Oda are also in this group to begin with, but they join group 2 when the discussion is to be enacted in role-play (the teacher educator asks them to do that, so the number of PSTs in each group is appropriate).

After working on the task for just a few moments, Oda states the conjecture in rather technical language, 'If the dividends are equal, then the one with the lowest divisor is the biggest.' Not all group members seem sure about this conjecture, since they continue to search for one.

*43. Siri: Okey, if you divide five by one and by 0.5. Maybe we need to show that five divided by one is bigger even if 0.5 is less?*

*44. Mia: Yes.*

*45. Marie: Okey, but if you have a whole person, then divide five on the whole person? Versus if you have half a person.*

*46. Siri: You still have just five.*

*47. Marie: I don't know. This was very hard.*

*48. Siri: It does not make any sense.*

Siri raises the question of comparing five divided by one and five divided by 0.5. In turn 45, Marie introduces a situation indicating partitive division, which they struggled to make sense of when dividing by decimal numbers. They do not manage to resolve this problem, and the discussion continues.

*78. Siri: Five divided by one will be five. And five divided by 0.5?*

79. Ole: *It will be 10.*

80. Siri: *Are you sure?*

81. Marie: *This was my thinking, that you will get twice as much.*

82. Ole: *It depends on what the task asks for. If you sell games, then you cannot divide the game two times in a way. So, then it will not be a valid answer.*

83. Marie: *If you have five, you do not suddenly get ten.*

84. Ole: *Yes.*

85. Marie: *Then you must divide the five into two.*

86. Siri: *Okey, we have five cakes.*

87. Marie: *Then we divide them in two [uses the calculator]. It is ten, yes.*

Both Siri and Marie are unsure about division by decimal numbers. Marie does not understand how one can get ten starting with five, indicating that she thinks about division as partitive division. They do not discuss this issue about division further. Ole and Oda leave for another group before the role-play.

Siri volunteers to be the teacher and jokes that neither the PSTs playing students nor she understands what the tasks ask for. The role-play starts with whole number divisions, where Siri (the teacher) introduces a context of muffins and persons to reason about the tasks 24:12 and 24:4. The PSTs playing students correctly reason that the fewer persons, the more muffins each person will get. Then Siri moves on to five divided by one and five by 0.5.

158. Emilie: *If you have five cakes and divide by one, you will get five cakes. If you have five cakes and divide by 0.5... I do not know.*

159. Siri: *If you have five cakes and divide them in halves, you just divide each cake in half. How many cakes do you get?*

160. Emilie: *Ten halves.*

161. Siri: *Ten halves that is correct. Very good.*

None of the PSTs grasp here that the context has changed from dividing cakes between persons to halving cakes, and that this change will not help them to reason about the task. They continue with their role-play and form the conjecture that ‘the smaller the number you divide by, the bigger answer you get.’ Generally, they are very pleased with the role-play, and Siri states, ‘This was really good. I feel that we have done everything now.’ When discussing the next, refined role-play, Mia, who has taken notes of the role-play, sums up:

206. Mia: *Then there were some cakes. Five cakes divided by one is five, and five divided by 0.5 is ten half-cakes. No, ten cakes.*

207. Marie: *Yes, this did not make that much sense.*

208. Mia: *It will be halves.*

209. Emilie: *No, but then it will not be a whole.*

210. Mia: *It will be ten, but they will be smaller.*

212. Marie: *It is so funny that if you are to divide by half a person, then you have to divide the cake in two. The half-person can get.*

213. Siri: *It just is not a half-person. It is more like five divided by half.*

214. Marie: *Oh, so you do not divide persons?*

215. Siri: *You only divide the cake.*

*216. Marie: The person that is half, that is the person getting the cake? No, I do not know. Yes, but... just continue.*

In the excerpt above, Marie is persistent in her quest to understand what happens when one divides by decimal numbers, but the others do not offer much help, and finally, she gives up.

The talk about the division of decimal numbers (5:1 versus 5:0.5) in the refined role-play is similar to the previous play. The teacher asks the students how many pieces of cake one gets if one divides five cakes in half. After a student says ten, the teacher concludes that this is correct and more than five divided by one. Together, they state the conjecture that 'if you have the same dividend but different divisors, then the one with the smallest divisor gives the biggest answer.' Siri (the teacher) asks the students to check the conjecture on different tasks, and then they end the role-play. The talk after the role-play is mainly about being a teacher in general, and they do not discuss the play or talk about mathematics or teaching mathematics.

Another group (group 2) then performed their role-play in front of the class. Here, they discussed 12 divided by 0.5 using a quantitative context (scarves, 1 metre long or 0.5 metre long). The PSTs in group 1 are impressed by the other group's role-play, particularly the teacher's moves.

*344. Siri: He expands on the contribution of the students. Giving alternative solution strategies, using that one with the scarf. It was different than we thought about.*

*345. Mia: That was smart.*

They do notice the scarf context, but do not elaborate on why it was 'smart', or how to use it when discussing division by decimal numbers.

Despite Maria repeatedly questioning the reasoning behind using half cakes and half persons during group work, the PSTs in group 1 failed to resolve the issue. They exclusively relied on a partitive model and discussed distributing cakes among persons.

Even though the teacher educator introduced one quotative context (involving scarves) suitable for division by decimal numbers before the group work, group 1 never discussed it during their work. When the other group

uses it in their role-play, they do not go into what was good with it compared with the model they have used (half cakes/people).

By not resolving the issue of half cakes and half persons, and not discussing another context for division, we suggest that the role-play did not play a productive role in developing mathematical knowledge for these PSTs.

## Group 2

To begin with, only Mona and Tora are in the group. Ole and Oda are in group 1 during work on part 1 of the task; they join group 2 for parts 2 and 3.

Mona and Tora start the work by considering 18:4 and 18:10. Tora suggests that '18:4' is the biggest, and they go on to compare 5:1 and 5:0.5, as shown in the excerpt below:

*4. Tora: Five divided by one is biggest because... hmm.*

*5. Mona: Isn't it? Or?*

*6. Tora: I don't know. If you divide five by 0.5. You divide by one half. Is it more then?*

*7. Mona: I don't know.*

*8. Tora: If you multiply by 0.5, it is 2.5.*

*9. Mona: I have to use the calculator.*

Mona and Tora continue to use the calculator (even though the task asks not to do that), and they conclude that 'it seems that, as long the first number is the same, a smaller second number gives a bigger answer.' Here, Mona and Tora show they are very insecure about the mathematical content. They do not reason about the relation between 18:4 and 18:10; no possible explanation is given. It seems they have no other way to reason about the division with 0.5 than to check on the calculator. Mona explicitly expresses her struggle with the mathematical content when Oda and Ole join the group for the role-play:

'I can be a student; I need to have it explained.' Tora will also be a student. Ole gets the role of teacher, and Oda is an observer.

The teacher Ole starts by asking the students to compare 200:4 and 200:5. He leads to reasoning using a partitive context, sharing money between four or five persons and 'we need to share between more people, then they get less', before going further to comparing 12:1 and 12:0.5. The student Tora starts to use the same money context, but the teacher Ole suggests:

*95. Ole: It is difficult to share by a half-person. Let us try another context: Say you have 12 metres of scarf, and you are to divide it in 1 metre or divide it in 0.5 metres. How many scarves do you get?*

*96. Mona: You get one whole scarf if you are dividing by 1, so you get a piece.*

*97. Ole: Mhm, if you want one piece, yes (laughing). It was a bad context. Timeout, I need to re-formulate. Help me, Oda. You have 12 metres of scarf which you are to divide into 1 metre, so you get 12 pieces, right?*

*98. Oda: Yes.*

*99. Ole: And if you are to divide it into 0.5 metres, you get 24. Okey?*

*100. Oda: Yes, you do.*

*101 Ole: Right, timeout is finished. I will reformulate, girls. We have a 12-metre-long scarf that is to be divided into pieces that are 1 metre long. And then you have a scarf, which is also 12 metres long and has to be divided into pieces that are 0.5 metres long. Which one gives more pieces?*

Tora and Mona suggest that it is the last one, and they also reason further by saying that the number of scarves will be doubled because '50 centimetres plus 50 centimetres is one metre.'

Teacher Ole continues by asking the students to look for some connection between the two comparisons, and Mona suggests:

*107. Mona: If there are fewer people to share the money, they get more. But it is the same with scarves, too: if you divide them into more pieces, there is more. So, that can be a connection here.*

The group finishes the role-play here. Mona says it was lovely to be a student and that they ‘figured it out in the end.’ There is development in Mona and Tora’s mathematical knowledge, as we see it: unlike their work on the task before the role-play, they use a partitive context, and develop arguments (without calculating) for why  $200:4$  must be more than  $200:5$ , and they use a quotative context to reason about the relation between  $12:1$  and  $12:0.5$ .

Still, Mona’s utterance in turn 107 shows that she still struggles with quotative division as she talks about quotative as ‘dividing in more pieces,’ instead of dividing into pieces of a given size.

Also, Ole seems to have used the work on the role-play to develop his mathematical knowledge. He tries to suggest a quantitative context that the teacher educator mentioned at the beginning of the lesson, but his language is imprecise. He notices that and takes a time-out to discuss it with Oda before moving further.

After the role-play, the group points out the significance of the teacher’s preparation: planning how to explain, selecting examples, and using appropriate contexts. For instance, the context of a scarf was effectively used to reason about division by  $0.5$ . Mona asks whether some context with cakes would work for  $12:0.5$ .

*186. Mona: If you have a whole cake that you divide...*

*187. Tora: You need to deliver it in 12 birthday parties.*

*188. Ole: Yes, you have a cake and divide it in pieces that are half of cake-pieces. How many do you get?*

*189. Mona: If you first divide it in 12, and then each piece in halves. Something like that.*

190. Ole: Yes, you have a cake with 1-pieces, and divide pieces in halves. How many do you have?

191. Oda: The example with the scarf was good.

192. Tora: If one rather says that we are to cut, to make smaller scarves?

193. Ole: To make it simpler?

194. Tora: Yes. Because I could not understand it to start with, I just thought, why do we have such a long scarf? Why should we divide it? It can be just me being too slow. But maybe if you said that we had scissors and needed to cut.

The group tries to find how such contexts can match 12:0.5 and discuss how to improve the scarf context. They try the role-play again, this time using cakes as the context. Again, Ole is the teacher, Mona and Tora are students, and Oda is the observer.

237. Ole: So, we have a cake. And we divide it into 12 pieces. And in this one, you divide all the 12 pieces into... no. (laugh) Time out.

238. Oda: There is something wrong.

239. Ole: No.

240. Mona: I don't understand why divide in 12, because...

241. Tora: Because you have 12 cakes. No. You have one cake. (laugh)

242. Ole: Quiet, quiet (laugh).

243. *Mona: No, but I am a student now, really. Here, you have 200 to divide into four pieces, or between four persons. Here, you have 12 of something to divide into one piece.*

244. *Ole: If you have a cake with 12 pieces, and you are to find how many pieces of full size, size 1 (laugh). I agree; it does not work.*

245. *Tora: We go back to the scarf.*

246. *Ole: Yes, I agree.*

The group continues the discussion in the same way as in the first role-play – the same question as in turn 101, reasoning about 50 cm and 1 metre, and conclusion as in turn 107. The teacher educator asks them to perform their role-play in front of the class, and they do that. After that, in their reflection in the group, Oda brings up the notions of partitive and quotative division and points out that they were important in the task.

As shown in the excerpts above, PSTs in group 2 discuss the mathematical content throughout the work. In their first discussion on the task, Mona and Tora do not use any context, and do not manage to reason about the division problems. With Oda's help, Ola brings in a quotative context (scarves) during the role-play – in a similar way as the teacher educator presented it in the beginning. Ole's question is partly imprecise, and the conclusion – as expressed in turn 107 – is also imprecise. However, the PSTs go into further discussion and try to design a quotative context with cakes too. They fail, but the discussion, and their new try-out, are highly valuable as they try to make sense of the context, match it with 12:0.5, and find out why their attempts do not make sense by comparing the structure with other division contexts (as in turn 243).

We suggest that the work on role-play serves as a productive arena for developing the mathematical knowledge of these PSTs. This involves learning about and investigating various division contexts, understanding their applicability, and effectively utilising this knowledge. As they experiment with different scenarios in the role-plays, they explore how to formulate clear questions, and how the conclusion can be developed and expressed.

### Group 3

The group consists of Marius, Ane, and Gry. They start the work by concluding immediately that more will be given to each person when the divisor is smallest.

*2. Marius: But, is it not always the smallest factor when the first number is the same?*

*3. Ane: Yes, it must be like that, I guess.*

*4. Marius: Yes.*

*5. Ane: So, it will be more for each person.*

Later, when they discuss the conjecture, they are more precise and state, 'When the divisor is smallest, the answer will be biggest'. When it comes to the relation students can find, they formulate it as 'the smaller the divisor, the bigger the answer'. PSTs in this group do not refer to any of the examples given in the task, and the only reference to division involving decimal numbers is Marius mentioning, 'I think that example is so funny. That first you divide by a whole person and then by a half person.'

In the role-play, Gry is the observer, Ane plays the student, and Marius is the teacher. The role-play starts with Marius asking, 'What have you found out?' whereupon Ane answers, 'I found out that those with the smallest divisor give the biggest answer.' They take a timeout and realise that they were 'too fast' and that Ane was 'too clever and stated the conjecture too early.' They discuss several further examples, like 3:4, 3:7, 200:40, and 200:10. However, they never talk about division by decimal numbers in the time-outs nor the role-play. The only model they use when deciding which task gives the biggest (or smallest answer) is the partitive model (like 'the more persons you have to divide by, the less you get').

After the first role-play, they discuss various pedagogical moves to emphasise students' thinking and generalisation, but do not discuss division by decimal numbers. Still, in the refined role-play, Marius (playing teacher) asks about one task involving decimal numbers.

184. Marius: *Yes...what have you found out in task a?*

185. Ane: *In a, I found out that it will be the biggest answer for 24:4.*

186. Marius: *Yes, the biggest answer is 24:4. What about in task h?*

187. Ane: *In h, it will be 2.4:0.11.*

188. Marius: *Do you see any connection between the tasks? Something that is the same?*

189. Ane: *I can see that when the divisor is smallest then the answer will be biggest, maybe?*

190. Marius: *Yes, but why?*

191. Ane: *Well, maybe because you divide something between fewer people then there will be more on each.*

192. Marius: *Yes, that's correct.*

There is no explicit discussion about why 2.4:0.11 is the biggest (compared with 2.4:1.1), and when arguing for why the smallest divisor gives the biggest answer, they use a context of people, indicating a partitive model of division. The teacher educator comes by, and she asks them to play their role-play once more. Again, the PSTs use a partitive division model in their argumentation. The teacher educator notices this and asks them if the teacher (in the role-play) could have offered another context making sense in the case of decimal numbers.

255. Marius: *Maybe we could have used quotative division?*

256. Teacher educator: *Yes. How would that be? Discuss it, how it can sound.*

*The teacher educator goes to another group.*

257. Gry: *That what she said before with the scarf?*

258. Marius: *I don't remember completely.*

259. Gry: *If you have five a five-meter-long scarf and are to divide it into 1-meter pieces, as in task c. You get five pieces. If you have five meters and are to divide it into half-meter pieces, you get ten pieces.*

260. Ane: *Yes, with these numbers, but how could we do it with 2.4:0.11?*

261. Gry: *It does not make sense.*

262. Marius: *Doesn't it?*

263. Gry: *Or, you can have 2.4 meters of rope, and you want each piece to be 0.11. How many pieces do you get?*

264. Ane: *Yes.*

As we see above, when the teacher educator asks about another, more appropriate context, the group answers immediately that they could use quotative division. When trying to formulate the context, they think about the one the teacher educator used, and they manage to use it in a precise way for five divided by one/0.5 (turn 259). Even though they are a bit unsure whether and how it can be used with other numbers, they succeed in formulating another quotative context. Afterwards, group 2 presents their role-play in front of the class. In their reflection afterwards, group 3 discusses only pedagogical aspects of the role-play, and does not discuss models and reasoning in the division.

Thus, when the teacher educator asks directly about context that would make sense in division by decimal numbers, the PSTs in this group show that they know the notion of quotative division (turn 255). They understand the context the teacher educator used as an example (turn 259), and they can formulate such context in other examples (turn 263). However, this is the only time they mention it, and they do not discuss how such a context could be used in argumentation of division tasks.

Thus, the data indicate that the PSTs in this group can use this quotative context to give meaning to division, including decimal numbers. However, it does not seem that they find it important to do in the role-play, and they do not utilise their knowledge without the teacher educator's explicit intervention.

## Discussion and implications

This study aimed to investigate how role-plays can contribute, or not contribute, to the development of PSTs' mathematical knowledge when they worked in groups without continuous guidance from teacher educators. Our findings indicate that each of the three groups studied had opportunities to learn mathematics, but it varied in how effectively they utilised these opportunities.

The findings show that PSTs in both Group 1 and Group 2 engage in the mathematical content without the teacher educator's intervention. In Group 1, the discussion about the context suitable for division by decimal numbers is primarily initiated by one of the PSTs, Marie. She reacts to the context proposed by the group, and highlights aspects that do not align with the division problem. The other PSTs try to fill the gaps, but it does not work (the context does not make sense, as Marie points out); Marie gives up, and the group does not go further.

However, they notice a more appropriate context used by another PST group later; they think it is a 'clever move' and talk about how this is used to 'bring out the reasoning of the students'. So, even though they do not comment on this other context in depth, they may understand better what an appropriate context for work on decimal numbers can be. Thus, the PSTs in the group initiated and took the discussion on mathematical content. Still, it is unclear whether the role-plays have served as an arena for the development of mathematical knowledge.

On the other hand, PSTs in Group 2 try to use the division context suggested by the teacher educator at the beginning of the lesson in the role-play. They manage to use it in the role-play (to some extent), and then go into further discussion about alternative contexts, which they try out in the next role-play, and discuss further.

Even though some aspects still seem challenging for the group, we suggest that the PSTs develop their mathematical knowledge and try to utilise it in the role-plays. Dışbudak-Kuru and Isıksal-Bostan (2023) point out in their study that PSTs can make inquiries about content knowledge during lesson planning, and we see that both Groups 1 and 2 do it in our study. However, Group 1 stops the inquiries rather early, while Group 2 manages to go further.

In Group 3, the PSTs neither discuss nor use any context in the role-plays that could be appropriate for division by decimal numbers. When the teacher educator asks them about this, they immediately mention the notion of quantitative division, give an example of the context, and also, without significant challenges, design another similar context that makes more sense for smaller numbers.

Thus, it seems that they do not really have problems with the mathematical content, but they simply do not use their knowledge in the role-play. Studies have shown before that PSTs overlook the importance of going into depth of the mathematical content (see, e.g., Enge & Valenta, 2010; Santagata et al., 2007; Star & Strickland, 2008). We see that this is the case both in Group 3 (not discussing it at all) and in Group 1 (giving up without resolving the problem).

Joint work on planning and rehearsing discussions has been shown earlier to give opportunities for PSTs' learning of subject matter knowledge (e.g., Silver et al., 2007; Hovtun et al., 2021). In these studies, a teacher educator works together with a group of PSTs. Hovtun et al. (2021) propose that the teacher educator's guidance is an essential aspect in this context.

Our findings corroborate their assertion. In groups consisting of just PSTs, it seems somewhat arbitrary whether the PSTs will discuss the mathematical content during their group work and how they will do that. Furthermore, when they do not discuss it sufficiently, their focus shifts to rather general considerations about students and teaching, and their learning opportunities are reduced.

The development of mathematical knowledge through work on role-plays, where PSTs work in groups without a teacher educator present the whole time, seems to be more challenging to achieve than in usual cycles of investigation and enactment (Lampert et al., 2013).

Still, working on role-play is a valuable approach in teacher education, but it is essential to be aware of this approach's advantages and limitations.

Our findings suggest that new mathematical content needs to be thoroughly worked on before or during the PSTs' engagement in role-plays, and that the teacher educator needs to guide this.

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## Rehearsing core practices outside the classroom

### *Preservice teachers' group work with socio-emotional challenges in a simulation workshop*

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**Abstract:** In this article, we explore how groups of novice preservice teachers (PSTs) rehearse taking part in practices that are fundamental when dealing with students' socio-emotional challenges through the simulated practice design (SPD) *Breaktime*. *Breaktime* is a simulated learning resource consisting of 17 videos featuring digital bullying scenarios and socio-emotional transgressions in a ninth-grade class. Simulated learning is increasingly used in higher education (Chernikova et al. 2020). The role of the teacher requires many skills that extend beyond the classroom. By conceptualizing preservice teachers' engagement with a simulated exercise of core practices, we contribute to a growing discourse in educational research. Our analysis highlights the interaction between the preservice teachers' own experiences and the SPD's mediational tools. Through our study, we observe that preservice teachers use these media tools as focal points for a collective exercise in professional practice when they encounter authentic challenges. *Breaktime* can serve as a bridge to real-world practice early in teacher education and help form a foundation for the professional development of preservice teachers.

**Keywords:** professional practice, simulation-based practice design (SPD), approximation of practice, core practices, teacher education

**Sammendrag:** I denne artikkelen utforsker vi hvordan grupper av ferske lærerstudenter øver på å ta del i sentrale praksiser forbundet med å håndtere sosio-emosjonelle utfordringer gjennom det simulerte praksisdesignet (SPD) *Storefri*. *Storefri* er en simulert læringsressurs bestående av 17 videoer med digitale mobbingssituasjoner og sosio-emosjonelle overtredelser i en niendeklasse. Simulert læring blir i økende grad brukt i høyere utdanning (Chernikova et al., 2020). Lærerrollen krever mange ferdigheter som strekker seg utenfor klasserommet. Ved å konseptualisere lærerstudenters engasjement med en simulert øvelse av kjernepraksiser bidrar vi til en voksende diskurs innenfor utdanningsforskning. Vår analyse belyser samspillet mellom lærerstudentenes egne erfaringer og SPD-ens mediale verktøy. Gjennom vår studie ser vi at lærerstudenter bruker disse mediale verktøyene som omdreiningspunkter for en kollektiv øvelse i profesjonell praksis når lærerstudenter møter autentiske utfordringer. *Storefri* kan fungere som en bro til virkelighetsnær praksis tidlig i lærerstudiet, og være med på å danne et grunnlag for lærerstudenters profesjonelle utvikling.

**Nøkkelord:** profesjonell praksis, simuleringsbasert praksisdesign (SPD), virkelighetsnær/utvidet praksis, kjernepraksiser, lærerutdanning

## Introduction

In contemporary teacher education, the integration of theoretical knowledge with practical skills remains a challenge (Gorzycki et al., 2020). Teachers need to provide socio-emotional support in and outside of classrooms (McDonald et al., 2013). Simulation-based practice design (SPD) allows educators to address these challenges by rehearsing such practice in teacher education.

This article examines how simulation-based learning can help preservice teachers (PSTs) rehearse core practices when asked to respond to middle school pupils' socio-emotional challenges in and outside their classroom. Our study examines how first-year preservice teachers engage with the digital multimodal SPD *Breaktime* (SPD accessible at [www.ludo.usn.no/storefri?lang=en](http://www.ludo.usn.no/storefri?lang=en)). The student groups' collective interactions with the SPD and each other create an *irreducible tension* (Wertsch, 1994) of conveying to each other their understanding of the phenomenon exposed in *Breaktime*.

The present study is an exploration of the simulation's role in what Grossman et al. (2018) call the 'approximation of practice' using qualitative analysis methods (Boos et al., 2018; Brauner et al., 2018). *Breaktime* aims to help novice PSTs rehearse core practices with middle school pupils' socio-emotional challenges to support a 'good and safe learning environment'. Recently published national reports emphasise the need for a stronger focus on teachers' socio-emotional competencies (NOKUT, 2024) and an 'expanded practice' beyond classroom contexts (KD, 2024), that is, practices that move beyond traditional on-campus teaching in teacher education.

In seeing the coping with pupils' socio-emotional challenges as a core practice for a teacher, we extend the research field's current focus of core practices 'that are essential to the work of teaching' (McDonald et al., 2013, p. 379). Thus, we pose the following research question:

*How do the students make use of different mediational tools when using the simulation-based practice design Breaktime to rehearse core practices concerning socio-emotional challenges?*

The research emphasises a collaborative approach in teacher education (TE), exposing novice PSTs to 'core teaching practices' (McDonald et al., p. 502).

Socio-emotional scenarios involve pupils' well-being, and social inclusion. Teachers must address social exclusion, and digital bullying at school.

A challenge for TEs is to bridge the curricular divide between pedagogical knowledge and 'pedagogies of enactment' (Grossman et al., 2009). Grossman et al. (2009) propose that PSTs' practice should entail both 'the technical and the intellectual and is enacted not by single individuals but as members of a broader community of practice' (Chaiklin & Lave, 1996; Grossman et al., 2009). A professional teacher must be able to observe and respond to pupil behaviour, both in the classroom and during recess. This skill set is vital to the core practices of teaching. Despite its importance, this is underresearched in core practice studies (Grosser-Clarkson & Neel, 2020).

## Theoretical background

By employing fictitious video narratives enriched by a variety of documents to simulate authentic situations, the SPD *Breaktime* is designed to facilitate approximations of teachers' practice concerning challenges in the socio-emotional learning environment of the pupils. Thus, it offers novice PSTs opportunities to rehearse and enact discrete components of complex practice in settings of reduced complexity' (Grossman et al., 2009, p. 283).

Employed as a resource in an on-campus workshop, the SPD *Breaktime* is a 'designed setting' which simulates an 'authentic setting' in a 'controlled environment' on campus (McDonald et al., 2013, p. 384). This approach prepares PSTs for the authentic setting they will encounter during observational practice later in the semester.

### Core practices

*Core practices* refer to the essential activities and strategies that educators use to facilitate learning and improve pupils' learning outcomes (Grossman et al., 2018). The field focuses on identifying, understanding, and refining these practices to enhance teaching quality across learning environments (Grosser-Clarkson & Neel, 2020; Van Der Schaaf et al., 2019).

The notion of *core practices* can be seen as reflecting a natural evolvement of the field of teacher education. Rooted in pragmatism, teacher education has developed through the 20th century's paradigmatic shifts of behaviourism and cognitivism and evolved into the contemporary understanding of learning as more of a social and constructivist endeavour (McDonald et al., 2013, p. 379). In accordance with this epistemic turn, we argue that the discourse on core practices should develop a stronger emphasis on the teachers' role in creating a good socio-emotional learning environment.

Although notions of praxis have been manifested throughout the 20th century, teacher education is still being criticised for a lack of ability to close the theory–practice gap (Aagaard, 2023; Studiebarometeret, 2023).

The study of core practices aims to establish a framework of best practices that can be taught, learned, and applied by educators to improve their instruction and support student learning (Grosser-Clarkson & Neel, 2020; Van Der Schaaf et al., 2019).

A core practice is, however, also understood as an exercise of professional judgement (Biesta, 2017) and a 'creation of meaningful intellectual and social community' that ought to be practised and theorised in teacher education programmes. The practice of teaching involves both socio-emotional and ethical aspects. Yet, the study of core practices has had a limited focus on the 'commitment to equity and social justice' (McDonald et al., 2013, p. 381).

Despite stating the expressed goal of building understanding, skill, relationship, and identity (Grossman et al., 2018), the empirical study of core practices seems to focus almost exclusively on 'the complex realities of the classroom' (Grossman et al., 2018, p. 7).

This study extends the field to the social environments of the school by describing the PSTs' activities with *Breaktime* as rehearsals of core practices. Such a move is situated well within the stated aims of previous research in the field, yet in an area where little empirical research has been conducted.

### **Approximation of practice**

Approximation of practice can be an effective approach to develop complex skills (Chernikova, 2020, p. 502). Grossman and her colleagues draw up three elements of teaching practice, including *representation of practice*, *decomposition of practice*, and *approximation of practice* (Grossman et al., 2018).

*Breaktime* is a digital simulation-based practice design (SPD) and an example of ‘representation of practice’ as it includes ‘artifacts from practice’ (Grossman et al., 2018, p. 14). The ‘decomposition of practice’ is explained as breaks ‘for the purpose of teaching and learning’ (Grossman et al., 2018, p. 15). Approximations of practice ‘require students to engage in practice that is related, but not identical, to the work of practicing professionals’ (Grossman et al., 2018, p. 16). They can provide students with ‘deliberate practice’ of particularly difficult components of practice, as is the case of *Breaktime* with socio-emotional challenges (Grossman et al., 2018, p. 16). *Breaktime* constitutes a ‘representation of practice’ whilst teacher educators provide decomposition and approximations ‘to enact elements of practice with a high degree of support and under conditions of reduced complexity’ (Grossman et al., 2018, p. 16).

Moreover, ‘approximations of practice can supplement existing pedagogical approaches in teacher education’ (Grossman et al., 2009, p. 284). The day spent on *Breaktime* is an integral part of other pedagogical practices of a teacher, such as lectures, tutoring, micro-teaching, and forthcoming observational practice.

### **Mediational tools**

According to McDonald et al., ‘a cycle for learning to enact core practices’ is firmly grounded in a situated perspective of learning (McDonald et al., 2013, p. 381). Seen through the lens of socio-cultural theory, the designed setting of the workshop created what can be described as an ‘irreducible tension’ between the mediational tools of the SPD, the PSTs’ own experiences and reflections, and the contextualised mediation of these tools within the collective (Wertsch, 1994, p. 205). The ‘irreducible tension’ implies that the agents and the mediational means cannot be fully separated or reduced to independent components when analysing human action. They are inherently interconnected and mutually influential.

The ‘irreducible tension’ occurs in a teacher’s everyday practice and must be navigated in collaboration with colleagues. The SPD *Breaktime* consists of material resources that can become tools for the students’ meaning making. As students try to share their understanding with each other, this creates

an ‘irreducible tension’ (Wertsch, 1994, p. 205) that forms the fundamental dynamic driving their interaction and collaboration.

Consequently, the PSTs will summon symbolic tools such as their own reasoning, memories from their own schooling experience, and insights from prior lectures in their problem solving.

In our analysis, we find instances of how ‘irreducible tension’ generate this dynamic. The main ambition of *Breaktime* is to immerse students in a realistic school context. For them to tackle the critical thinking, problem-solving, and sense-making of dilemmas and tasks of the SPD, they must analyse, decode, negotiate, and convey their individual understanding of these tools to their group, to seek a mutual comprehension through dialogues to reach a practical decision ‘valid within the limits of a given collectivity’ (Wertsch, 1994, p. 206).

Collectively, the students must seek viable solutions to practical problems. The ‘irreducible tension’ generated by the SPD and the students’ cooperative and ‘active role in the skill development process’ (Chernikova, 2020, p. 503) is to be understood as our unit of analysis.

## Methods

### Context

Norwegian K-13 teacher education requires 5 years of study. This article focuses on 18 first-year preservice teachers (PSTs) preparing to teach levels 5–10. After a month of seminars, they had upcoming observational in-school practice.

The full-day workshop followed a lecture on the schools’ ‘obligation to act to ensure pupils a good socio-emotional school environment’ (Education Act, 1998), which was the foundation for an instructional activity (IA) during the simulation (Lampert et al., 2013). The day began with an introduction by the TEs, followed by an expository short video (Figure 18.1).

## **Simulation-based practice design (SPD): *Breaktime***

Simulation-based learning is increasingly used in higher education (Chernikova et al., 2020). The main aim of the SPD is to prepare PSTs for teaching roles by having them practise collaborative judgement, seek information together, and discuss their observations.

The task document requires PSTs to investigate recess incidents and create an action plan to resolve problems. The SPD invites PSTs to watch short video clips containing storylines from recess in class 9C, unfolding at the fictitious Stavnakker Middle School. This simulation involves socio-emotional problems and digital transgressions such as ghosting, power play, sharing of nudes, and digital bullying (Aagaard, 2023, p. 171).

### **The videos**

*Breaktime* includes 17 videos, each over a minute long, about fictitious pupils' interactions during recess. The density of information is enhanced through documents that offer background and context to the narrative. Additional documents provide context, written collectively by teachers, researchers, and teen actors. Authenticity is of high importance to SPDs (Chernikova, 2020).

The first video shows teacher Ingunn returning from lunch and noticing that two students are missing. She turns to the camera, breaks the fourth wall, and asks:

**Figure 18.1**

*Screenshot: The teacher asks: Could you check what happened during recess? So I can teach*



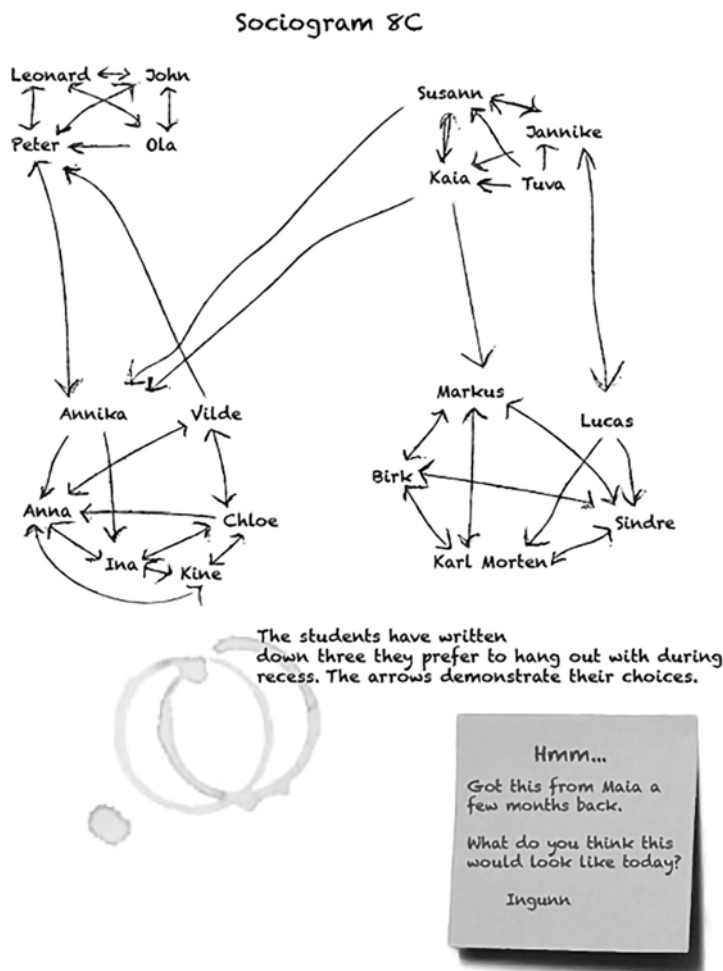
The 16 subsequent videos tell three main stories. The first story shows boys playing a game on their school laptops in the classroom while excluding a classmate. The second story features girls gossiping while video-filming other students. Thirdly, there is a story revealing that a girl in class has shared a nude and talk of an upcoming party. In the latter, a group of boys huddle together as one of the boys, John, shows the nude to his friends. A boy in the group inquires who sent it, and John answers: 'It is Susann.' And they follow up by asking: 'Susann? Her? Susann? Her over there?' The three main narratives intersect and relate to one another. Reflecting the unpredictability of recess, the SPD unfolds as a non-linear collection of stories, inviting PSTs to explore and investigate.

## The sociogram

As the PSTs progress, they access a range of dated and recent resources, including a class list, a sociogram, surveys, social media posts, and emails. These documents support PSTs in addressing socio-emotional challenges. While applicability varies, all documents provide insights into the social life of 9C, both in and out of school. A central document in the analysis is a hand-drawn, year-old sociogram.

**Figure 18.2**

*Sociogram: The sociogram illustrates the social groupings of 8C. Note that the students wrote down three classmates who they would prefer to hang out with during recess, and that this document has been given to Ingunn from Maia 'a few months back'*



The sociogram illustrates the relationships between teens based on their responses to 'Who would you like to socialise with in class?' Compiled by a teacher, the sociogram is only accessible to teachers. It was created when the class was in 8th grade. Figure 18.2 shows that Ingunn received the sociogram from another teacher a few months ago.

Group research has focused on how groups establish and maintain high performance for decades (Boos & Kolbe, 2018, p. 68). The sociogram highlights the complexity of group interactions and performance, showing that understanding every interaction is nearly impossible. However, past relationship data in the form of available documents in *Breaktime*, including email correspondence with parents, meeting minutes, and other information, can be key to understanding current social dynamics.

## Data collection

Our data consist of video and audio recordings, and a survey (Table 18.1). Video data were collected using several stationary cameras recording in three student groups working with *Breaktime*. Audio data were collected using the Nettskjema mobile app, to supplement the video and ensure audio quality.

**Table 18.1**

*An overview of data collected*

| Video data | Auditory data |
|------------|---------------|
| 5.5 Hours  | 5.5 Hours     |

As researchers, we have recorded three large groups of novice PSTs using a combination of stationary video cameras fixed on the groups and audio-recording. A meticulous coding process is part of ‘investing time and resources in coding of actual group interaction [which] allows for obtaining insights into group dynamics that would otherwise remain hidden’ (Boos & Kolbe, 2018, p. 74).

## Analytic procedures

We used qualitative thematic analysis (Brauner et al., 2018). This involved a familiarisation session for all authors, followed by documenting notable student interactions (events). Researchers shared and compared observations to categorise the interactions. The analysis focused on PSTs' use of mediational tools, and how these tools facilitated collaborative sensemaking and problem-solving.

Central to this process is Wertsch's concept of 'irreducible tension' (1994, 205), which serves as a critical unit of analysis. This tension is generated as PSTs attempt to convey their understanding to each other, becoming the underpinning dynamic that drives their interaction and collaboration.

When probing into specific events, we follow a two-step process, inspired by Linell (2009) and Silseth and Arnseth (2021), where we first give a description of the unfolding of the event, and then analyse it applying analytical concepts outlined in the theory section. This process provides a fine-grained analysis of the groups' meaning making, and simultaneously ensures transparency concerning our interpretation.

## Unit of analysis

In our study, the unit of analysis is Wertsch's concept of *irreducible tension* of meaning making and problem-solving amongst the PSTs.

*Breaktime* consists of documents and correspondence that may enlighten the PSTs in their work. A teacher's professional life increasingly involves documentation regimes (Wertsch, 1994, p. 206). Grossman et al. (2018) make a point that novice teachers must learn 'to be sensitive to issues of status and equity' to 'negotiate patterns of inclusion and exclusion, and to be sensitive and knowledgeable about group dynamics' (Grossman et al., 2018, p. 279). Thus, one of the core practices of many teachers is creating and using these documents for assessing, communicating, and acting on situations. Navigating these complexities inevitably produces misconceptions and disagreements within a group.

## Ethical considerations and the role of participants

The subjects of our study are first-year PSTs. All PSTs signed a consent form, in accordance with SIKT's guidelines (SIKT, 2024), for both video and audio recordings, with the option to withdraw consent at any time. The audio-recording app Nettskjema, authorised for text and audio data collection, securely saves video data.

The two teacher educators (TEs) responsible for the workshop are co-researchers, along with the main researchers and co-authors, who served as observers.

## Analysis and findings

Three specific events in our data illustrate how PSTs begin to rehearse core practices concerning socio-emotional challenges in school when using *Break-time*. All three display instances of tension in the group of PSTs, where they try to convey their understanding of the mediational tool to each other.

The first event revolves around how one element of the SPD, specifically the *sociogram*, becomes a mediational tool for the group's meaning making. The second recounts how PSTs reference what their own teachers did in similar situations, and in the third, they refer to recent lectures at university. In the second and third events, the PSTs' prior experiences are summoned as resources for analysing and making decisions on how to respond to the perceived problems in the pupils' socio-emotional learning environment. All three excerpts derive from one group of six PSTs.

### Event 1: Sociogram

The first excerpt concerns the PSTs' interaction with the sociogram (Figure 18.2). After having spent about ten minutes clarifying and discussing the relations between the pupils in the SPD, the PSTs seem a bit doubtful about whether their own speculations form a good enough basis for creating an action plan, which is the task they have been given.

Then they discover the sociogram, which does not seem to match what they have seen in the films. The PSTs discuss for a few minutes, concluding that the milieu, especially regarding some of the girls, is 'toxic'. Then they suddenly realise that the sociogram is dated and therefore does not necessarily reflect the current social relations in the narratives. This inclusion of a dimension of time and change is caught in the excerpt below:

1. Bård: ((Reading)) *'Got this from Maja a few months back. What do you think this would look like today?' Well, it could be that (0.2) Vilde and Chloe have been very good friends before. [But then they]*

2. Bianca: *[But not anymore because] Vilde got together with Peter.*

3. [...]

4. Bianca: ((Points at the title of the sociogram)) *It says 8C, so it's probably a year ago.*

5. Bård: *Yes, it says ((pointing at the Post-it note on the sociogram)) 'Received this from Maia a few months back.' Right (.) So a lot could have happened during those months.*

In this excerpt, Bård reads from the Post-it note which appears to have been attached to the sociogram and suggests that a change in the friendship relations may have happened. Bianca expands on this new theory. Other PSTs in the group take part in deducing a possible course of action based on the new information (which has been omitted in the excerpt above). Bianca then shares the observation that it says '8C' and deduces that this must be information from yesteryear. Bård re-reads aloud the first part of the Post-it note and concludes that a lot could have happened in the milieu since this sociogram was created.

The PSTs' discovery of the dated sociogram seems to lead to a realisation of how the situation may be more complex than it first seemed. Bård verbalises his thoughts to the group. Some PSTs engage in the conversation about the

sociogram, considering what they have observed in the videos, while other group members sit in silence.

The revelation of the document charged the group's understanding and discussion with new questions about the extent of changes that can occur in a youth group over such a period. It also re-opened questions that seemed resolved before they discovered the sociogram. At first glance, it may have looked like there was a clear, definitive answer to the nature of the social relationships of a middle school class, and that it did not portray some of the students as very honourable. After this event, the PSTs have realised how relations can be very dynamic and changeable.

## **Event 2: Schooling experience**

The novice PSTs draw upon their own schooling experience in event 2. The task document has become a structuring resource. PSTs must find practical solutions to the problems they find that they need to address.

In the excerpt, the group agrees that the most severe issue is pupils filming each other during recess and sharing the clips with their phones. The PSTs recall that at least half the group had 'cellphone hotels' (i.e. handing in their cellphone to the teacher) in middle school. This is a measure that they now want to include in their action plan. When Bea says 'he' in the following excerpt, she refers to her own middle school teacher.

1. *Bjørn: Are you writing that down? (.) Cellphone hotel?*
2. *Bård: Yes ((writing. Meanwhile the other PSTs peak in a lowered voice))*
3. *Bea: We (0.5) had a cellphone hotel. I remember that some people took pictures in middle school. (0.5) ((The group nods)) I don't know if it was a girl or someone. (1.0) So the teachers had to check one and one of us, the phone.*
4. *Bianca: Seriously? ((Bjørn and Bianca laughs))*

5. *Bea: Yes (h). But it's like (0.5) you could delete it before he checked it, right?*

6. *Bianca: Yes, I know.*

7. *Bjørn: But to check for such a picture?*

8. *Bea: They just (1.0) He said that we had to go into Photos, and then we had to show it to him. ((Shows with her hands how the teacher would swipe on the pupils' phones))*

9. *Bjørn: Okay. ((Bjørn and Bianca laughs))*

10. *Bård: ((Reads what he has written)) 'We see that much of the problems that arise... ((continues))'*

Bjørn asks Bård to write down 'cellphone hotel' as a measure, and while Bård writes, the conversation snaps out of the 'formal' discussion mode and into a more informal track. This is marked by how the three PSTs all lower their voices as if not to disturb Bård, who is writing. Bea recounts one situation from school. She talks about how some students took pictures of others without permission and how the teacher demanded to check each cell phone. Bianca and Bjørn both laugh, and Bianca says, 'Seriously?' Bea reaffirms and continues by pointing to how the teacher's action was not efficient, as the pupils could just delete the photo. When Bjørn seems to ponder the teacher's decision to check the pupils' phones, Bea responds by elaborating in words and gestures on how the teacher did it.

We find it interesting to see how the PSTs draw upon their own schooling experience when creating an action plan, but also how Bjørn and Bianca question the decision of Bea's former teacher. We see the beginning of a formation of professional reasoning in the critical, though hesitant, reflection upon the situation when the teacher forces the pupils to show their phones.

It seems clear from the discussion preceding the extract that they agree that the teacher is obliged to do something but find it difficult to accept that it is necessary to breach the pupils' privacy the way he does. The excerpt is one of several situations which demonstrate how previous school experience

can become a resource in rehearsing core practices for novice PSTs, and how an emerging sense of critical thinking can be observed.

We also find it interesting that this story, and the following reflection upon a teacher's actions, are told in a low voice as if not to disturb the more formal solving of the task. Effectively, the PSTs present content that we, as teacher educators, find most relevant to the task. However, they convey it in a way that suggests they see it as less relevant.

### Event 3: Prior lectures

The last event of this analysis demonstrates how the PSTs refer to content from previous lectures and apply this knowledge to the situations observed. In the following excerpt, they refer to 'a 9A-case'. In a Norwegian school context, this is a well-known reference to a specific paragraph in the Education Act that states that 'all pupils are entitled to a good and safe learning environment', and that schools must act if this is not the case.

The topic of the prior lecture referred to below was § 9A and how to follow up on instances where the learning environment felt unsafe for pupils. PSTs have also been given relevant resources, such as an action plan template and three examples of real action plans. Prior to this event, they have studied these and connected them to a recent relevant lecture, before using these tools to produce arguments about what to do.

1. Bård ((reading)): *'If you have seen something that you believe may be a 9A case, it is necessary to fill out a notification form.'*  
*Action plan, yes.*

2. Bianca ((pointing at something in the papers, looking at Bård)): *There Bård: Yes, that was what we talked about yesterday, that (0.5) everyone should have the right to a safe (.) and good (.) environment that promotes (.)*

3. Bjørn [health]

4. Bård: [health] well-being and [learning].

5. Bianca: *[learning]*, yes.

6. Bård: *If there is anyone who doesn't have that, then we need to create a notification form. But most people here don't exactly (0.5)*

7. Bjørn: *I don't think everyone is equally happy.*

8. Bård: *No, but there is no one who has [come forward and said]*

9. Berit: *[From what we saw]*

10. Bård: *Or, there is such a thing (0.5) If someone is being bullied (.)*

11. Bianca: *There are many who don't function together.*

The event opens with Bård reading from the instructions for the group work. They are supposed to consider whether the situation can be a '9a-case' and, if so, to fill out a notification form and make an action plan. Bjørn and Bianca take part with Bård in a jumbled, collective recitation of the paragraph, piecing it together.

Then Bård states that such cases necessitate the creation of a notification form but seems to question whether the situation is so serious that it calls for such a response. Bjørn laments how not 'everyone is equally happy', and Berit seems to support Bjørn in stating that we may not have the full picture. Bianca adds that there 'are many who don't function together'.

This excerpt showcases a complex exchange of PSTs' callbacks to prior lectures about whether events observed necessitate 'a notification form' and 'an action plan' according to the judicial procedures of a 9A case. The PSTs use the available documents, and what they have learned previously, to evaluate the situation.

## Discussion

Our research investigates how groups of preservice teachers utilise different mediational tools while engaging with the simulation-based practice design *Breaktime* to rehearse core practices related to social-emotional challenges.

Our analysis focuses on three key events, highlighting the early stages of PSTs' meaning-making processes using both material tools (e.g. videos and documents) and immaterial tools (e.g. personal schooling experiences, and prior lectures). Our PSTs are novices, and our findings reflect the initial steps towards professional practice.

*Breaktime* offers PSTs opportunities to rehearse and enact components of complex practice in simplified settings (Grossman et al., 2009). The activity unfolds in a controlled environment, designed to mimic authentic situations. Middle school pupils, acting out realistic socio-emotional scenarios, and the PSTs' reminiscences of their own schooling experiences contribute to this authenticity (McDonald et al., 2013). Consequently, our findings emphasise three critical points for the reader.

*Breaktime* serves as an arena where PSTs navigate, observe, and align their understanding of mediational tools, collectively stepping towards professional judgement (Biesta, 2017). This early engagement sets the foundation for long-term educational goals.

Data show that PSTs frequently draw upon their own experiences as students and learners of pedagogy. Although they are only weeks into their training, they use available mediational tools, such as personal schooling experiences, prior lectures, to approach *Breaktime* tasks. These experiences represent an approximation of practice (Grossman et al., 2018), giving PSTs early exposure to the complexities of socio-emotional challenges faced by middle school students.

Event 1 highlights a specific mediational tool, the sociogram, which challenges PSTs' initial observations of pupil interactions. This tool helps PSTs realise the dynamic nature of pupil relationships, marking a critical step towards understanding complex practices (Grossman et al., 2009).

In Event 2, the PSTs draw on their schooling experiences to offer solutions, despite appearing off-task. This practice is significant, as it represents the beginning of a meaningful intellectual and social community (McDonald et al., 2013).

Finally, Event 3 demonstrates how PSTs integrate prior lectures into their analysis. This unguided decomposition of practice shows how approximations of practice can enhance teacher education (Grossman et al., 2009).

The task of finding two missing pupils becomes complex, as the PSTs must coordinate their observations and plan actions. This requires effective synchronisation of behaviours (Boos & Kolbe, 2018), establishing a common understanding crucial for professional practice.

The PSTs' reflections on their schooling experiences, realising that their own social relations might have been mapped by past teachers, highlight the powerful nature of rehearsing professional practice. This shift marks a critical aspect of their development.

Navigating socio-emotional challenges is a core practice PSTs rehearse in *Breaktime*, using prior lectures and literature to verbalise professional language and obligations, such as the Education Act's paragraph 9A. Our analysis shows that the PSTs use mediational tools like the sociogram to understand class dynamics and rehearse 'professional judgement' (Biesta, 2017). Combined expertise, and individual experiences, enrich group discussions, fostering critical thinking and professional enactment (Boos & Kolbe, 2018). These early approximations of practice are essential for developing the skills needed to address realistic socio-emotional challenges in educational settings.

Grossman et al. outline three elements of teaching practice: representation of practice, decomposition of practice, and approximation of practice (Grossman et al., 2018). *Breaktime* serves as an example of 'representation of practice' by incorporating 'artifacts from practice' (Grossman et al., 2018). The sociogram is an example of a representation of the core practice of understanding what goes on among the pupils to cultivate the socio-emotional environment. In the simulation it is conveyed as a teacher-produced document, and relating to it in the group is thus also an approximation of practice for the PSTs.

The 'decomposition of practice' occurs when tasks are broken down 'for the purpose of teaching and learning' (Grossman et al., 2018). Approximations of practice require PSTs to engage in practice that is related but not identical to the work of practising professionals, offering deliberate practice of particularly challenging components, such as socio-emotional challenges in *Breaktime* (Grossman et al., 2018). These approximations provide essential rehearsal opportunities under conditions of reduced complexity, supplementing existing pedagogical approaches in teacher education (Grossman

et al., 2009). Preservice teachers will have ample opportunities to rehearse socio-emotional scenarios using *Breaktime* and will be given time to discuss various approaches to solve issues theoretically, which may become relevant in school contexts.

Understanding the concept of tension in mediated action is crucial for grasping the dynamics between theoretical principles and practical application. Wertsch (1994) suggests that mediated action inherently involves a kind of tension between the general concept of mediation and the specific contextualised use of these mediational means in executing concrete actions. This *irreducible tension* is evident in *Breaktime*, designed to help PSTs practise problem-solving tasks relevant to their professional careers. These tasks involve identifying problems, analysing contexts, and applying professional and experiential knowledge to make practical decisions (Chernikova et al., 2020).

The simulation's various narratives and problems create complex contexts that require critical and collaborative forms of engagement among the PSTs. The problem-solving process generates an 'irreducible tension' within the groups, becoming a focal point of analysis. This tension not only promotes critical thinking and problem-solving but also helps novice teachers develop the skills necessary for professional practice (Wertsch, 1994; Chernikova et al., 2020).

Our study demonstrates that approximations of practice, and the inherent tensions within mediated actions, can play an important part in PSTs' development. *Breaktime* provides a platform for PSTs to engage with complex socio-emotional challenges, using their prior experiences and acquired knowledge to navigate and resolve issues. This process of rehearsing professional practice in a controlled yet authentic environment can function as a preparation for the realities of the PSTs' future teaching careers. In NOKUT's final assessment report of teacher education in Norway (NOKUT, 2024), the need for rehearsing professional practice is explicitly highlighted.

## Conclusion

In conclusion, our study demonstrates that approximations of practice, and the inherent tensions within mediated actions, can play an important part in PSTs' development. As highlighted in NOKUT's final assessment report of teacher education in Norway (NOKUT, 2024), there is a need to create spaces where PSTs, as future teachers, can rehearse professional practice in different ways.

Our study has shown that *Breaktime* is a platform that provides PSTs with opportunities to engage with complex socio-emotional challenges, using their prior experiences and acquired knowledge to navigate and resolve issues. Rehearsing professional practice in a controlled, yet authentic, environment can represent a particularly useful and powerful preparation tool for PSTs. In other words, rehearsing will make PSTs better prepared to cope with the realities of their future teaching careers.

## Appendix 1: Transcription key

Adapted from Jefferson (2004)

- (.) Full stop inside brackets: Micropause of no significant length
- (0.2) Number inside brackets: Timed pause
- [] Square brackets: Overlapping speech
- ((interaction/analyst comments)): Description of non-verbal activity

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## Epilogue

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## Introduction

If you were to search academic databases for studies related to the topic of this book, you might use terms such as ‘micro-teaching’, ‘simulation’, or ‘role-play’. However, the central concept underlying this book and the research project from which it originates is ‘rehearsal’.

Rehearsal is the overarching concept that explains why we engage in simulations, role-playing, or micro-teaching. It is fundamental to all professional education, offering students the opportunity to practise in a safe environment without the risk of making critical mistakes or causing unnecessary disruptions. Rehearsal acknowledges that teaching – like other professions – is not just theoretical but also practical, emotional, and relational, and that there are certain practices that relate to teaching in general and to teaching specific subject matter. In this anthology, the authors present research and practices which contribute to a richer understanding of the importance of rehearsal.

Yet, the various articles reveal certain tensions surrounding the concept of rehearsal, and variations in its interpretation. In this concluding epilogue, we highlight some of these tensions and conceptual variations, followed by perspectives that deepen our understanding of rehearsal and reflection in teacher education. Finally, we discuss how the knowledge gathered in this anthology can inform future research and practice in teacher education.

### **Complexity, contingency, uncertainty – and the rehearsal of routine behaviours**

A key takeaway from this anthology is that because teaching is inherently complex, contingent, and uncertain, teacher education must create opportunities for preservice teachers to practise and rehearse essential behaviours and skills. This helps prepare newly qualified teachers to navigate their professional roles, and continue their learning throughout their careers.

However, there is an inherent tension within this idea. Teaching is not technical; it is always situational, raising several important questions:

- Which core practices should be prioritised?
- To what extent are core practices contextual or subject-dependent?
- Is there a danger that we make teaching more instrumental if we emphasise core practices, routines, and rehearsal – that we deprofessionalise teaching and make it more scripted?

Sfard highlights the importance of developing a broad repertoire of routines during teacher preparation. Teaching routines expand throughout a teacher's career, forming a lifelong process of professional development. However, no set of routines can fully prepare teachers for every unexpected event. Sfard suggests that alongside a rich variety of teaching techniques, teachers must develop situational sensitivity. The more established their routines, the more cognitive space is freed to engage with students and adapt to unforeseen circumstances.

Another tension, raised by Biesta, concerns different perspectives on teaching. Is teaching a set of techniques that can be rehearsed, a craft learned through apprenticeship, or a performative art? Biesta states that 'entering practice is done through practising the practice'. This can be interpreted as the process of becoming a fully qualified teacher through continuous, guided practice in safe environments, such as rehearsal rooms and classrooms.

Every time a teacher steps into a classroom, they engage in a live performance that may differ from class to class, even if the lesson content remains the same. Sensitivity to the audience – the students – is crucial. Teaching cannot be reduced to a rigid script; it requires interaction and responsiveness. As Sawyer (2011) argues, the essence of teaching lies in balancing structure and improvisation. He cautions that excessive external directives can diminish teaching quality by limiting opportunities for improvisation.

When a profession is strongly influenced by external directives, it is characterised by what Sachs (2016) calls political professionalism. Practice is subject to standards, external accountability, and control. This is likely to harm practitioners' enactment of the profession, or to diminish the teaching quality, as Sawyer (2011) says.

The studies presented in this anthology reflect a different kind of professionalism, namely what Sachs (2016) has called democratic professionalism. This is the kind of professionalism that is researched and developed within the professional community itself. Research is needed and used to continually improve practice, and to identify practices that are valuable for teaching and

learning. These are practices that might be rehearsed to make PSTs better prepared for practice by strengthening their professional teaching repertoire. Democratic professionalism comes from inside the profession and is negotiated within a community of practice.

Yet, there is a kind of professionalism which we have chosen to call personal professionalism. This is the kind of professionalism that the practitioner, in our case the teacher, enacts when responding to the context, situation, and the students, when improvisation is needed. This kind of professionalism is more difficult to rehearse; however, a rich and internalised set of routines is likely to support the PSTs in strengthening their personal professionalism when meeting unexpected situations in and outside the classroom.

Our understanding of the goal of the RetPro project is to enhance PSTs' professional knowledge for teaching. Teaching as a profession is a 'practice', and all teachers who 'open their practice' when starting out as newly qualified teachers need to be aware of the professional knowledge base that teachers have access to, develop, and use.

Learning some of the key practices in a way that involves modelling, planning, rehearsing, practising, and reflection can also be regarded as a learning strategy for continued professional learning in the workplace.

## Reflection and its role in rehearsal

Reflection is a central theme in this anthology. As Leitch discusses in her prologue, reflection is regarded as a meaningful learning tool rather than a mere academic exercise. The two kinds of reflection that are mainly addressed are (see Schön, 1983):

- **Reflection-on-action** occurs after a teaching experience, during discussions with educators, or through written reflections.
- **Reflection-in-action** happens in real time, as teachers make adjustments while teaching.

There is another reflection type that is evident, although not as pronounced in the articles, namely '**reflection-for-action**'. Reflection-for-action is essential in the first phase of the rehearsal model used in RetPro. The first phase is described as 'introducing and learning about the activity', 'studying and modelling', and 'modelling' in the articles. These three descriptions can imply different foci, not least whether or not PSTs are engaged in critical discussions of research on the topic, theories about the topic, or just modelling. Our impression is that this varies in the included studies.

For instance, in one study the teacher educators involved first expressed their concern about using research in the project because it could interfere with the 'magic', but later they realised that introducing and using research would contribute to PSTs' understanding (see Vangsnes, article 3). Arnesen et al. (see article 16) find that they need to strengthen the planning phase.

Thinking seriously about how reflection-for-action can be integrated as a proper 'study phase' is one way to introduce professional literature and relevant research to PSTs, enhancing their understanding of *why* certain practices can be worth learning and using, *when* they might be favourable, and, in some cases, *for whom* they might be especially valuable.

The study phase is essential for later reflection as well. John Dewey (1910) describes reflective thinking as suspending judgement and postponing conclusions. Learning to maintain this state of uncertainty while engaging in systematic inquiry is a crucial skill developed through teacher education. A study phase which includes reading, discussing, observing, and discussing practices that are modelled provides a rich knowledge base and vocabulary for later reflection-in-action and reflection-on-action. It is a way to build professional knowledge and shared language.

Reflection-in-action is the difficult one. Brezinski (2018) describes six characteristics of reflection-in-action:

1. Actions influence the situation, sometimes unpredictably.
2. Teachers cannot pause to reflect; they must rely on intuition.
3. The outcomes of actions are often unforeseeable.
4. The situation is fluid and can be interpreted in multiple ways.
5. No single interpretation is definitively correct or incorrect.
6. Language itself shapes the situation, making complete detachment impossible.

Because reflection-in-action is so immediate, can it be rehearsed? Biesta suggests that teachers should reflect not only on what they have learned, but also on how they have been in particular situations. Some of the articles in this book have used video recordings to help PSTs do just that: to analyse and reflect on practices, decisions, interpretations, and feelings.

In many ways, reflection-in-action boils down to what a teacher notices, or how sensitive the teacher is to the surroundings and contexts. Noticing has been an area of growing interest in educational research.

However, a review of the literature suggests that few studies demonstrate direct improvements in teaching practices due to noticing interventions (König et al., 2022). We also believe that noticing is related to teacher sensitivity, but both of these concepts are still quite ‘fuzzy’.

It would be interesting to learn more about how or when rehearsal might influence sensitivity in learning situations, or whether rehearsal influences PSTs’ noticing in ways that also lead to constructive changes in teaching practices.

## **Where do we go from here?**

The articles in this anthology demonstrate how rehearsal has enabled learning for PSTs. They provide insight into the kinds of reflections that PSTs engage in related to what they observe, and what they experience through simulation, role play, teacher-in-role, and other essential approaches to learning in teacher education.

Rehearsal helps reduce complexity by building a repertoire of well-considered behaviours. It allows teachers to manage some of the inherent uncertainties of the profession. Rehearsal must be meaningful. This is emphasised throughout the anthology. Rehearsal must emphasise understanding rather than rote technical application. A main reason for this is that teaching is a continuous process of rehearsal. There is no singular ‘opening night’ where everything falls perfectly into place. Teachers constantly encounter new and unpredictable situations, requiring them to adapt and refine their practice over

time. Teachers need to continually explore new ways of teaching to meet the learning needs of the children, and adolescents, in schools.

This requires a learning orientation, and an understanding of teachers as lifelong learners. It is not enough to rehearse specific core practices if teacher education also has to prepare teachers for uncertainty (Munthe, 2007). Uncertainty involves doubt and risk – or ‘the incalculable’ as Biesta writes in this anthology. But uncertainty is also a necessary aspect of learning – we need to ask questions, to wonder, to be curious, and to want to find out. Can we rehearse this in teacher education, too?

Tauritz (2016) suggests that educators should guide students through three key themes:

- Learning to embrace uncertainty as an opportunity.
- Developing resilience in uncertain situations.
- Reducing uncertainty by building a repertoire of routines.

We wish to add a fourth point to the list above:

- Learning to create uncertainty through questioning the taken for granted or own assumptions

Being curious about one’s own teaching practices, and the consequences they might have for others, is a key to professional learning for teachers. Learning to ask questions about teaching and learning, to wonder about students’ learning, relationships, and well-being, are also important skills to learn, and to hone.

Bullough (2021) stresses the importance that teachers’ reflections go beyond instrumental practice and critically look at the whole person and his/her practice. ‘Within higher education questions of self, well-being, and of individual agency often are set aside in favour of more instrumental values, like training and market-measures. By linking “self” to “study,” self-study seems to proclaim the importance of the person and the quality of that person’s life to the quality of the practice’ (p. 258).

This anthology takes ‘the practice turn’ in teacher education as a starting point, and has provided valuable insight into how teacher educators and PSTs on campus, and in schools, have developed and studied rehearsal in different subjects, and through different pedagogical approaches. The research anthology

demonstrates, through many practical examples, how teaching practices can be modelled and rehearsed both on campus and in schools.

The term ‘practice turn’ is often used to illustrate a different emphasis than, for instance, an ‘academic turn’ or a ‘theoretical turn’. We have witnessed a call for a practice turn in teacher education for many years (see e.g. Donaldson, 2011; British Educational Research Association, 2014; Conway & Munthe, 2015; Darling-Hammond, 2017).

However, we believe that what is needed is a ‘professions turn’, which encompasses practice, research, and theory in a comprehensive way to strengthen professional knowledge and skills. Teaching is both academic and practical, and it is vital for teacher education to provide the conditions that combine the academic and practical in meaningful ways.

The model used for rehearsal in the RetPro project is one way to create this coherence, and to provide the content that is necessary for meaningful reflection-for-action, reflection-in-action, and reflection-on-action.

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