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Pedagogy is just common sense

A case study of student teachers' academic learning practices

Thesis for the degree of Philosophiae Doctor

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Norwegian University of Science and Technology
Faculty for Social Sciences and Technology Management
Programme for Teacher Education

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Live as if you were to die tomorrow
Learn as if you were to live forever

- Mahatma Gandhi

Preface

This thesis is the tangible product of a long journey and I'm not sure when or where it started. It might have been when I applied for a PhD grant, or when I was hired to coordinate different faculties involved in developing a new teacher education programme. It might have its origins in the position I held as a researcher on image-guided surgery which I left to become a teacher or it might stem from my work with surgeons to change surgery practices through the latest innovations in medical technology. Perhaps it started in a lecture theatre in Germany, listening to the professor who introduced us to the theory of electromagnetism and quantum physics. Looking back, I cannot say with certainty where or when this journey truly began. What I do know is that the road has been longer than simply that from when my candidature was accepted. Along the way, I have taken part in many and very different practices, always trying to understand the different perspectives of the people I have been collaborating with and always hoping to capture the generosity of the support they have given to my research. I also know that this journey has shaped me as a person. Yet, as the journey now approaches its destination, I realise that the end is really just another beginning and beginnings are a gift.

First, I wish to thank Ove Haugaløkken for motivating me to do a PhD in the first place. I am also grateful to the students who participated in my study. They generously shared their insights and time in a very busy time of the term.

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Hoveid who has offered many “mind-bombs” with his energetic way of always asking questions. I also wish to thank Torill Ryghaug for backing me up during my “writing week” abroad as well as for being a supportive, honest, and good colleague from my very first day at PLU. I thank Wenche Rønning, who provided helpful guidance in early stages regarding use of questionnaires.

I have had the privilege to be a part of the National Graduate School in Teacher Education (NAFOL). Thanks to NAFOL for arranging for stimulating discussions as well as providing financial support. Thanks to one and all of the PhD candidates in “NAFOL Kull 1” for the many discussions and social gatherings – physically as well as in social media. Special thanks to Mari-Ann Letnes, Kristin Barstad, and Halvor Spetalen for the many (academic and non-academic) conversations.

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Trondheim, March 2014, Ela Sjølie

Abstract

The backdrop for this thesis is the persisting criticism against teacher education. Teacher education is claimed to be overly theoretical, unrealistic, and distant from practice. As a result of this criticism, teacher education has been challenged to change. There is a general call for developing new and better ways of organising teacher education that aim to strengthen the link between theory and practice. However, despite the fact that the criticism is directed towards the academic part of the studies, little research has focused on student teachers as learners in higher education. It follows from this that we know little about the part of teacher education that we endeavour to develop. What do student teachers mean with their claim that teacher education is too theoretical? How do student teachers work with their academic studies and what kind of challenges do they encounter? And finally, how do conditions within teacher education influence how they experience and work with their studies? These are the questions that are explored in this thesis.

The thesis reports on a case study of student teachers' academic learning practices. The study is set in a Norwegian secondary teacher education programme and draws upon perspectives from learning to teach, student learning in higher education as well as more recent developments in practice theory. Qualitative and quantitative data have been collected from 78 student teachers enrolled in two successive years of a five-year integrated Master's programme. Four research questions have been explored in four separate journal articles that are summarises and synthesised in this thesis.

Through holistic focus on the *academic* part of teacher education, this case study provides additional perspectives on the criticism of teacher education with three main contributions. First, this thesis offers alternative representations of the much debated theory-practice gap in teacher education. It is suggested that the constant focus on solving "the theory-practice problem" might sustain an inappropriate dichotomy of theory and practice, which in turn prevents us from considering the whole "ecosystem" of teacher education. Second, this thesis demonstrates the need for reaching *beneath and beyond* the surface of student teachers' experiences. The findings direct attention to constraining conditions within the programme and to teacher educators' teaching practices and social relations. The findings reveal the influence of discourse and power – issues that are rarely discussed in research literature. Third, it is suggested that teacher educators need to rethink traditional structures of authority in teacher education. This implies to include student teachers as active, *responsible,* participants of their own learning practices, rather than consumers of what teacher education has to offer.

Sammendrag

Det hevdes at lærerutdanning er for teoretisk, urealistisk og distansert fra praksis. Den vedvarende kritikken har utfordret lærerutdanningen til å utvikle nye og bedre måter å organisere seg på. Behovet for å styrke koblingen mellom teori og praksis har blitt spesielt vektlagt. Til tross for at kritikken hovedsakelig er rettet mot den teoretiske delen av studiet, finnes det lite forskning på lærerstudentene og hva de gjør i studiet. Vi mangler derfor forskningsbasert kunnskap om den delen av lærerutdanningen som det er ønske om å utvikle og forbedre. Hva mener lærerstudenter når de påstår at lærerutdanningen er for teoretisk? Hvordan jobber de med sine akademiske studier, og hva slags utfordringer møter de? Og hvordan påvirker ulike forhold innenfor lærerutdanning hvordan de opplever og arbeider i studiet?

Denne avhandlingen utforsker disse spørsmålene gjennom kasusstudie av lærerstudenters akademiske læringspraksiser. Studien bygger på perspektiver fra læring i lærerutdanning, læring i høyere utdanning, samt nyere praksisteori. Datamaterialet omfatter kvalitative og kvantitative data fra 78 studenter ved to påfølgende kull ved den femårige lektorutdanningen ved NTNU. Fire forskningsspørsmål har blitt besvart i fire separate tidsskriftartikler som oppsummeres og syntetiseres i denne avhandlingen.

Gjennom et holistisk fokus på lærerstudenten tilbyr denne dybdestudien nye perspektiv på kritikken av lærerutdanningen gjennom tre bidrag. For det første diskuteres alternative tilnærminger til det mye debatterte teori-praksis forholdet i lærerutdanningen. Det argumenteres for at et kontinuerlig fokus på å løse "teori-praksis problemet" kan opprettholde en lite hensiktsmessig dikotomi, som igjen hindrer oss fra å se helheten i det komplekse landskapet som lærerutdanningen befinner seg i. For det andre viser denne avhandlingen nødvendigheten av å dykke under overflaten av lærerstudentenes rapporterte erfaringer og evalueringer av utdanningen. Funnene retter oppmerksomheten mot begrensende forhold i programmet, som for eksempel overfylt undervisningsplan og negativ studentdiskurs, og mot lærerutdannere sin undervisningspraksis og sosiale relasjoner. For det tredje er argumenteres det for at lærerstudentene i større grad må involveres som aktive, ansvarlige, deltakere i sin egen læringsprosess, snarere enn at de er konsumenter av hva lærerutdanningen har å tilby.

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Sjølie, E. (2014). The role of theory in teacher education: reconsidered from a student teacher perspective. *Journal of Curriculum Studies*

Sjølie, E. and Østern, A.-L. (in review). Student teachers' learning within the practice architectures of teacher education. *Educational Research*

Sjølie, E. (in review). When form stands in the way of content – a study of student teachers reading and writing and practices. *Education Inquiry*

Sjølie, E. (2014). In the tension between idealism and practicality: student teachers' meta-awareness of learning and teaching. *NAFOL Year Book 2014*

Introduction: The problem

The backdrop and main motivation for this thesis is the persisting criticism against teacher education – a criticism that is largely related to the academic part of teacher education. Teacher education is claimed to be overly theoretical, unrealistic, and distant from practice (Darling-Hammond, 2010, Lid, 2013, Niemi, 2002). Newly graduated and pre-service teachers feel inadequately prepared, and call for topics that can help them with the *actual* challenges they face in the classroom, e.g. classroom management or teaching children with special needs (see, e.g., Aspfors, 2012, Lid, 2013, Roness, 2011b). In Norway, student teachers have joined the public debate with newspaper feature articles, accusing teacher educators for "preaching pedagogical *fog* theories" or "common sense", and arguing for closing down teacher education altogether; "teaching is a craft and can only be learned in practice."[1] Despite numerous efforts around the world over the last decades, the criticism remains strikingly stable; it seems to be an insurmountable task to bring about major change in teacher education.

Student teachers are part of a complex enterprise. A teacher education programme consists of a teacher education faculty, practicum schools as well as a large number of university faculties across the whole range of academic disciplines. The student teachers must relate to different traditions and competing agendas; they are teacher candidates, but also students; they are students of learning and teaching, but also students of mathematics, social sciences, or foreign languages. Finally, they are young university students engaged in any number of social student activities; they are workers, and perhaps also parents. It was the complexity of the students' situation that caught my interest when I worked with student teachers from an administrative and supervising perspective. In my conversations with the students, I also recognised the criticism and the dissatisfactions that are so often described in research literature. I was particularly struck by many students' negativity towards university coursework, which I found surprising as many of these students were enrolled in Master's programmes and thus accustomed to academic studies. The questions that arose from these experiences with students were: Where does all this negativity come from? Do *we* produce it? If so, *how* do we produce it?

An extensive literature review of research on teacher education reveals a paradox. Despite the fact that the persisting criticism is directed towards the academic part of the studies, and that considerable efforts around the world have

[1] One of these articles can be read online ("Praktisk pedagogisk ulykke" [Practical-pedagogical misfortune]): www.klassekampen.no/article/20140222/ARTICLE/140229961.

[2] These teacher education programmes are located at university colleges and qualify for

focused on developing more successful *university-based* models (e.g. Calderhead and Shorrock, 1997, Darling-Hammond and Lieberman, 2012, Grossman et al., 2009, Korthagen et al., 2006, Loughran, 2006), pre-service teachers are rarely considered as students in higher education. Research on student teachers exists almost in isolation from research on higher education, and the main focus is predominantly directed towards students' *teaching practice* (either actual teaching or how they think about teaching). It follows from this that we know little about what is actually going on in the part of teacher education that we endeavour to develop. What do student teachers mean with their claim that teacher education is too theoretical? What do they expect from theory? How do student teachers work with their academic studies and what kind of challenges do they encounter? And perhaps more importantly, how do conditions within teacher education influence how they experience and work with their studies? These are the questions that this thesis aims to explore.

In a commonsensical understanding of the "theory - practice issue" in teacher education, it follows that the main focus of this thesis is on *theory*. However, the general argument that will be developed and sustained throughout this thesis is that the "learning of theory" is also a practice – a practice that needs to be given more attention if we are to understand more of the complex and perennial dilemma of students' dissatisfaction with teacher education. In order to develop and design better *university-based* teacher education, this knowledge is vital.

Research context – political climate

Teacher education in Norway is in the midst of great changes and considerable political attention. The political climate regarding educational issues can be described as having two "winds" blowing at the same time. One is the focus on teacher quality and recruitment. Concerns about teacher quality partly originate from the general low "status" of the teaching profession and the subsequent declining numbers of applicants to teacher education (Ministerråd, 2008). Combined with Norwegian students' poor results in international comparisons such as PISA and TIMSS, doubts have been raised about the quality of the teachers. One answer to these challenges was to raise the admission requirements for general teacher education[2]. Another measure was to introduce a new five-year "integrated" combined degree programme at university, which provides the graduate with teacher education combined with a Master's degree in one academic subject (and

[2] These teacher education programmes are located at university colleges and qualify for teaching all subjects at the primary and lower secondary levels (ages 6–15).

one year's study in a secondary subject).[3] Finally, within a few years, a new reform of teacher education will ensure that all qualified teachers in Norway hold a Master's degree. Finland has been a major inspiration in this matter, where teacher education was transferred to universities more than 30 years ago, and a Master's degree is required for primary as well as secondary schoolteachers. In summary, these changes can be seen as an academisation of Norwegian teacher education.

The second "wind", and perhaps sometimes in tension with the first, is the move towards a more *practice-based (or "close to practice[4]")* teacher education. This is related to the aforementioned criticism about teacher education being too theoretical – a criticism that is documented in national evaluations of teacher education (Lid, 2013, NOKUT, 2006). These evaluations formed the background for the most recent reform of teacher education in Norway (in 2010, see Munthe and Haug, 2010, Munthe et al., 2011). There is a general call for developing new and better ways of organising teacher education that are built around a close collaboration between university and schools and that aim to integrate the different parts of teacher education into a coherent totality (see KD, 2003, 2009). A particular aim is to find models that strengthen the link between theory and practice. A further requirement in these development efforts is that teacher education must be *research based*, which means that teacher education programmes should be built upon empirical, evidence based research results (see KD, 2009, McKenzie et al., 2005, Munthe et al., 2011).

It is within this context that the study in this thesis originated. The participants in the study were enrolled in the aforementioned "integrated" combined degree programme at the Norwegian University of Science and Technology (NTNU), and the study started under the umbrella of a national R&D project ("the PIL project"). This project aimed to integrate theory and practice through an alternative model of organising practicum.

The PIL project

PIL is an acronym that translates to "Practicum as an integrating element of teacher education". It was a project that ran from 2008-2010, focusing on narrowing the gap between theory and practice in teacher education. The project was designed and conducted in close collaboration with one lower secondary and one upper secondary school in close proximity to the university campus. The main idea of the project was to have a continuous alternation between campus activities and school practicum throughout the entire semester. In general, the students were in school

[3] This programme qualifies the graduate to teach specific subjects at the lower and upper secondary level (ages 13–18).

[4] "Praksisnær" in Norwegian.

two days, and on campus one or two days. In the traditional model, 4 weeks of campus activities precede and succeed 6-8 weeks of practicum.

Although the PIL project was the point of departure for the current study, the data material includes students from both models (PIL and the traditional model). The project as such will not be in focus in the discussion of the findings. In the final discussion chapter, I will return to the implications of this study for the PIL project, and also for implementation of alternative models more in general.

Structure of the thesis

The thesis comprises three parts. The introduction sets the stage and identifies the main focus of the thesis: student teachers' experiences of the academic part of teacher education. The thesis is motivated by following questions:

- What do student teachers mean with the claim that teacher education is too theoretical? (What do they expect from theory?)
- How do student teachers work with their academic studies and what kind of challenges do they encounter?
- How do conditions within teacher education influence how student teachers experience and work with their studies?

Guided by these questions, *Part I* provides the historical, methodological, and theoretical background for the study. In seeking to make the research process transparent, the first part provides the background for the study but at the same time it gives a picture of the sequential path of the research process. It is contained within three chapters. Chapter 1 provides a historical overview and literature review of research on teacher education with a particular focus on learning to teach and on the relationship between theory and practice. The chapter concludes with the argument that the manner in which student teachers think about theory (or what they *mean* by theory) remains open for investigation. It also concludes that student teachers' engagement with university coursework has rarely been studied within research on teacher education. Chapter 2, therefore, shifts the focus to reviewing literature from research on higher education, and explores three perspectives on student learning that are of particular interest considering the questions above. The argument that is developed throughout this chapter is that learning must be seen as more than coming to possess certain knowledge and skills. Learning is a social phenomenon – a practice – taking place within sites of discourse and power that are historically and culturally situated. Such a view of learning challenges the individual view that dominates in higher education today. The chapter concludes with the formulation of the research questions of the study. Chapter 3 introduces the overall theoretical framework of the study – the theory of practice architectures. This theory provides a lens and a terminology to study student teachers' learning *as*

a practice, and also to go beyond the surface of the students' "stories". The chapter both introduces practice theory in general, and the theory of practice architectures in particular.

In *Part II* a detailed account of the methodological approach and research design is given. Part II also provides a more detailed description of the *case* of this study: the organisation of this particular teacher education programme. In the last part of the thesis, *Part III*, I present and discuss the findings of the study. First, the four articles are summarised and then synthesised through the lens of practice architectures. Then, I return to the point of departure of my study: the PIL project and the ongoing efforts to develop new models of teacher education that can strengthen the link between theory and practice. The main argument that is followed up in this last part of the thesis is that when implementing such models (or in developing teacher education in general) one needs to pay closer attention to the *site* in which these models are implemented. This involves studying *the practices* of students as well as the teacher educators. It also includes studying teacher educators as part of the practice of educating teachers; this also directs attention to the social relations within a teacher education faculty.

Clarification of concepts

Pedagogy and pedagogical theories

Considering that the thesis is read also within an international setting, there is particularly one concept that needs clarification: the term *pedagogy* or *pedagogical theory*. *Pedagogy* does not carry the same meaning in all countries, and the debate about differences and similarities is part of a trans-Atlantic discourse large enough for several books in itself (see, e.g., Ax and Ponte, 2010, Gundem and Hopmann, 1998, Pantic and Wubbels, 2012). In a European tradition, the field of *pedagogy* is the field concerned with how and why we educate children, young people or adults. This usage of *pedagogy* embraces upbringing in all kinds of settings, not just the processes that go on in schools and schooling, and it aims to provide an understanding of the whole enterprise, "in all its technical, practical, moral and political complexity" (Kemmis, 2012, p. 83). When *pedagogy* is used in this thesis, it is within a European tradition, and a simplified translation into English would be *education*.

There are, however, two specific uses that will be used throughout the thesis. The first expression – *pedagogy subject* (alternatively *the subject of pedagogy*) – refers to the *university course in pedagogy,* which is distinguished from *subject didactics.* Subject didactics is similar to what in some countries are called *curriculum courses or methods courses.* The second term is *pedagogical theories*. This refers to theories that are taught in teacher education in general, i.e. in both the *pedagogy subject* and *subject didactics.*

Students and student teachers

Student teachers and pre-service teachers can both be used to denote the students who are enrolled in a teacher education programme. The word "students" in this thesis will always refer to student teachers or university students in general. "Pupils" will always refer to students attending school.

PART I: Theoretical landscape

Only when all players and landscapes that comprise the learning-to-teach environment are considered in concert will we gain a full appreciation for the inseparable web of relationships that constitutes the learning-to-teach ecosystem.

- Wideen et al., 1998, p. 170

Part I presents the theoretical landscape that has informed this thesis. At the same time, it also represents the sequential, developmental path of working with the thesis. Part I is contained within three chapters. While Chapter 1 covers topics that can be seen to constitute the background for the thesis, Chapter 2 has largely informed the data collection. Chapter 3 brings in a perspective that came in "mid-way" that expanded my understanding of learning as well as providing a lens and framework for the whole study. It thereby represents the main theoretical underpinnings of the data analysis and discussion of the findings and implications of the thesis. The research questions have been refined accordingly on this path.

Chapter 1 Research on learning to teach

This chapter explores how student teachers' engagement with university coursework has been studied within research on teacher education – as part of the process of *learning to teach*. Considering the main backdrop of the thesis – that teacher education is claimed to be too theoretical – particular attention will be given to how the theory-practice relationship has been represented in research literature as well as how it is perceived by student teachers. The first part of the chapter provides a picture of the many different questions that have been asked in research on teacher education. It does so by giving a brief history of research on teacher education and identifying some main approaches to student teachers' learning to teach. The second part discusses the "theory-practice gap" in teacher education, a topic that has been a common concern for all the different approaches. The focus in this chapter will be on the big picture and research lines that have served as background and motivation for the topic of the research in this thesis.

1.1 Research interests in teacher education - a brief history

Research on teacher education is often criticised for being underdeveloped and fragmented and that it has failed to build generalizable knowledge upon which teacher education programmes can be designed and developed (Bergem et al., 1997, Cochran-Smith and Zeichner, 2005, Murray et al., 2008, Teige et al., 2008, Villegas-Reimers, 2003). Bergem et al. (1997) note that research on teacher education in Norway is characterised by many small-scale studies, mostly exploratory and not theoretically grounded. There are also few cross-references between the different studies (Haug, 2010). One explanation for the fragmented field can be found in the many different ways the problem or challenge of teacher education has been framed and approached through the relatively young history of this research tradition. Cochran-Smith and Demers (2008) list shifts in research paradigms and methods, changing understandings of teacher learning and development, and shifting notions of educational accountability as the three most important factors. In an extensive review on the development within research on teacher education, Cochran-Smith and Fries (2008) identify four historical epochs of research on teacher education, partly as a consequence of these changes. Each epoch is characterised by a distinct framing of the problem of teacher education as well as methodology and theoretical underpinnings.

From the 1920s to the 1950s, research on teaching or teacher education was conceived as a *curriculum problem*. Improving teacher education was seen as a matter of standardising the curriculum of the different teacher education programmes based on the identification of some key teacher characteristics. From

the 1950s up until the early1980s the focus on teacher education was seen as a *training problem*. The intention was to establish a "science" of teaching, and improving teacher education was seen as a matter of producing desired teacher behaviour in beginning teachers. The main criticism against the training research was that it did not acknowledge the relationships between the technical aspects of teaching and its intellectual and decision-making aspects in the complex setting of schools and classrooms (Cochran-Smith and Fries, 2008).

In the beginning of the 1980s, this long-lasting criticism and subsequent debates eventually led to a general shift from seeing teacher education as a training problem to conceptualising it as a *learning problem*. This involved trying to identify a professional knowledge base for teaching as well as understanding how teachers learn to teach. While research designs up until then had been primarily quantitative, this shift brought with it new research paradigms and perspectives, including qualitative, interpretative and critical approaches (Bergem et al., 1997, Cochran-Smith and Fries, 2008).

The research from this period differs in terms of the questions being raised as well as the epistemological underpinnings or the underlying assumptions about learning to teach. In terms of the questions of interest, researchers were interested in teacher thinking, which includes a large body of research on teachers' beliefs (see, e.g, Borko and Putnam, 1996, Wideen et al., 1998), teacher change, which includes stage theories on development (see, e.g., Richardson and Placier, 2001), and student teaching and teacher induction. Research on student teaching and teacher induction documented the difficult transition from teacher education to profession in terms of a practice shock (see, e.g., Veenman, 1984) or a "washing-out effect" of the insights gained during teacher education (Zeichner and Tabachnick, 1981). Researchers voiced a general concern about the impact of teacher education on student teachers' prior beliefs about learning and teaching (Wideen et al., 1998).

In terms of the epistemological underpinnings, Wideen et al. (1998) identified three historic, simultaneous traditions that reflect different assumptions about learning to teach: the positivist, the progressive, and the social critique tradition. In the positivist tradition, learning to teach is seen as a process of providing a novice with knowledge about teaching, typically knowledge accumulated through research findings. In this tradition, the university provides the theory, skills and knowledge about teaching, while the schools provide the field setting where this knowledge is applied and practiced, The novices will then make the effort of integrating it all. This is mostly referred to as "traditional models" and is, according to many researchers, still dominating teacher education around the world (e.g. Allen, 2009, Korthagen et al., 2006, Wæge and Haugaløkken, 2013). The progressive tradition was a result of the learning-to-teach shift. The focus changed from determining what novices should know and how they should be

trained to know it, to attempting to understand what they do know and how this knowledge is acquired. In this tradition, there have been many attempts to try alternative ways for preparing teachers by taking control over individual parts of the teacher education programme. The literature reveals tensions between these attempts and the existing structures and competing agendas within teacher education programmes (Wideen et al., 1998). In the last tradition, social critique, the focus is on broader issues in teacher education, for example the aim to prepare teachers to be able to deal with the diversity resulting from an increasingly multicultural society.

Research from the period on learning to teach was criticised for focusing too much on the individual teacher. Wideen et al. (1998) appealed for an ecological approach to research on teacher education, while Eraut (2000) was concerned with identifying the different factors to consider when taking a holistic approach to the research. As a result of this criticism, in the mid-1990s, the attention of researchers shifted again from the individual teacher or student teacher to the whole enterprise of teacher education. The focus of research on teacher education changed from being a learning problem to being seen as a *policy problem* (Cochran-Smith and Fries, 2008). This shift was, according to Cochran-Smith and Fries, partly a result of an increased focus on high standards and accountability and the subsequent need to build empirical knowledge to inform political decisions and reforms. One important aim in this period, which we are still in, has been to build empirical knowledge on successful factors for teacher education programmes, e.g. to identify characteristics of powerful programmes (e.g. Darling-Hammond, 2010, Darling-Hammond and Lieberman, 2012) or to develop fundamental principles (e.g. Korthagen et al., 2006) that can be used in different contexts. Furthermore, since the mid-90s there has been increased interest in studying teacher educators as well as students (Bergem et al., 1997), which can be seen in the call for developing a pedagogy of teacher education (e.g. Loughran, 2006, Richardson, 1997) or in self-studies of teacher educators' teaching (e.g. Berry, 2004, Loughran, 2004).

1.2 Different approaches of learning to teach

It is possible to talk about three main approaches of how student teachers' *learning to teach* has been studied: *reflection-oriented* research, learning to teach as *developing professional knowledge* and policy-oriented research focusing on *organising for learning to teach*. The large interest in reflection in teacher education is demonstrated by the abundant literature on "reflective practice" and "reflective practitioners" (e.g. Calderhead and Gates, 1993, Korthagen et al., 2001, LaBoskey, 1994, Ottesen, 2007, Ovens, 2009, to mention but a few). Considered as a watershed in this matter is Schön's (1987, 1983) notion of *the reflective*

practitioner, and the following *reflective turn*[5] (Schön, 1991). Scholars argue that reflection can be used to link theory and practice in teacher education (e.g. Korthagen et al., 2001) or as a way to make personal practice theories explicit (e.g. Lauvås and Handal, 2000). The ideals or purposes of reflection have been widely problematised in research literature, in particular because of its differing definitions and uncritical use (e.g. Calderhead, 1989, Edward-Groves and Gray, 2008, Griffiths, 2000, Ottesen, 2007, Søndenå, 2004). Nevertheless, it continues to be an important topic in research on student teachers. In the Norwegian context, reflection is seen as necessary for the sustained and continuing professional development for teachers and is endorsed as a key objective in National Curriculum Regulations for teacher education (KD, 2003).

Approaches that focus on learning to teach as developing professional knowledge have explored teachers' growth of knowledge, or the significance of teachers' thoughts and beliefs for teaching practice. Important questions have been to study student teachers' beliefs and how they change (or do not change) during the course of teacher education[6] (e.g. Borko and Putnam, 1996, Knoblauch and Woolfolk Hoy, 2008, Nettle, 1998). Researchers have also been interested in the development of practical knowledge or craft knowledge, in what a teacher needs to know, and how that knowledge is developed in professional education (e.g. Calderhead, 1991, Feiman-Nemser, 2008, Grossman et al., 2009, Hammerness et al., 2005, Thiessen, 2000). Scholars have argued for a practice-based teacher education, in which professional knowledge is developed through structured practical experiences (cf. clinical practice, see Grossman et al., 2009). The aim of a practice-based teacher education is also reflected in the Norwegian context as a second key objective in the curriculum regulations (KD, 2003).

Within approaches that focus on organising for learning to teach, an important question has been related to how to tackle discontinuities between the educational setting and the school. This has, for example, been studied through different forms for school-university partnerships (e.g. Darling-Hammond, 2006, Furlong et al., 2008, Haugaløkken and Ramberg, 2007), mentoring (e.g. Edwards and Protheroe, 2004, Ottesen, 2006) or teaching methods within teacher education. Examples of the latter are how various approaches affect student teachers' learning such as microteaching, case methods, video, students as researchers, or portfolios (e.g. Jahreie and Ottesen, 2010).

Despite the variety of questions that have been asked, and the methodology and theoretical underpinnings that have been used, all three lines of research have a

[5] Although Donald Schön did not write about teacher education in particular, but professional education with examples from architecture and engineering, his work has had major impact on teacher education.

[6] See also (Wideen et al., 1998) for an extensive review on this topic.

recurring, common theme: research often begins and/or ends with references to the *theory-practice relationship* or the *theory-practice gap*. Darling-Hammond (2009) referred to the "theory-practice gap" as the Achilles' heel of teacher education. It is perhaps *the* most discussed issue in research on teacher education, and was also the point of departure for the study in this thesis. However, despite its frequent (and somewhat clichéd) use, it is not unambiguous what "the theory-practice gap" refers to. Before studying how student teachers understand theory and practice, it is therefore necessary to scrutinise the "theory-practice gap" from an epistemological perspective. In the following section, I will highlight some parts of this highly complex and extensive discussion and also the different ways that the theory and practice "gap" or relationship has been represented in research literature on teacher education.

1.3 The theory-practice gap(s) in teacher education

To say that the theory-practice gap has been discussed from an epistemological perspective is to say that it is about knowledge: what is the nature of knowledge, how do we know what we know, and what status is to be ascribed to knowledge? Discussions about the theory-practice gap started just here: as a reaction to the dominance of theoretical knowledge and the natural science model as the ideal also within social sciences and humanities. The growing reactions started in the post-war era and form one background for the aforementioned shift identified by Cochran-Smith and Fries (2008), where teacher education was framed as a learning problem rather than producing a scientific (true) knowledge base about teaching.

Theoretical and practical knowledge

The western world's understanding of knowledge can be said to stem from Plato. In Plato's view, knowledge is justified true beliefs, and the theoretical scientific (true) knowledge is the only kind of knowledge (Gustavsson, 2000). Early and influential theorists who challenged this understanding were Polanyi (1967) with the notion of *tacit knowledge* and Ryle (1949) with the distinction between *knowing that* and *knowing how*. By using the concept *knowing* instead of knowledge, Ryle emphasised that knowledge is characterised by activity and not just something that exists in people's head. Ryle also showed that these different ways of knowing are based on different kinds of reasoning. With the growing interest in the kind of knowledge that is "hidden" in human activity, a myriad of different notions were introduced. Examples are *knowledge-in-action* (Schön, 1983), *procedural* knowledge (as opposed to declarative knowledge), and Shulman's (1986) suggestion of three different forms of teacher knowledge: *propositional* knowledge, *case* knowledge, and *strategic* knowledge. Furthermore, many theorists distinguish between theoretical and practical knowledge by drawing

on Aristotle's classification of knowledge in theoretical knowledge, technical or craft knowledge, and practical wisdom[7] (e.g. Kemmis and Smith, 2008, Saugstad, 2005).

This expanded view of knowledge has implications for how to understand the relationship between theory and practice in professional education. First, the status of practice was raised, as it was understood as a *being* knowledge. As described in the previous section, learning to teach could be seen as developing professional knowledge, raising questions such as: what forms of knowledge are contained within professional (or teacher) knowledge and how are these forms connected to each other? Grimen (2008), for example, argues that rather than making a clear division between theoretical and practical knowledge, knowledge is better understood as a continuum.

Another implication is related to how to understand individuals' actions: human action cannot be described as deployment of rules derived from theoretical knowledge. Theorists have argued that theoretical and practical knowledge are inextricably intertwined and a prerequisite for each other, and that this has implications for how to understand learning. One example of this view is found with Saugstad (2005). She builds on Aristotle's classification of knowledge and suggests distinguishing between *spectator* and *participant* knowledge. Spectator knowledge is knowledge of the general that is not directly involved in practical life. It gives room for academic playfulness, as it offers the freedom to think of conditions being different, without considering the consequences in practical life. Participant knowledge is "the knowledge of how to participate in practical life" (Saugstad, 2005, p. 356). It is knowledge about how to act and produce something in shifting circumstances, and includes both technical skills and intuitive sense of how to act rightly in a specific situation. Saugstad's main concern is the consequences of this understanding of knowledge for how we understand learning. She claims that the problem of the gap between an academic setting and practical life is a result of a universal understanding of learning. This universal understanding neglects that learning theoretical and practical knowledge involves different modes for learning. The eagerness to harmonise the differences (and close the gap) between theoretical and practical knowledge has led to neglecting both of them.

[7] Aristotle distinguished between three different kinds of reasoning – theoretical, technical and practical, each guided by a different purpose and knowledge interest – *episteme, techne,* and *phronesis* – and also involving different activity forms (*theoria, poiesis,* and *praxis)*. Different theorists understand and use these notions differently, and there is not space, nor is it purposeful, to go into detail on the differences or the concepts here. For more details on how Aristotle's concepts can be understood in the context of teacher education, see Saugstad (2005) or Kemmis and Smith (2008).

The concept of theory and its relationship(s) to practice

Theorists have also been working particularly with the concept of theory. While an expanded view of knowledge was sparked by an interest in practical knowledge, discussions about the concept of theory can be said to start with dissatisfaction with the dominance of the pure scientific view of theories also in social sciences. Up until the 1980s, a dichotomous view of theory and practice was prevalent in teacher education (Orland-Barak and Yinon, 2007); theory was commonly regarded as the responsibility of universities, while practice was the responsibility of schools. This is often referred to as a "theory-into-practice" view and is largely associated with "traditional" approaches in teacher education (as also referred to in the historical overview above). A theory-into-practice view implies a linear or direct relationship between theory and practice, in which theory is described as something that determines practice or is translated into practice. Practice, on the other hand, can be seen as "applied theory" (see, e.g., Callewaert, 2006, Kvernbekk, 2005).

Many of the contributions to the theory-practice discussion can be seen as attempts to overcome the dichotomy between theory and practice. By problematising the binary view of theory and practice as separate entities, both the concepts of theory and practice have been expanded and redefined for the study of human activity. Some theorists have problematised whether educational theories can be called theories at all in the sense that theory is used in natural science, i.e. theories that are supposed to describe and predict phenomena in the world (e.g. Callewaert, 2006). Flyvbjerg (2001, p. 25) suggests that it is not meaningful to speak of theory in the study of social phenomena at all: "the study of social phenomena is not, never has been, and probably never can be, scientific in the conventional meaning of the word 'science'; that is, in its epistemic meaning". Carr suggests that educational theory is a cultural invention of the late nineteenth and early twentieth century, in which the purpose has been to "replace the contextually dependent, subjective beliefs of practitioners with the context free, objective knowledge generated by theory" (Carr, 2006, p. 144). From the perspective of system theory it has been argued that the different systems (university and school) produce theory of different kinds. While the interest within university is primarily insight and understanding, and the produced knowledge (or theory) is communicated to be true or not true, knowledge produced in schools emphasises "what works" – in this lesson, for my class, and in this specific school (Rasmussen et al., 2007).

Rather than drawing the borders of what can be defined as *theory*, other theorists (e.g. Jarvis, 1999, Kvernbekk, 2005, Weniger, 1990) have worked on redefining and expanding the concept of theory that is more adequate for studying human activity and in turn to discuss theory-practice relationships. These contributions are sometimes overlapping with the discussion about knowledge. Instead of separating theory and practice as separate entities, theory can be seen as

embedded in practice on different levels (e.g. Lauvås and Handal, 2000, Weniger, 1990): practice is theory laden and theory is practical. Examples of notions that have been used are *formal theories* and *personal theories*. Formal theories can be understood as theory that is explanatory or descriptive, generalisable, public, sanctioned and generally empirically derived (Grundy, 1987), while personal theories can be seen as representing personal knowledge (Jarvis, 1999). Kvernbekk (2012) advocates positioning theories on a continuum ranging from strong to weak, with well-articulated theories on one end (strong sense) and loosely articulated theories on the other (weak sense). Theories in a weak sense contain claims, views and beliefs that are constructed from experience and participation in pedagogic activities. A more "radical" view is that theory and practice are inseparable because theory is inherent in practice. This view can be found with Carr (1995), who argues that practice is fundamentally theory-laden.

With expanded notions of theory, the relationship between theory and practice shifts from being dichotomous to being interdependent, and *reflection* is often seen as the mediating factor. For instance, student teachers can reflect on theory in light of practice or on practice in light of theory (as, e.g., in Eilam and Poyas, 2009, Ketter and Stoffel, 2008), or in a reflective, cyclical process between theory and practice (as, e.g., in Korthagen et al., 2001). Through a reflective process, personal theories can be made explicit (e.g. Lauvås and Handal, 2000) or practice can be theorised (e.g. Segall, 2001).

Researchers' representations of theory-practice relationships

Although the above outline is a very short summary of a longstanding, complex, and contested topic, it indicates that there are many possible interpretations of the notion of a "theory-practice gap". Since the concepts of knowledge, theory and practice can be conceptualised in different ways and stand in complex relationships to each other, one can hardly talk about *the* theory-practice relationship or *the* theory-practice gap in teacher education. In the understanding that human activity is fundamentally situated (as with Flyvbjerg, 2001), and that theory and practice are inseparable (as with Carr, 1995), it is perhaps difficult to talk about a gap at all. It makes more sense to talk about false expectations of what theory is and can do. In other representations, a "gap" can be understood as lack of congruence between different *forms* of theory, for instance between theories in a weak and strong sense (see Kvernbekk, 2012).

As a consequence of this complexity, the "theory-practice gap" is represented in different ways in the literature. Perhaps the most common representation of the gap is the disconnection between what happens in higher education and the student teachers' field experiences (e.g. Zeichner, 2010), or the disparity between the theory studied in the teacher education programme and the practice the students observe in practicum (e.g. Allen, 2009). Others describe it as a

perceived gap to emphasise that it might not be a "real" gap, for example that teacher candidates fail to see the connections between formal theories and their own practice (e.g. Ketter and Stoffel, 2008) or between formal theories and the practice of others (e.g. Eilam and Poyas, 2009). It is thus a question of being able to recognise how theory *manifests* itself in practice. Yet another way has been to explain the gap as the incongruence between intentions and conditions (e.g. Callewaert, 2006, Carlgren, 1999) or between *espoused* theories (cf. Argyris and Schön, 1974) and *theories in use* (e.g. Breunig, 2005). One example of the latter is that teachers might say that they profess a socio cultural view on knowledge, while their practice is actually contradictory. The gap is thus between rhetoric and practice: between what they say they do or what they would like others to think they do (espoused theories) and what they actually do (theories in use).

However, quite often the theory-practice-gap is used without further clarification of what the *gap* refers to or how the authors (or students) conceptualise the concepts of theory and practice (see also Kvernbekk, 2005, Saugstad, 2005); it often seems to be taken as given how to understand them, and the focus has been more on pedagogical implications. Of particular interest for this study was to search for studies that have explored how student teachers understand theory and practice in teacher education.

Student teachers' representations of theory-practice relationships

A number of studies focus on how student teachers *value* theory, for example that they value practical experiences higher than the more theoretical parts of the studies (Allen, 2009, Haugaløkken and Ramberg, 2007, Smith and Lev-Ari, 2005), that student teachers expect teacher education to fill a "bag of teaching tricks" (Loughran, 2006), or that they largely prefer information for immediate use (see, e.g., Reid and O'Donoghue, 2004). In the research literature, the perception that teacher education is "too theoretical" is almost regarded as a truism (see, e.g., Darling-Hammond, 2010). However, Smith and Lev-Ari (2005) point out that the student teachers appreciate also the theoretical aspects of teacher education, and that they seem to accept that there is an essential body of teacher knowledge that is best acquired at the teacher education institution. Allen (2009) emphasizes that the majority of the student teachers in her study saw value in what they had learned on campus, but as they started to work as teachers, theoretical insights they had gained in teacher education were devalued and at times denigrated. In a study on secondary teacher education in Norway, Roness (2011b) found that the overall satisfaction with teacher education was quite good, and that the student teachers had internalised the value of an academic preparation in education. Other studies have emphasised the need for getting past the "survival phase" to be able to appreciate theory (e.g. Ketter and Stoffel, 2008, Russell, 1988).

While numerous studies have explored how student teachers value theory and also their engagement with theory in relation to teaching practice, studies that explore student teachers' *understanding* of theory and theory-practice relationships are very hard to find. In an early study, Russell (1988) revealed that pre-service, beginning and experienced teachers perceived theory-practice relationships and developed their understandings differently. He concluded that there is a need for "direct and explicit attention to the 'theory-practice' relationship" in teacher education (Russell, 1988, p. 15). In a more recent study, Orland-Barak and Yinon (2007) found that the "meeting between theory and practice" took many idiosyncratic forms and meanings. In other words, the student teachers understood and experienced connections between theory and practice in different ways. Despite extensive database searches, I have yet to find studies that explore student teachers' understanding of theory. The lack of such studies raises questions, I argue, of how to understand the criticism that teacher education is "too theoretical". How can we know what students mean by "too theoretical" or that there is a lack of congruence between "theory" and "practice" if we do not know what they mean by theory? As illustrated above, such a lack of congruence can have many different interpretations.

1.4 Summary and implications for research questions

In this chapter I have presented literature that constitutes the background for the study in this thesis. The focus has been on different approaches of "learning to teach" and the theory-practice relationship(s) in teacher education. There are two issues from this overview that are particularly relevant for this thesis.

The first is related to the theory-practice gap in teacher education. In addition to the ambiguity in terms of what the theory-practice gap refers to and the lack of studies that explore student teachers' understanding of theory and practice, researchers tend to blame "traditional approaches" for the persisting criticism of teacher education. As concluded by Korthagen et al. (2006, p. 1038): "the theory–practice issue seems intractable: telling new teachers what research shows about good teaching and sending them off to practice has failed to change, in any major way, what happens in our schools and universities." At the same time, research on university coursework is scant, which raises doubt whether such a conclusion is substantiated. The little research that *has* been done on university coursework is dominated by small-scale studies on innovative teaching methods seen through the eyes of teacher educators (Cochran-Smith and Zeichner, 2005, Floden and Meniketti, 2005). In their extensive review, Cochran-Smith and Zeichner conclude that teacher educators largely see teaching and learning as very interactive and collaborative, and that a course is "seldom defined as a class that transmits information about particular methods of instruction and ends with a final exam"

(Cochran-Smith and Zeichner, 2005, p. 15). As for the particular programme in this thesis, it claims to be a practice-based teacher education programme, it has a 20 year long history of school-university partnerships, high degree of student activity in workshops, the students conduct a research project on their own practice, the students are followed closely as individuals, and reflection is a key objective. Still, the criticism is valid for this programme too: students keep reporting in annual evaluations that it is too theoretical and distant from practice. This made me curious: is it perhaps "too easy" to keep blaming traditional models of teacher education? Are there alternatives to the claim that "teacher education is too theoretical?"

The second point is related to the call for more holistic approaches in teacher education. It has been pointed out that the research field is characterised by many single, innovative studies that do not pay enough attention to the programme in which the interventions occur (Cochran-Smith and Zeichner, 2005, Wideen et al., 1998). As noted by Wideen et al. (1998), to apply alternative approaches within existing teacher education without paying attention to the totality of the programme "is rather like rearranging the deck chairs on the Titanic" (p. 167). The first step toward developing a new theory for learning to teach, they argue, is to take a more holistic approach and to challenge the myths that underpin current teacher education programmes. Perhaps the most surprising gap in terms of a holistic approach is the general lack of attention to student teachers as students *in higher education*. Despite the fact that the main criticism of teacher education is directed towards the academic part of the teacher education, research on student teachers is largely isolated from research on student learning in higher education (also observed by Grossman and McDonald, 2008). An obvious advantage of drawing on research from higher education is that it can provide valuable insights related to student teachers' learning and engagement with their *academic studies*. Furthermore, a holistic approach should also include different voices. While the major part of research on teacher education is conducted *on* student teachers, it is mostly seen through the eyes of their teacher educators (Cochran-Smith and Zeichner, 2005). Wideen et al. (1998) point to conflicting expectations of teacher educators and student teachers and emphasise that what we learn depends on whose voices are being heard.

To conclude, the questions of what student teachers mean by the claim "too theoretical" or what they expect from theory in teacher education remains unanswered. Furthermore, considering the questions related to how student teachers work with their academic studies, the review revealed the need for exploring another area of research: research on student learning in higher education. In the next chapter, I will present research from three different perspectives on student learning that can shed light on these questions.

Chapter 2 Research on student learning

In this chapter, I will go into depth on three different lines of research related to the overall questions of the thesis. The first engages with the influence of students' mental models in the form of epistemological beliefs or conceptions of learning and teaching (related to the question of what students mean by "too theoretical"). This has been studied both within research on teacher education as well as in research on higher education. The second topic has its origin in higher education and relates to students' study behaviour. It examines how different approaches might be related to learning outcome and various conditions in the learning environment (related to how students work with their studies and conditions that influence on this). The third approach builds upon theories of reading, writing, and literacy as social practices, and argues for a new approach to understanding student learning, which challenges the first two.

2.1 Students' conceptions and beliefs

Researchers' concern with examining beliefs is based on the assumption that personal beliefs are the best indicator of the decisions individuals make throughout their lives (Pajares, 1992, Pintrich, 1990). The beliefs individuals hold act as filters for their perceptions and judgements, which in turn affect their behaviour. In an attempt to "clean up a messy construct" and to argue for the importance of examining educational beliefs of teacher candidates, Pajares (1992) is particularly concerned with how beliefs differ from knowledge. Pajares emphasises that beliefs do not lend themselves easily to empirical investigation. They are inflexible, deeply personal (and incontrovertible) truths, mostly unconscious, inextricably intertwined with knowledge, and they are also often inconsistent within a belief system.

> Belief systems, unlike knowledge systems, do not require general or group consensus regarding the validity and appropriateness of their beliefs. Individual beliefs do not even require internal consistency within the belief system. This noncensensuality implies that belief systems are by their very nature disputable, more inflexible, and less dynamic than knowledge systems. One likes to think that reason and evidence advance knowledge and that informed scholarship develops; beliefs are basically unchanging, and when they change, it is not argument or reason that alters them but rather a conversion or gestalt shift (Pajares, 1992, p. 311).

The research literature comprises a large array of different terms to describe pre-service or in-service teachers' *thinking.* Clandinin and Connelly (1987, p. 487) discovered "a bewildering array of terms" including personal theories, personal knowledge, practical knowledge and principles of practice. They concluded that most of the constructs are simply different words meaning the same thing, but that there is considerable confusion and lack of clarity concerning the distinction between beliefs and knowledge. Pajares (1992) adds words such as attitudes, values, opinions, ideology, perceptions, conceptions, preconceptions, dispositions, implicit theories, and explicit theories, all of which he claims to be beliefs in disguise.

Educational beliefs have been studied differently within research on teacher education and higher education. In research on teacher education, the focus of research has predominantly been on beliefs (or thinking) about learning and teaching *in a school setting*, and on how these beliefs relate to teaching practice and learning to teach. Furthermore, the research is predominantly qualitative, and in a broad sense, researchers have been concerned with what goes on in the minds of (pre-service and in-service) teachers as they engage in learning to teach, planning, and classroom action. Within higher education, research on beliefs has focused particularly on conceptions of the nature of knowledge and knowing, in the following referred to as *personal epistemology,* and on how these conceptions are related to the students' learning. There has also been a focus on conceptions of learning, but with a different conceptualisation and different methods than those that have been used within teacher education. This will be clarified through the following sections. The research within higher education is based on a combination of qualitative and quantitative methods, and with a particular focus on developing models and inventories for measuring beliefs and conceptions in larger samples and across different contexts.

Teacher education – (student) teachers' thinking about learning and teaching

The larger part of researchers within this line of research relate their work to Lortie's (1975) influential sociological study of teachers. Lortie used the term "apprenticeship of observation" to refer to the fact that prospective teachers have well-worn commonsensical images of teaching and learning as a result of many years of observing teachers in the classroom. However, without access to the teacher's planning, knowledge and intentions, these images often contain a number of misconceptions.

The characteristics of student teachers' beliefs

Student teachers' beliefs upon entering their teacher education have been characterised as idealistic and optimistic, deeply seated, loosely formulated and traditional in numerous studies (Richardson, 2003, Richardson and Placier, 2001).

Some of their beliefs have been called insidious and even dysfunctional (Pajares, 1992). In their extensive review of research on learning to teach, Wideen et al. (1998) noted that entering teacher candidates tend to focus on affective qualities of teachers (such as warm and caring), and to think that teacher-personality is more important than cognitive skills or content knowledge. Furthermore, learning is often viewed as a rather simple process of transferring knowledge and of dispensing information (Britzman, 2003, Richardson and Placier, 2001, Wideen et al., 1998).

However, Wideen et al. (1998) warn against generalisations, as student teachers' beliefs vary from individual to individual, and also between different categories of students (as, e.g., found in Bramald et al., 1995, Brookhart and Freeman, 1992). Richardson (2003) draws attention to the fact that much of the research that is referred to on student teacher beliefs was conducted before constructivist learning theory had been widely integrated in classrooms of both schools and teacher education. Richardson (2003) contends that although studies indicate that many student teachers still hold transmission beliefs of teaching, a growing number of teacher candidates now hold strong constructivist beliefs. These beliefs are, however, equally dogmatic as the transmission beliefs, and she suggest that the biggest challenge for teacher educators is to help student teachers become somewhat sceptical about their own beliefs and open up for alternative conceptions of teaching and learning.

A recurring theme when discussing student teachers' beliefs is the fixed nature and resistance to change. Nevertheless, changing beliefs is the main aim for much of the research, and it is often argued that changing beliefs of student teachers is difficult, although not impossible. Numerous research studies report on how student teachers changed their beliefs during the course of teacher education, either through one university course, the academic part of teacher education programmes, or field experiences (e.g. Bramald et al., 1995, Brouwer and Korthagen, 2005, Knoblauch and Woolfolk Hoy, 2008, Nettle, 1998). It is emphasized that the first step for student teachers (with help from their teacher educators) should be to examine their personal beliefs, for example through a reflective approach (see, e.g., Brouwer and Korthagen, 2005, Darling-Hammond and Lieberman, 2012, Korthagen et al., 2001, Smith, 2007). In this regard, research on reflective practice and professional knowledge overlap. Other researchers have questioned findings that report belief changes (e.g. Tillema and Knol, 1997, Torff, 2005). While superficial change may come about in the academic part of teacher education, teaching experiences usually send student teachers back to their pre-existing beliefs (Cochran-Smith, 1991, Wideen et al., 1998). Pajares (1992) noted that researchers within teacher education have failed to explore teacher beliefs, and called for research into the *nature* of belief change. He also contends that student

teachers' beliefs will not change unless they are substantially challenged during teacher education.

The influence of beliefs on student teacher learning

There is considerable support that entering beliefs of student teachers strongly affect what they learn from teacher education and also how they approach teaching (cf. Pajares, 1992, Richardson, 2003). Beliefs are not only filters, but can also be barriers to knowledge offered in teacher education programmes as they can be used to screen out experiences that are cognitively incompatible (Wideen et al., 1998). Calderhead and Robson (1991), for example, found that the students they studied learned very different things, depending partly on their preconceptions of learning and their role as teachers. In her seminal study on learning to teach, Britzman (2003) illustrates how what she calls cultural myths shape student teachers' knowledge about education. One of the myths she discusses is that "everything depends upon the teacher"; unless the teacher establishes control there will be no learning. Furthermore, the student teachers seemed to explain teacher competency as the absence of conflict. She points to a discourse of learning to teach as a highly individual process – a process where asking for help or having feelings of helplessness and vulnerability are signs of individual weakness. In their encounter with the complex and conflict-filled classroom, "all they could do, was blame themselves rather than reflect upon the complexity of pedagogical encounters" (Britzman, 2003, p. 227). Britzman contends that teacher educators must help student teachers explore these cultural myths, and that failing to do so, contributes to idealising the process of learning to teach, which in turn strongly constrains student teachers' learning.

According to Richardson (2003), most empirical studies on teacher education today feature beliefs, conceptions, images or perceptions as significant elements of the studies. Despite the abundance of research internationally, Norwegian studies are hard to find. The only study I have been able to find[8], is Roness' (2011a, 2009, 2011b) study of student teachers' motivation to become a teacher. And Roness' study only indirectly addresses the influence that student teachers' thinking might have for their learning. He followed the total population of full-time student teachers at four major universities in Norway through the one-year Postgraduate Certification in Education (PGCE) and 1.5 years into their work as teachers[9]. Roness (2009) found that the main motivation to become a teacher was the opportunity to work with the academic subject and to make it available to their students. He noted that this differs from research on primary teacher education, in which the dominant motivation factor has been an altruistic one – to

[8] Searches were performed in Idunn, Eric and EBSCO.

[9] This PGCE course prepares students for teaching on secondary level.

make a difference in children's lives. Roness (2011a) further suggests that PGCE students seem to have different expectations from the teacher education programme than they do from the studies of their academic subjects[10]. They already know their academic subjects, so they expect to learn how teacher education can help them use this knowledge in school. I argue that such expectations also serve as a filter in terms of what student teachers choose to engage with in teacher education.

Higher education - personal epistemology

While research within teacher education has focused on student teachers' thinking about learning and teaching related to teaching practice, research on higher education has been concerned with how personal epistemology and conceptions of learning relate to study strategies and academic learning outcome. *Personal epistemology* is an umbrella term that encompasses a variety of terms, but it can be summarized as describing an *individual's cognition about knowledge and knowing* (Pintrich, 2002).

Most models used in investigating personal epistemology have their foundation in the pioneer work of Perry (1970). Perry concluded that many first-year students believe that knowledge is unchangeable facts handed down by authority. By the time they finish, the majority have come to believe that knowledge is more complex and tentative in nature and that it is derived through reason and empirical enquiry. From this original research, Perry developed a scheme consisting of nine developmental positions from dualism (right or wrong) to commitment within relativism (knowledge is ultimately relative). Building on and challenging Perry's work, various models and inventories have been proposed which attempt to map the content, structure and developmental trajectories of personal epistemology (e.g. Baxter-Magolda, 2002, King and Kitchener, 1994, King and Kitchener, 2002, Moore, 2002, Schommer-Aikins, 2004). Some investigations have shown how epistemological beliefs influence learning (Schommer-Aikins, 2004) and academic achievement (Schommer, 1993), while others have focused on educational practices that stimulate the development of epistemological beliefs (Baxter Magolda and King, 2004, King and Kitchener, 2002).

Until recently, research within higher education and teacher education existed almost in isolation from each other. However, there is now a burgeoning body of research that combines the two areas and investigates personal epistemology in the context of teacher education. I will restrict the review below to studies on student teachers.

[10] Upon entry into the PGCE course, the student teachers have already completed a bachelor's or a master's degree in at least one academic subject.

The influence of beliefs on student teachers' learning

A main focus for researchers has been to explore how epistemological beliefs relate to various aspects of academic learning. In a qualitative study of 14 student teachers, Bondy et al. (2007) found that the students' beliefs about knowledge and knowing strongly shaped what they took from different parts of their university courses. Students who understood knowledge as uncertain and integrated were more likely to open up to multiple perspectives and to see interconnection between ideas than those who viewed knowledge as certain and fixed. In a series of studies of Norwegian student teachers (Bråten and Strømsø, 2006a, 2004, 2006b, c, 2005, Bråten et al., 2008), Bråten and associates investigated how personal epistemology relates to different aspects of student learning. In one study, they identified negative relations between naïve epistemological beliefs and students' use of cognitive and metacognitive strategies (Bråten and Strømsø, 2005). They also found that students who believed in quick learning (i.e. learning takes place quickly or not at all) were less likely to adopt mastery goals, which focus on meaningful approaches to learning (Bråten and Strømsø, 2006c). In another study on 39 student teachers (Bråten and Strømsø, 2006a) it was found that students holding sophisticated epistemological beliefs demonstrated better understanding when reading multiple, partly conflicting, texts about a specific topic, compared to students holding naïve epistemological beliefs. A later study with 135 student teachers also showed a positive relationship between epistemological beliefs and text comprehension. Furthermore, several studies also indicate that student teachers' epistemological beliefs influence how they perceive teaching and instruction in teacher education (Brownlee et al., 2011b). Many et al. (2002), for example, found that student teachers with more naïve beliefs were less able to appreciate critical reflection. In a qualitative study, Rogers (2011) examined the nature of students' epistemological beliefs and the significance of disciplinary context. He argues that content knowledge from the disciplinary studies shape student teachers' epistemological understanding and metacognitive awareness of ways of learning.

How personal epistemology relates to conceptions of learning and teaching

A particular concern for researchers within teacher education has been to explore the link between personal epistemology and conceptions of learning and teaching (e.g. Brownlee et al., 2011a, Brownlee et al., 2009, Chan and Elliott, 2004, Cheng et al., 2009, Rogers, 2011). These beliefs are, in turn, believed to influence teaching *practice*. In this regard, research results vary. While several studies show consistency between personal epistemology and conceptions of learning (see Brownlee et al., 2001, Chai et al., 2011, Chan and Elliott, 2004), some find inconsistencies between conceptions of *learning* and conceptions of *teaching* (e.g. Brownlee et al., 2001, Chai et al., 2011, Cheng et al., 2009). Cheng et al. (2009)

argue that the common perception that conception of teaching is belief-driven (by epistemological beliefs) must be understood with caution in the early years of teachers' professional development. One explanation for inconsistency between beliefs can be found in conflicts between the students' conceptions and the reality they face in classrooms (Cheng et al., 2009). In light of the previous chapter, this could be represented as a gap between theory and practice. Another explanation for discrepancies between epistemological beliefs and conceptions of teaching is that students are in a transitional stage of moving from naïve to sophisticated beliefs (Brownlee et al., 2001). Chai et al. (2006) suggest another explanation: that student teachers hold two sets of beliefs, one for epistemology and the other for schooling.

Summary of research on beliefs

As illustrated in the review above, there is considerable support in research that student teachers' beliefs are strongly related to their academic learning in higher education, learning to teach and teaching practice. Some claim, however, that the relation to teaching practice is not sufficiently explored (see Cheng et al., 2009, Wideen et al., 1998). I argue that the relations between students' beliefs in a university setting and in a school setting in general have not been much in focus. With exception of a small number of studies, research on teacher education is still largely isolated from research on higher education. Furthermore, despite an extensive literature review within these two research areas, I have yet to find studies that explore students' beliefs or conceptions about theory. Although the concept of theory is closely related to the concept of knowledge, it is not the same.

Across research on beliefs in teacher education and higher education, there is one common conclusion. The argument made by (virtually all) researchers is that educators must facilitate students' *explicit* reflection on their beliefs about knowledge, learning and teaching. In research on teacher education, many researchers have argued for the importance of exploring these beliefs in connection with structured teaching practice (e.g. Grossman et al., 2009, Korthagen et al., 2001, Smith, 2007). In the research strand of higher education, researchers have highlighted the importance that teachers demonstrate constructivist teaching and epistemic reflection (e.g. Bondy et al., 2007, Rogers, 2011).

Despite the large body of research on student teachers' beliefs within different research areas through 40 years, authors continue to claim that teacher educators have failed to explore the nature and influence of beliefs (e.g. Brownlee et al., 2011b, Grossman and McDonald, 2008, Silverman, 2007). For research within teacher education, a common critique is the large number of small-scale studies and the diversity of perspectives and methods used, which makes it difficult to make cross-generalisations (Cochran-Smith and Zeichner, 2005, Pajares, 1992, Wideen et al., 1998). Within the higher education strand, it is more common with studies that include large samples and also to use established measures for the

different constructs (such as epistemological beliefs or conceptions of learning and teaching). However, the challenge remains here to develop robust and domain-sensitive measures (Hofer and Pintrich, 1997, Yadav et al., 2011). Debacker et al. (2008) analysed three widely used questionnaires for measuring epistemological beliefs. They concluded that the instruments have large error components and poor construct validity with inadequately specified and operationalized components. The authors argue that the state of knowledge in the area of epistemic beliefs and their relationships with learning should be seriously reconsidered.

The focus on beliefs implies a highly individual and cognitive understanding of how students learn and develop. Similar to the development of research in teacher education, where the focus shifted from the individual learner to include the whole enterprise of teacher education, there are perspectives within learning in higher education that aim to combine individual factors with social and contextual factors. One perspective with a particularly strong position in higher education is the notion of *approaches to learning.*

2.2 Students' approaches to learning

According to Webb (1997), *students' approaches to learning* (SAL-perspective) has become the canon for theory and practice in higher education. It has been the basis for extensive funding for research internationally (Haggis, 2003, Webb, 1997), and it also forms a main background for the "Quality reform of higher education" in Norway (Ministry of Education, 2001). Considering the aim of this thesis – to explore how student teachers work with their academic studies – it is therefore an important perspective to consider.

Origin and development

The original research that gave rise to the SAL-perspective was carried out in Sweden in the early 1970s – often referred to as the Gothenburg-studies (Marton and Säljö, 1997, 1976). Based on individual interviews with university students, the researchers identified two qualitatively different ways the students approached academic texts. The students used either a surface approach, in which the student's focus was on the text itself and the intention was to memorise the text, or they used a deep approach, in which the focus was on what the text was about and the intention was to understand the meaning of the text. These differing approaches were then connected to learning outcome. All of the students who used a deep approach achieved "high learning outcome" but only one of the students who used a surface approach achieved the same (Marton and Säljö, 1997, 1976). Subsequent studies by the same research group also added the influence of students' conceptions of learning. By asking questions about what the students mean by learning, they identified five (later extended to six) *conceptions of learning*

(Marton et al., 1993). Starting at the lowest level of understanding, these conceptions were to view learning as: 1) increasing one's knowledge, 2) memorising and reproducing, 3) applying knowledge, 4) understanding, 5) seeing something in a different way, and 6) changing as a person (Marton et al., 1993). The first three of these conceptions of learning were seen to underpin a surface approach to learning while the last three were seen to underpin a deep approach to learning. Entwistle (2009) described the Gothenburg-studies as groundbreaking, as they introduced a broader view of learning than what was common at the current time. The findings implicated an understanding of individuals as having their own intentions, seeking to make sense of the world for themselves within a social setting (Entwistle, 2009).

The original research from Gothenburg was later extended by Entwistle and Ramsden (Entwistle and Ramsden, 1983, Marton et al., 1997) in Britain and Biggs (1987, 1999) in Australia, all of whom developed these ideas further in the form of diagnostic instruments that aim to identify different approaches to learning for large samples of students. Over the last two or three decades, various instruments have been constructed, validated and revised within and across different context (for overview, see Entwistle and McCune, 2004, Entwistle and Peterson, 2004). Through this continuing development a third approach, a *strategic* approach, was introduced (Tait et al., 1998). This approach includes the influence that assessment has on students' studying, and their intention to do as well as possible in a course. It is more an approach to studying rather than learning, as it involves the ability to switch between deep and surface approaches (Volet and Chalmers, 1992). It describes a study behaviour characterised by organised studying, effective time management, effort and concentration (Entwistle and Peterson, 2004). The strategic approach also incorporates aspects of self-regulation and metacognition, aspects, which have been central in other areas of student learning such as self-regulated learning (Boekaerts, 1999). Today, the SAL-perspective comprises a larger framework that includes a broad range of concepts describing learning and teaching in higher education (see Biggs and Tang, 2011, Entwistle, 2009, Prosser and Trigwell, 1999).

The different approaches – deep, surface and strategic

The research literature on approaches to learning is extensive, and it is therefore not surprising to find varying descriptions of the notions of deep, surface and strategic approaches to learning. Different inventories often have different focus or incorporate other aspects of student learning into the same inventory (Entwistle and McCune, 2004). Nevertheless, a common way to describe how the approaches differ from each other is to view each approach as guided by an intention, characterised by certain learning strategies, and also reflecting a particular kind of motivation. An overview of the different approaches is provided in Table 1.

Table 1 Overview of the different approaches (based on Entwistle and McCune, 2004, Entwistle and Peterson, 2004)

Approach	Intention	Strategies	Motivation
Deep *Seeking meaning*	To understand ideas for yourself	Holist strategies: - Looking at the broad picture - Relating ideas to previous knowledge and experiences - Looking for patterns and underlying principles Serialist strategies: - Being cautious and logical - Checking evidence and relating it to conclusions - Examining logic and argument cautiously and critically - Monitoring understanding - Engaging with ideas and enjoying intellectual challenge	Intrinsic
Surface *Reproducing content*	To cope with course requirements	Strategies: - Treating the course as unrelated bits of knowledge - Routinely memorising facts and carrying out procedures - Focusing narrowly on the minimum syllabus requirements - Seeing little value or meaning in either the course or the tasks set - Studying without reflecting on either purpose or strategy - Feeling undue pressure and anxiety about work	Extrinsic Fear of failure
Strategic *Putting effort into organised studying*	To do well in the course and/or achieve personal goals	Self-regulation of studying: - Organising studying thoughtfully - Managing time and effort effectively - Forcing oneself to concentrate on work Awareness of learning in its context: - Being alert to assessment requirements and criteria - Monitoring the effectiveness of ways of studying - Feeling responsibility to self, or others, for trying hard consistently	Achievement Sense of responsibility

There are two questions that have been of particular interest for researchers examining student approaches to learning. First, how are approaches to learning related to learning outcome and academic achievement? Second, how are various factors within the learning environment related to the different approaches to learning? As answer to the first question, it is widely acknowledged that there is a strong positive relation between deep and strategic approaches to learning on the one hand and academic achievement on the other. A corresponding negative relationship exists for surface approach. This relationship has become one of the postulates of the SAL-perspective (Pettersen, 2008). In the Gothenburg-studies, in which the learning outcome was measured qualitatively by analysing written responses, the results were unequivocal. Many other studies have later supported these findings (e.g. Diseth and Martinsen, 2003, Diseth, 2002, 2007b, Kember and Leung, 1998, Lizzio et al., 2002, Pettersen, 2010, Trigwell and Prosser, 1991). The strongest relationship seems, however, to be between a strategic approach and academic achievement. In their study of Norwegian undergraduates, Diseth and Martinsen (2003) found that there was only weak or no relationship between a deep approach and academic achievement. They refer to other research that supports this finding. The authors explain this by an overload of curriculum that enforced a strategic approach, and also that research shows that a deep approach is more strongly correlated with academic achievement for mature students than it is for undergraduates.

Considering the assumed strong relationship between approaches to learning and learning outcome, the overall aim for educators is thus to promote deep approaches to learning.

What factors influence students' approaches to learning?

There are a variety of different factors that are considered to be influential on students' approaches to learning (for overview, see Biggs and Tang, 2011, Entwistle and Peterson, 2004). Some factors belong to stable personal characteristics, such as previous knowledge, abilities, personality, or learning styles (e.g. Kolb, 1984, Pask, 1988, Riding, 1997). Other factors are robust, although susceptible to influence, such as students' motivation or mental models (personal epistemology and conception of learning). Finally, how a student approaches a task is influenced by contextual factors within the learning environment.

One contextual factor is the subject discipline. An array of studies indicates that the academic discipline has a direct effect on how students approach learning (Eklund-Myrskog, 1996, Lawless and Richardson, 2004, Sadlo and Richardson, 2003, Vermunt, 2005). The different nature of subject disciplines involves different processes that are involved in deep learning (Entwistle, 2009). Lawless and Richardson (2004) explained this as well-established "house-styles",

which arrange for and reward certain orientations or approaches. Another contextual factor is the students' perception of the learning environment. Entwistle (2009) stresses that approaches to learning should be seen as relational, as approaches to learning are a result of encounters between the individual (with personal qualities) and the requirements from the surroundings. Depending on the different circumstances, a student might interpret a particular task differently; for example, whether the task is interesting and worth doing or not. Using inventories that combine approaches to learning with perceptions of learning environment, research studies have established the influence of various factors within the learning environment, such as perceived workload, teaching quality, or student autonomy (e.g. Diseth, 2007a, b, Lawless and Richardson, 2002). Workload in particular seems to have a strong influence, in that a perceived high workload might enforce surface approach (see Kember and Leung, 1998). The relationship between a student's perception of the learning environment and approaches to learning has become the second postulate for the SAL-perspective (Pettersen, 2008).

2.3 Critique - the need for an expanded view of learning

Earlier in this chapter I referred to Webb (1997), who contended that the notion of deep and surface approach to learning has become the "canon" for educational development in higher education. Indeed, the abundant literature on approaches to learning in higher education supports this claim. The model of conceptions/beliefs and approaches to learning is presented as a comprehensive framework for understanding learning and teaching in a university setting (see Biggs and Tang, 2011, Entwistle and Peterson, 2004, Prosser and Trigwell, 1999). The findings that are reported in various articles indicate extensive support for the relationships between conceptions/beliefs of knowledge and learning, contextual factors, approaches to learning and learning outcome. Because of the contextual aspect and consideration of many different factors, researchers describe this as a holistic and relational approach to student learning (see Entwistle, 2009).

An interesting paradox emerges from this body of research. On the one hand, research repeatedly shows that relationships exist between conceptions/beliefs, context, approaches, and outcome. On the other hand, it has been shown that changing beliefs or approaches is extremely difficult. Still, researchers (within teacher education as well as higher education) continue to focus on how to promote changes in beliefs and to increase deep approaches (see Haggis, 2003, Wideen et al., 1998). This paradox is rarely discussed in the research literature that has been reviewed here.

A number of studies report weak or lack of relationships between a deep approach and academic achievement (e.g. Diseth and Martinsen, 2003, Diseth,

2007b, Entwistle et al., 2000, Rollnick et al., 2008); the strongest relationship is between strategic approach and learning outcome. Although the researchers discuss the problems of establishing or confirming relationships, there are very few examples of researchers, who question the ideas or postulates that *underpin* the research (Haggis, 2003, 2009). Debates largely revolve around the importance of careful conceptualisations (e.g. Entwistle and McCune, 2004, Hofer, 2005), methodological issues such as validation of instruments (e.g. DeBacker et al., 2008, Diseth, 2001, Pettersen, 2010) or around the definition of the terms (e.g. Richardson, 2011). Founding their research on "impressive evidence", researchers often present relationships between conceptions/beliefs, approaches to learning and learning outcome as given or "true" regardless of educational contexts. One example of this "taken-for-grantedness" was found in Brownlee et al. (2011c). Even though most of the articles in this book base their arguments on the relationship between personal epistemology and approaches to learning (and in the end learning outcome) also within teacher education, my literature search revealed only two studies (Gordon, 2002, Rodriguez and Cano, 2007) that have actually investigated approaches to learning in teacher education. However, these studies also take the relationship between approaches and learning outcome as given.

Perhaps the main characteristic to emphasize from the research reviewed so far is the *individual* and *cognitive* focus. Although approaches to learning include contextual factors, there is, by and large, little focus on the social aspects of learning. Furthermore, there is a general lack of the *student teacher perspective*. The learner is often constructed as an object to be changed, and who is diagnosed against normative goals (the deep/strategic learner). Malcolm and Zukas (2001, p. 38) contend that "in higher education, the 'learner' appears frequently as an anonymous, decontextualised, degendered being whose principal distinguishing characteristics are 'personality', 'learning style' or 'approach to learning'". Researchers appear to suggest that as long as educators make the right arrangements, it is possible to manipulate learners to change their beliefs and to choose the right approaches in working towards a comprehensive understanding of the content of the particular course. As argued by Prosser and Trigwell (1999, p. 92): "If the context is changed, there is the likelihood the student's approach will change." There is also a dominant focus on a *lack* of certain skills or understandings, which is illustrated by frequent use of words such as "naïve" and "sophisticated" or expressions such as "poorer approaches" (Richardson, 2000, p. 170) and "fully developed conception of learning" (Entwistle and Peterson, 2004, p. 411). Within research on teacher education, the aim is usually to bring about a change in students' conceptions of learning from an "incorrect" (traditional) to a "correct" (constructivist) view of learning.

This objectification of the learner not only fails to address the richness and complexity of the students' situation such as the *different* relationships they take

part in (with, e.g. peers, teachers, or administrators) or the many *different* contexts they need to switch between inside as well as outside the campus area. It also leaves out the dimension of power, which raises a number of questions. First, how do students and teachers understand the aims and purposes of various activities in education? Several researchers have pointed to a *lack of shared understanding* as an explanation for many of the problems that students encounter (e.g. Haggis, 2003, Storch and Tapper, 2000, Wideen et al., 1998). Second, whose goals and standards are the students measured or "diagnosed" against? Haggis (2003) suggests that rather than regarding the model of conceptions/approaches of learning as a generic set of relationships in teaching and learning, the model could be seen as an articulation of the aims and values of higher education. She also points out that the attitudes, values, and skills, which characterise the description of the ideal learner, have taken academics themselves many years to learn. Richardson (2003) draws attention to the ethical dimension of working on changing student teachers' beliefs. She argues that most contemporary researchers on education are convinced that constructivist pedagogy provides a better education, and the aim is thus to bring about changes from traditional to constructivist beliefs and understandings. Richardson asks if these changes are warranted: "Might we be developing a group of teachers who ideologically cling to constructivist beliefs at such point as another, perhaps more worthy, approach is developed?" (Richardson, 2003, p. 17).

Although the research reviewed so far provides valuable insight into student learning, the above critique indicates a need for a broader view of learning; a view that not only tries to generate a set of generic set of relationships, but that views learning as happening within a specific, social, and cultural context. Details as well as theoretical and methodological implications of such a view will be elaborated in the next two chapters. First, I will briefly present research from one strand within higher education that has taken such a view and studied reading and writing in higher education.

2.4 Researching student learning as practices

A relatively new research area within higher education has become known as "academic literacies". Building upon theories of reading, writing and literacy as social practices, authors have argued for a new approach to understanding student learning that challenges prevailing views in higher education, in particular the approach to "fix" problems with the individual student (Jones et al., 1999, Lea and Street, 2000, 1998, Lillis and Scott, 2008, Lillis and Turner, 2001). Lea and Street (1998) argue that approaches to student writing and literacy in higher education can be conceptualised through three overlapping (but not mutually exclusive)

perspectives or models: 1) a study skills model, 2) an academic socialisation model, and 3) an academic literacies model.

The first, the study skills model, is partly grounded in behavioural and experimental psychology. In this model, writing and literacy are seen primarily as individual and cognitive skills, which can be unproblematically transferred from one context to another (Lea and Street, 2000). The second model, academic socialisation, builds on sources from social psychology, anthropology and constructivism and is concerned with students' acculturation into disciplinary and subject-based academic discourses. The focus is on inculcating students into the academic culture, for example by promoting deep orientation to learning. In such a model, Lea and Street (2006) argue, the academy is seen as a relatively homogeneous culture, and it is presumed that once students have learned and understood the basic rules of a particular academic discourse, they can reproduce it unproblematically. This argument resonates with other researchers who have argued that in the efforts to help students to adapt their practices to those of the university, habits of thinking, codes and conventions of academia are often taken as given (e.g. Gibbs, 1994, Graff, 2002).

In the third model, academic literacies, student writing is seen at the level of epistemology and identities rather than skills or socialisation. It is "concerned with meaning making, identity, power, and authority, and foregrounds the institutional nature of what counts as knowledge in any particular academic context" (Lea and Street, 2006, p. 369). The academic literacy model suggests that literacy practices (such as reading and writing) are complex, contested, specific, and, above all, contextualised. Such a view is more than taking into consideration contextual factors of the learning environment or considering what Lawless and Richardson (2004) called "house-style" characteristics of deep approach to learning. It foregrounds communicative practices and power relations within each specific context. In other words, it emphasises a theory of learning as *initiation into communicative practices* rather than induction into behaviour and coming to possess certain knowledge. Lea and Street (2000) argue that from a student's point of view, a dominant feature of academic literacies is the requirement to "switch practices between one setting and another, to deploy a repertoire of linguistic practices appropriate to each setting, and to handle the social meanings and identities that each evokes" (p. 35). To illustrate the importance of giving attention to communicative practices I will describe research findings from two studies more in detail.

In the first study, Lea and Street examined student writing and staff feedback in two British universities. When analysing staff feedback, they found that what the teachers considered as the most important elements of a student text was clearly influenced by their disciplinary history. Furthermore, epistemological and methodological issues that underlay their conceptualisations were often

expressed through surface features, such as "structure" and "argument" without explicitly saying anything about what these entail. The wordings were treated as if they were transparently meaningful. This was confusing for the students and even more so in multi-disciplinary courses. Lea and Street suggest that the tutors' own writing practices are integrally related to their own academic knowledge and own academic world-view. When a tutor is faced with writing that does not seem to make sense within their own framework, they tend to turn to familiar categories like structure and argument. From the students' point of view, writing involved switching between codes and unpacking what kind of writing a particular assignment might require. This was especially challenging because of conflicting advice from different teachers. Whereas the students internalised the language of feedback (such as argument and structure), they had difficulties in understanding when they had achieved this successfully. Some took the approach of learning the rules of the game, while others felt constrained by not being able to use their own knowledge, but only the academic, "acknowledged" knowledge.

Based on these findings, Lea and Street argue that tutor feedback must be understood as genre that needs explicit attention as part of the teaching. They suggest that one explanation for student writing problems might be the gaps between academic staff expectations and student interpretations of what is involved in student writing. The findings from Lea and Street's study are very interesting within the context of teacher education. It is not only that the student teachers enter teacher education with backgrounds from many different academic disciplines; also the teacher educators have various backgrounds. Faculties of teacher education often comprise staff with highly diverse disciplinary backgrounds and also varying work experience from school or academia.

Another interesting study is Francis and Hallam's (2000) study on how Master's students in education understood different text types. A main conclusion from this study is that the ability to deal with text genre is crucial for students' understanding of academic texts. The participants in the study were unable to recognise or deal with specific features of the texts, and the genres that caused most difficulties were texts most frequently recommended by tutors. These texts were mostly research articles underpinning the epistemology of their academic subject, and were seen as often lacking sufficient information for full understanding; too many assumptions of students' knowledge were taken for granted. Furthermore, the students felt surprised and threatened by discovering that others had not taken the same meaning from the text, and sought consensus at the expense of further efforts to understand. The students attributed reasons for difficulties with reading to aspects of style, organisation and language of the text. Rather than seeing that texts can be written in different ways for different purposes, the students simply blamed authors for poor and unclear writing. Francis and Hallam stress that the students' challenges in dealing with different texts should

not be seen as "defects", but as "normal learning awaiting further development" (p. 294). Like Lea and Street (2000), they emphasise the need for attention to communicative practices of academic communities, and suggest that this must be part of teaching the subject:

> The implication of such a view is that awareness of genre should be cultivated directly in relation to the texts used within the practices of teaching and learning, and that prior genre experience may not be suitable for new texts and new courses (Francis and Hallam, 2000, p. 295).

As also emphasised by Lillis and Turner (2001), the problem is not that students struggle with the conventions of the institution. The problem is the fact that conventions are treated as common sense and "communicated through wordings as if these were transparently meaningful" (p. 58). A final point to emphasise in relation to academic literacies is the dimension of power. Lea and Street (2000) emphasise that tutor feedback also reveals different interpersonal relationships between tutor and student. Tutor feedback works to both construct academic knowledge and maintain relationships of power such as defining what constitutes valid knowledge.

2.5 Summary and implications for research questions

In this chapter I have explicated three separate perspectives on student learning: beliefs, approaches to learning and academic literacies – an individual perspective, a relational (or contextual) perspective, and a social perspective. Each one offers valuable insight into student learning in higher education, which in turn can be drawn upon when examining student teachers' engagement with their academic studies. Research on conceptions and beliefs emphasises the importance of exploring students' *thinking* about knowledge, learning and teaching. The review reveals a research gap when it comes to student teachers' thinking about theory. How conceptions of learning and teaching within a university setting relate to conceptions within a school setting also remains open for investigation.

Research on approaches to learning illustrates the potential influence of contextual factors on how students *work* with their studies, which in turn might influence what they take from university coursework. How student teachers approach their academic studies has rarely been studied. Finally, research on academic literacies emphasises the need for attention to *communicative practices* in students' learning. Lack of shared understanding between teachers and students and codes and conventions that are taken as given, have been suggested as explanations for students' challenges in academia. Considering the persisting

criticism against teacher education, these findings are very interesting. Are there, perhaps, alternative narratives to the "fact" that teacher education is too theoretical than what has been discussed in research literature to date? If nothing else, it points to the need of examining student teachers' *academic* learning in more detail.

The research overview that has been presented so far converges into the following overriding purpose of this thesis is to answer the following question:

What characterises student teachers' academic practices?

This question will be explored through four research questions:

RQ1: What characterises student teachers' conceptions of the nature and purpose of theory in teacher education?

RQ2: What issues are identified as being of critical importance to the student teachers during their (academic) teacher preparation?

RQ3: How do student teachers describe their reading and writing practices?

RQ4: How do student teachers talk about learning and teaching?

As put forward in the introduction, the presentation of the theoretical landscape of this thesis provides at the same time a picture of the research process. First, it pictures the move from research within teacher education to including research on higher education. Second, it pictures the move from an individual view of learning to a view of learning as a social practice. How this view developed together with an emerging critical view through the research process is explicated in Part II of the thesis. In the next chapter, the theoretical implications of a practice view of learning, the main theoretical lens for this study, is explicated.

Chapter 3 Learning through the lens of practice theory

> We are members of a higher education development community which defines what is appropriate, current and valid in the field, and from which we absorb guidelines as to the nature, scope and purpose of our own endeavours. In Foucauldian terms, we are part of an anonymous discourse which pre-dates our own arrival on the scene, and which moulds and constrains our agency as individuals (Webb, 1992, p. 351).

This quote from Webb summarises an important point that was put forward in the last part of the previous chapter: student learning takes place in academic institutions that are constituted in, and are sites of, discourse and power (cf. Lea and Street, 2000). Furthermore, these institutions are situated in history and pre-date the students' arrival on the scene (cf. Webb's quote). There are two important implications of such a view. The first is that learning is *situated*. Teaching and learning take place at a particular place at a particular time involving particular resources and particular people interacting with each other in particular ways. Second, learning is a practice – *a social phenomenon*, and not merely an individual, cognitive process. In this chapter, this view will be substantiated through practice theory, which constitutes the overall theoretical lens in this thesis.

To say that learning is a practice requires some clarification. The word "practice" is used in many different ways in everyday language; learning is not one of them. Also in research literature, practice is often used without further explanation, often referring to what people *do* (cf. the theory-practice discussion in Chapter 1). According to van Manen (1999) practice is one of the least theorised concepts in professional discourse. In the first part of this chapter I will therefore briefly describe what practice theory is as well as implications for the view of learning. Then, I will explicate the particular practice theory – the theory of *practice architectures* – a key theory in this thesis. In the final part of the chapter I will explain how this theory is used in this thesis, with special attention to how it is relevant for studying student teachers. The view of practice presented in this chapter draws particularly on practice theory as developed by Kemmis and associates (Kemmis et al., 2010, Kemmis and Grootenboer, 2008, Kemmis et al., 2014), which in turn rests heavily on the theory and philosophy of Schatzki (2001, 2003, 2002, 1996).

3.1 Practice theory

The term "practice theory" might sound like a contradiction in terms. It refers to various scholarly traditions that have collectively contributed to what has been called *the practice turn in contemporary theory* (Schatzki et al., 2001). Practice theory is not a unified theory, but rather forms a family of theoretical approaches connected by historical and conceptual similarities (Nicolini, 2012). Schatzki (2012) suggests that the expression "practice theory" has its origin in the classic work of Bourdieu (1977, 1990), but that the expression also covers contributions from a range of different theorists such as Giddens, (late) Foucault, Latour, Lyotard and Taylor. Common philosophical roots with most practice theorists are Heidegger and Wittgenstein (Reckwitz, 2002, Schatzki, 2012). While having had most influence in organisation studies (e.g. Corradi et al., 2010, Gherardi, 2009, Nicolini, 2009, Schatzki, 2005), practice theory is also increasingly becoming recognised in education (e.g. Aspfors, 2012, Boud, 2012, Hardy, 2010, Kemmis et al., 2014). There are in particular two common tenets of practice theory.

The first is the interest in the hidden knowledge that supports practices, often described as the "know-how" of the practice. "Human activity rests on something that can not be put into words" (Schatzki, 2012, p. 14). Knowledge is defined as a practical (bodily) and situated activity, which makes practice theory being at odds with cognitivism and rationalism (Gherardi, 2009). This view is related to the enhanced awareness of practical knowledge, which was discussed in Chapter 1.

The second commonality of practice theories is that important features of human life must be understood as rooted in human activities in *practices* and not merely in the *activity of individuals* (Schatzki, 2012). This can be seen as a reaction to the individualistic focus that has dominated research, in which social phenomena are explained merely by facts about people and their relations. The social is then located in the mind or "head of human beings", because "mind is the place of knowledge and meaning structures" (Reckwitz, 2002, p. 247)[11]. An individualistic view of practice is also sustained by everyday language ("a teacher's practice", "my practice"). At the same time it is also an opposition to "societist" theories that explain social phenomena through abstract structures, systems, or discourse. Practice theory attempts to forge a path between an individualistic view and a

[11] For more extensive overviews of how practice theories relate to other strands within social theory, see Reckwitz (2002) and Schatzki (2003). Reckwitz locates practice theory under the wider umbrella of cultural theories. The individualist view can be recognized in his description of cultural mentalism.

societist view[12]. Nicolini (2012, p. 4) describes this in the following way ("homo economicus" represents individualistic view and "homo sociologicus" represents a societist view):

> [P]ractice theories carve a specific space for individual agency and agents. While *homo economicus* is conceived as a (semi) rational decision maker and *homo sociologicus* is depicted as a norm-following, role-performing individual, *homo practicus* is conceived as a carrier of practices, a body/mind who 'carries', but also 'carries out', social practices.

In studying language and literacy as a discursive practice, a form of social and situated action, the perspective of *academic literacies* fits within the "family" of practice theories. It differs, however, in distinct ways from the practice theory that constitutes the theoretical framework of this thesis. Due to space constraints, these differences will not be elaborated here (see Nicolini, 2012 for an extensive overview different contributions and perspectives within practice theory).

To apply a practice lens in research involves more than studying practice as an empirical object. As Schatzki (2003, 2005) stresses, practice theories are *ontological* theories since they examine the nature and basic structures of social life and social phenomena. Practices are *the sites of the social,* where people meet, act and interact. All human coexistence, says Schatzki (2005), is inherently tied to the context in which it transpires; it always occurs in particular sites and particular times. Corradi et al. (2010) note that the influence that practice theory has had in organisation studies has been most important as an *epistemology* for the study of working practices and the kind of "hidden" knowledge that supports them.

Learning as practice

To view learning as a practice involves two important shifts. First, it implies a shift from seeing learning as cognitive and individual to viewing learning as social and situated. Early and influential contributors of such thoughts were Lave and Wenger (1991) with their notion of *communities of practice*. They argued that learning is interactional and involves communities as well as individuals. According to Lave and Wenger, learning takes place in a cultural context (the community). Participants learn how to carry out the practices through initial "legitimate peripheral participation" and novices gradually become more involved until they

[12] Schatzki (2003) makes the distinction between two camps in social ontology: individualists and societists. While advocates of the first camp believe that social phenomena consist of individuals and their relations, advocates of the latter argue (although with very diverse arguments) that social phenomena are explained by features other than of people (such as abstract structures, systems or discourses).

achieve full participation. A key in this process is not to learn *from* talk, but to learn *to* talk (Kemmis and Grootenboer, 2008). The community is the context for learning and the source of socialisation. That learning to teach can be viewed through the lens of communities of practice is not new. This is seen both in learning to teach as developing professional knowledge and in teacher learning in "professional learning communities" (see, e.g., Korthagen, 2010, Putnam and Borko, 2000). Less used is the term in academia, which I would argue is still dominated by the idea that learning takes place in people's heads (for example in conceptions/ approaches of learning). The view put forth in this chapter is that also academic learning is a process in which learners learn the "know-how" of the discipline by participating in various practices and social networks.

Second, to view learning as a practice implies a shift in how to understand the *context* in which the practice takes place. In qualitative research, the context is of vital importance. Research methodologists stress the importance of "thick descriptions" to picture the complexity of the social life that unfolds within it. There is, however, often a simplified relationship between context and individuals' actions. One example can be found in the theory about approaches to learning where Prosser and Trigwell (1999) suggest that "if the context is changed, there is the likelihood the student's approach will change". In other words, educators can manipulate students' behaviour by changing the context in particular ways. As will be elaborated in the following sections, the context – *the site of a practice* – is more than a container that surrounds and shapes the activities within a practice. Social practices are the product of a complex, dialectic interplay between individuals and their social circumstances (Kemmis and Grootenboer, 2008).

So far I have described some general characteristics of practice theory. In the following sections I will expound upon the specific practice theory used in this thesis, asking in particular three questions: *What is a practice? How are practices arranged? How do practices interrelate with each other?*

3.2 What is a practice?

The central concept in practice theory is that of a practice. Practices can generally be described as *organised human activities* that are based on a *socially shared way* of ascribing meaning to the world (Reckwitz, 2002). Schatzki (2012) defines a practice as a nexus of sayings and doings[13], which includes bodily as well as

[13] Schatzki also makes a distinction between dispersed and integrative practices. Dispersed practices can be, for example, walking, asking questions, or explaining, and they appear in many different kinds of "higher-order" practices. Integrative practices involve dispersed practices and other activities arranged in larger patterns, and are 'the more complex practices found in and constitutive of particular domains of social life' (Schatzki, 1996, p. 98). Education, teaching and learning are all examples of integrative practices.

mental activities. These sayings and doings are organised around four phenomena: practical understandings, rules, teleoaffective structures, and general understanding. An action or activity belongs to a practice if it expresses one of these elements. *Practical understandings* can be described as the *know-how* of the practice. It involves both recognising patterns and carrying out actions in particular ways. Using an example of practices within an academic institution, Schatzki (2005) suggests that practical understandings can involve knowing how to grade exams, how to teach, mentor or supervise. The *rules* of a practice are explicitly formulated directives or instructions, which in the aforementioned example could be curriculum guidelines, department affairs, or guidelines for timings of exams. *Teleoaffective*[14] *structures* are defined as "an array of ends, projects, uses (of things), and even emotions that are acceptable or prescribed for participants in the practice" (Schatzki, 2005, p. 472). Using the example of a student doing coursework, such a structure could include an end of surviving until the end of semester, a variety of tasks that can be pursued for that end, and also acceptable use of things (such as computers or books). Finally, the practice consists of *general understandings* about matters that are relevant to practice. These general understandings express a kind of worth or value to the practice that infuse people's doings and sayings, and can be different for different participants according to status or positions (Schatzki, 2012). One example of such a general understanding could be the nobility of educating students. Schatzki (2005, p. 472) suggests that:

> [t]o say that educational actions are organized by these matters is to say that they express the same understandings, observe, contravene, or ignore the same rules, and pursue ends and projects included in the same structure of acceptable and enjoined teleologies.

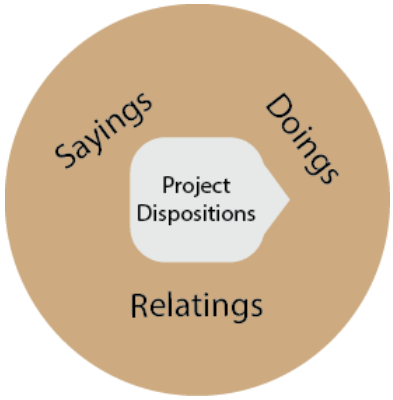
Kemmis et al. (2014) build on Schatzki's theory, but explicitly add *relatings* to their definition of practice; people, as social beings, are constituted through their relationships with others. They describe practices as organised bundles of *sayings, doings* and *relatings*. In a practice, people become speakers of shared languages and develop shared forms of understanding (sayings; often referred to as cognitive knowledge), part of shared practices and activities (doings; often referred to as skills and capabilities), and shared ways of relating to each other in forming identities and roles (relatings; often referred to as norms and values) (Kemmis et al., 2014). These sayings, doings and relatings are so deeply ingrained that they become invisible or taken for granted as "the way things are" (Kemmis and Grootenboer, 2008). Practices are also multi-layered, which means

[14] The "teleo-" part of teleoaffective structures refers to the philosophical account of teleology: an action is teleological when it is for the sake of an end.

that a practice can be part of one or several larger, practices. For example, student teachers engage in various but distinctive activities like listening to lectures, discussing with peers, reading syllabus literature, or writing assessments. These activities can be part of the students' writing or reading practices, in turn being part of their learning practices, which in turn are part of the meta-practice of education.

Furthermore, the *saying, doings,* and *relatings* of a practice "hang together" in the *project* of a practice and the *dispositions* of the practitioners. The set of dispositions, a term which is akin to Bourdieu's (1990) *habitus,* is what gives practitioners "a feel for the game" that makes it possible to act appropriately in the field. Dispositions include previous experiences, knowledge, skills and values of the practitioner (Kemmis et al., 2014). The project of a practice is the answer to the question *what are you doing,* and the term carries similarity to the "teleoaffective structures" from Schatzki. The notion of the project of the practice encompasses intentions, activities and ends within a practice (Kemmis et al., 2014).

Figure 1 A practice. Practices are composed of sayings, doings, and relatings that "hang together" in projects and the dispositions of the practitioners (cf. Kemmis et al., 2014)



Considering the multi-layered-ness of practices, it follows from Kemmis et al.'s definition that a practice consists of many different projects; different sub-practices have different projects that might (or might not) be directed towards the project of the higher-level practice. What is unclear with the definition of a project is how it accounts for the different projects between the participants. If 'the project' is used in singular on a particular level of practice, it bears the association that there is one *common* project for this practice. For example, when describing learning as practice, Kemmis et al. distinguish between *substantive practices* and *learning practices.* The first can be seen as the *topic* of a particular lesson or task, for example a lesson about learning theories, while the latter can be seen as

practices whose project or purpose is to come to know. It seems to be presupposed then, that all learners share this purpose or project. The project of a practice is, however, also described as referring "in part, to the intentions of those involved in the practice" (Kemmis et al., 2014, p. 14), which suggests that projects are both social (part of the practice) and individual. Schatzki seems to place intentional activities more on the side of the individual:

> Teleological hierarchies top off in some activity in which there is no further involvement, some activity that does not help compose yet a further activity. Such an activity is a person's end: it is that for the sake of which she acts (Schatzki, 2012, p. 15).

A student, for example, might write an assignment for the sake of passing an exam or for the sake of developing as a person. Whereas one student might study teacher education for the sake of advancing career prospects (perhaps even not as a teacher), another student might study teacher education for the sake of becoming a good teacher and making a difference in children's life. Nevertheless, they are part of the same practice. I will not pursue this discussion further at this point, but confine myself to raise the question of where the project (or projects?) of a practice is located.

The overriding purpose of this thesis is to explore student teachers' academic practices. *Academic* is used to emphasise that I have directed my attention towards the "university part" of teacher education and that I aim to study practices related to students' university coursework. Hence, it is not a "geographical" term (as in happening on campus) as these practices can take place in different locations. Nor does *academic* imply "learning of theory" as opposed to "learning to teach". It is to emphasise that I study the practices involved when student teachers engage with university coursework. I will mostly use practices in plural to emphasise that students' academic learning practices are made up of many "sub-practices".

3.3 Practice arrangements – theory of practice architectures

Practices are not formed solely by the participants: they are also shaped and conditioned by arrangements and circumstances *beyond* each person as an individual agent. According to Kemmis et al. (2014), practices are embedded in *practice architectures:*

> On our view of practices, (a) individual and collective *practice* shapes and is shaped by (b) what we will describe as *practice architectures*, so that (c) the *sayings*, *doings* and *relatings* characteristic of the

> practice hang together in *projects* that in turn shape and are shaped by (d) *practice traditions* that encapsulate the history of the happenings of the practice, allow it to be reproduced, and act as a kind of collective 'memory' of the practice (p. 31, emphasis in original)

Practice architectures exist in three dimensions – or *intersubjective spaces* – parallel to the activities of sayings, doings and relatings (see Figure 2). First, *cultural-discursive arrangements* (in the *semantic* space and in the medium of language), such as the language or specialist discourse that enables or constrains the sayings characteristic of the practice: What is relevant to say? What language is used to describe the practice? Second, *material-economic arrangements* (in the *physical space – time* and through the medium of work) such as financial resources or buildings and rooms that make the activities in the practice possible, and that enable or constrain the doings characteristic of the practice. Third, *social-political arrangements* (in the *social space* and in the medium of power) – for example roles, power structures or organisational rules – that make possible the relationships between people, and thereby enable and constrain the relatings that compose the practice. These cultural-discursive, material-economic, and social-political arrangements are bundled together in characteristic ways in *practice landscapes* and *practice traditions* (Kemmis et al., 2014). To say that practice architectures act as a kind of collective memory refers to a kind of memory that is sedimented in the practice architectures.

In their learning practice, or in the process of being initiated into learning practice, student teachers engage with and draw upon *already existing* practice architectures: 1) relevant cultural-discursive arrangements such as professional discourse or student discourse, 2) relevant material-economic arrangements such as physical set-ups of lecture theatres and rooms and various technology, and 3) relevant social-political arrangements such as different student-teacher or student-student relationships. The "sedimentation", as Kemmis et al. use it, refers to the fact that a site is historically and culturally situated, and is already there when individuals enter the site of teacher education. Even for a new site (such as the making of an entirely new teacher education programme), the "new" practices will be formed by previous practices that have been used to establish it (cf. Schatzki, 2005). The influence of the arrangements is, however, not only one way. The arrangements of a practice are constantly shaped and reshaped through the dynamic relationship between the individual and the social, and between the practice and the arrangements. Kemmis et al. (2014) argue that in order to bring about change in a practice, one must attend to all parts of a practice. One cannot transform a practice without also transforming the existing arrangements in the intersubjective spaces that support the practice.

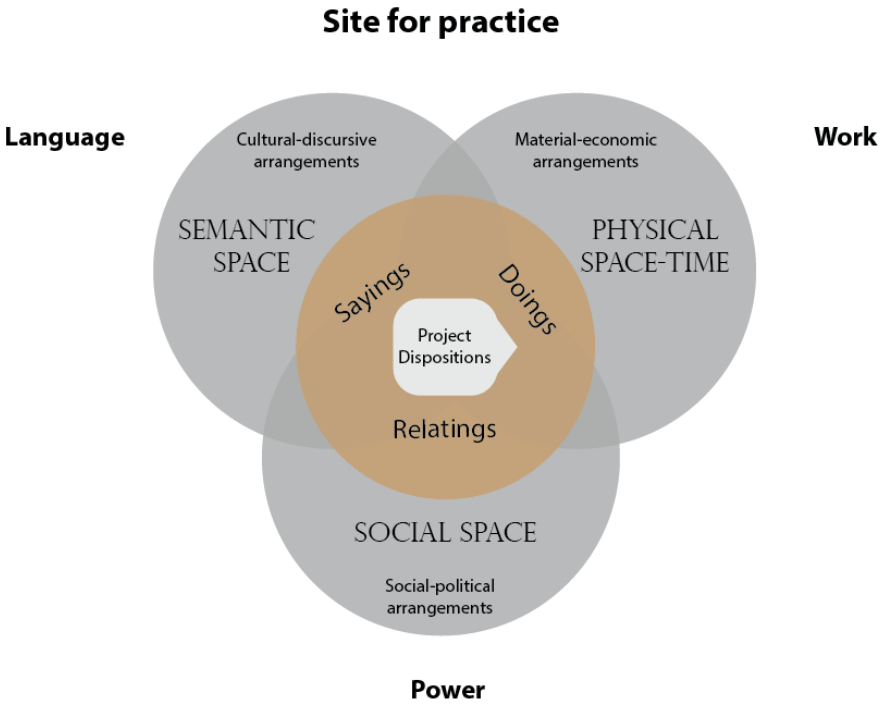


Figure 2 The site for practice

3.4 Interrelationships between practices

A teacher education programme comprises many different practices and arrangements, including students as well as staff and management. According to Schatzki's (2005) site ontology, all social life – that is human coexistence – is part of practice-arrangement bundles. The world is a web of practices: "All human coexistence transpires as part of this overall practice-order web. Any social phenomenon, accordingly, is a feature or slice of this web" (Schatzki, 2005, p. 473). Different practices overlap and interact and are constantly shaping and reshaping each other. Staying within the site of teacher education, we see that different practices *overlap* when particular actions are part of two or more practices (writing, for example, is part of both writing practice and reading practice) or when they share organisational elements (cf. Schatzki, 2005). Practices *connect* when actions from different practices form chains (e.g. student writes a text, a teacher gives feedback, the student rewrites the text), when actions from different practices

are performed in the same places (such as teaching and researching) or when actions of one practice form arrangements for another. In the latter case, one practice can become practice architectures that enable or constrain other practices as, for example, when teaching practices become practice architectures for learning practices.

To say that a teachers' teaching influences students' learning sounds rather like a truism. However, the interrelationship between practices implies more than that. Kemmis et al. (2014) stress that the interrelationship is between the *practices themselves*. This means that the interrelationship between teaching and learning is not restricted to the interaction between the teacher and the learner, or on how teachers frame and facilitate learning possibilities for students. A teaching practice consists of teachers' *shared* forms of understanding, practices and activities, and ways of relatings. This teaching practice within the site of teacher education shapes and creates cultural-discursive, material-economic, and social-political arrangements for student teachers' learning (and the other way around). Teachers (and teacher education) create conditions under which learners can learn, and learners create conditions under which teachers can teach. Kemmis et al. (2014) emphasise that the practice theory lens is not interested so much in finding how general aspects of teaching shape student learning, but rather to examine how *particular practices* and practice architectures come to shape other practices within the *particular site.*

Although the term *practice architectures* can evoke associations of something static or stationary, practices are, as should have been illustrated so far, in constant motion and development (dynamic and evolving). As a theory of the aforementioned "overall practice-order web", Kemmis et al. (2010, 2014) introduce the notion of *ecologies of practices*. The ecology metaphor directs attention to a view of practices as "living things", which stand in ecological relationships to each other. Kemmis et al. use the notion of ecologies of practices on what they identify as the "Education complex". This complex consists of four main practices: student learning (in school), teaching, professional learning (which includes initial and continuing teacher education), (educational) leading and (educational) researching. Student teachers' academic practices belong to one part of this complex (professional learning). The practices of the Education complex are, according to Kemmis et al., designed to be interdependent. A main argument by Kemmis et al. is that if educational change is to be realised, all these (meta-) practices must be addressed. Moreover, they cannot be addressed just one at a time as they exist in ecological relationships to each other; a transformation of each requires the transformation of all five. Figure 3 illustrates how student teachers' academic practices relate to other practices within teacher education.

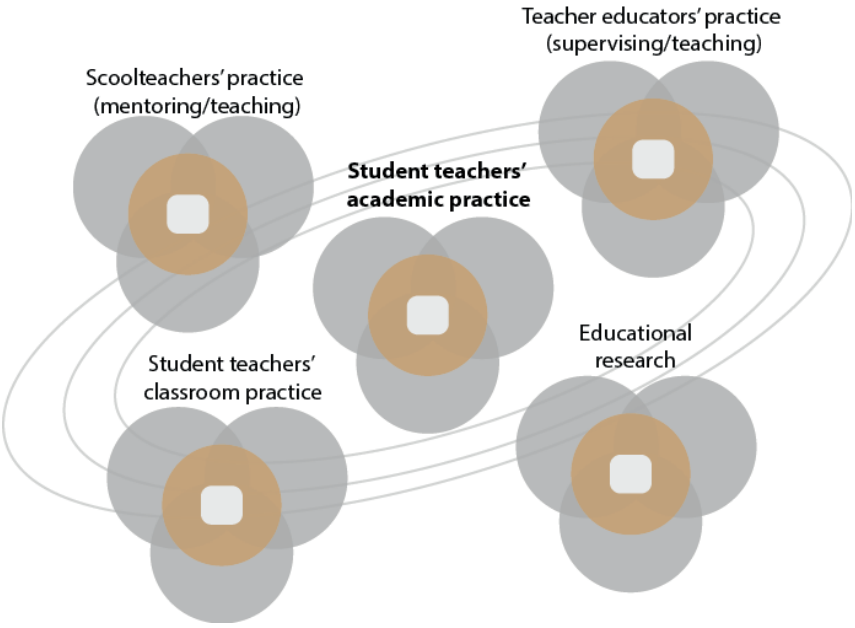


Figure 3 Interrelationships with other practices within teacher education

3.5 Researching practices

Although the presentation so far might picture practices as something tacit or invisible (and theoretical), they are real and tangible as we live and act through them. Student teachers' academic practices constitute the empirical object of this study. The question that remains, however, is: How can these practices be studied? How can we study the "unspoken"? Nicolini (2009) uses the metaphor of "zooming in" and "zooming out" on practices. His assumption is that studying practices requires choosing different angles for observation and different theoretical lenses without necessarily giving prominence to one in particular. The act of zooming in and out can be obtained by "magnifying or blowing up the details of practice, switching theoretical lenses, and selective re-positioning so that certain aspects are fore-grounded and others are temporarily sent to the background" (Nicolini, 2009, p. 1412). Zooming in is the detailed description of the practice, which could be to describe different features of the sayings and doings (and relatings) or practical concerns of the participants. Zooming out on practice requires focusing on the "texture" of practices such as trailing their connections to other practices, studying how one practice becomes resources for another, and describing "the ways in which practices are associated, form living assemblages,

and produce effects and phenomena" (ibid.) Ecologies of practices would represent such a lens.

Schatzki (2012) concludes that in order to acquire the knowledge hidden in a practice, a researcher has no choice but to do ethnography. This includes focus groups and meetings, but there is no alternative to "hanging out" with the people concerned. As indicated already, the practice view emerged during the course of this project. The study was therefore not originally designed to study practices on a micro-level. Instead, the theory of practice architectures provides a lens and a terminology for taking a holistic (and critical) approach to student teachers' experiences of the academic part of teacher education. As illustrated in Figure 4, each of the four research questions (each of which is examined in four separate articles) represents a "zooming in" on particular parts of student teachers' academic practice.

However, as outlined in the explanation of practice architectures, sayings, doings, relatings, and arrangements are intimately connected, and it is difficult to study just "one at a time". For example, students' talk about learning can reveal information about their relatings to teacher educators which, in turn, says something about the exercise of power and the social space of teacher education. Therefore, a synthesis of the findings from the four research questions can reveal further aspects of the practice. Taken together, the findings from the articles and the synthesis can be used to describe student teachers' academic practice through the three intersubjective spaces as well as trailing connections to other practices within the site (zooming out). In that way, the lens of practice architectures proves useful in the endeavour to reach beyond the surface of the students' academic practices and to capture the implicit, and thereby expand our knowledge of student teachers' learning.

In the last part of this chapter I will briefly describe what one might search for when attempting to describe a practice through the intersubjective spaces, and also how the theoretical perspectives from the previous two chapters fit into the picture.

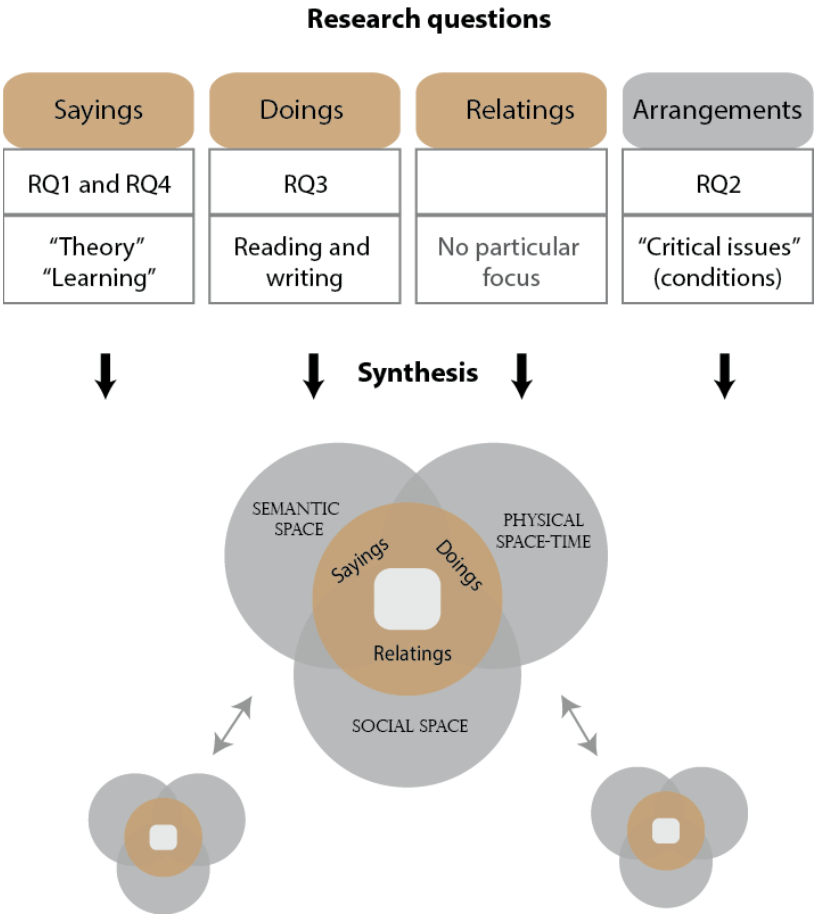


Figure 4 Synthesis of the research questions

The semantic space (through the medium of language)

The semantic space is the "place" that makes it possible to discuss what is done in the practice such that the participants can understand each other (cf. Kemmis and Heikkinen, 2011). This is enabled (or constrained) through c*ultural-discursive* arrangements of the site. A focus then could be to study how particular words are used, and the meaning that is ascribed to them by the participants. What words do they use to describe what they do? What do they talk about, or what do they *not* talk about? Furthermore, each participant understands the practice based on individual assumptions, conceptualisations and experiences. How are these individual assumptions visible in their practice?

The study in this thesis had its point of departure in "the theory-practice gap" and a particular project that aimed to "integrate theory and practice". An interesting question is therefore how students talk about these concepts. Considering the theory-practice discussion in Chapter 1 it is reasonable to assume that the words "theory" and "practice" do not carry the same meaning to teacher educators as they do to student teachers. Nor should it be supposed that the words mean the same to all students or to all teacher educators. Furthermore, the semantic space includes sayings and *thinkings*. The research presented on conceptions and beliefs thus provide useful lenses when zooming in on particular "thinkings" of the students. As illustrated in Figure 4, conceptions of "theory" and "learning" are of particular interest in this study (RQ1 and RQ4).

Research on "academic literacies" directs attention the *various* discourses the students have to switch between. By zooming in on students' reading and writing practices, it is possible to explore how these discourses are experienced from the student teachers' point of view. Perspectives from approaches to learning (SAL) will also be useful in this regard.

The physical space-time (through the medium of work)

In the theory of practice architectures, *material-economic* arrangements make the activities in the practice possible in the dimension of physical space-time, and enable or constrain the *doings* characteristic of the practice. When exploring the physical space of a practice, one therefore looks for distinctive activities and actions (Kemmis et al., 2014). Although intimately connected with the semantic space, reading and writing are of particular interest in RQ3 (how students describe their reading and writing practices). One also looks for specific practical arrangements, physical and economic conditions. To study the time-space of a practice is, according to Kemmis and Heikkinen (2011)[15], to look for *particular ends* that guide the activities (such as understanding a topic or achieving high grades in the course), the things that *motivate* them (such as interest in the specific topic or becoming a teacher), and the *paths and places* those activities go through (such the path from a reading an article to discussing it in a workshop, to writing an assignment that includes those insights).

Informing the study of the physical space-time is the SAL-perspective as it endeavours to identify important contextual factors that influence their academic practices. Most of all, however, the main focus is to foreground the student teachers' practical concerns (as, for example, emphasised in RQ2: issues that are identified as being of critical importance).

[15] Kemmis and Heikkinen build on Schatzki's notion of timespace of human activity (see, e.g. Schatzki (2012).

The social space (through the medium of power)

The social space is relationally-constituted (Kemmis and Heikkinen, 2011), which means that the focus is on relationships between participants and also the exercise of power. Perspectives from academic literacies particularly point to the relationship between teacher and student and what counts as valid knowledge. Researchers have also questioned how norms and values are expressed in education (e.g. Haggis, 2003, Malcolm and Zukas, 2001, Richardson, 2003). Webb (1997, p. 207) contends that "when we hold a mirror before the face of those we valorise for using a 'deep' approach to learning, it is our own image and cultural aspirations which we see."

Studying relationships necessarily requires including both parts in a relation (not only the student teachers). Interesting questions for studying this part of the practice are: What kinds of relationships are the students involved in, and how are these relationships seen from the student point of view? How do the students understand their own role in learning practices? Although not being a separate focus in the research questions, a synthesis of the findings might reveal some characteristics of the social space.

3.6 Summary

In this chapter I have presented the theory of practice architectures and showed how this theory is relevant for studying student teachers. The theory of practice architecture provides a lens and terminology to take a holistic approach to student teachers' learning within teacher education. Used on the whole enterprise of education, practice theory could also provide an ecological approach to researching teacher education, as called for by Wideen et al. (1998) in the quote that introduced Part I of this thesis. As already indicated, applying a practice lens of learning also hold some methodological implications, which is the topic for the next chapter.

PART II: The study

The real voyage of discovery consists not in seeing new landscapes but in having new eyes.

-Marcel Proust

Part II provides a detailed account of the methodological approach and research design of this case study. Chapter 4 makes explicit the methodological implications of applying a practice theory lens and presents further assumptions that underpin the critical interpretative approach of this thesis. It also presents a detailed description of the case. Chapter 5 presents how the data collection and data analysis were realised.

Chapter 4 Methodological considerations

In this chapter, the methodological considerations and procedures that are used in the thesis will be explicated. The main theoretical lens in this thesis – practice theory – was presented in detail in the previous chapter. In this chapter I make explicit some implications of applying the practice theory lens and also present methodological considerations.

4.1 Assumptions underpinning the research

Each research project has its unique combination of data collection and analysis. The choice of which methods to use in a project is dependent on the question(s) that the researcher aims to answer and on the researcher's background and assumptions. My research interest in the student teacher arose from my own experiences of working with both administration and teaching in teacher education. This background motivated for and shaped the choice of topic as well as the formulation of the research questions. However, the justification of the choice of particular methodology and methods reaches deeper than personal background and motivation. It reaches into the researcher's fundamental assumptions about reality and human knowledge. These assumptions do not only inform and shape the choice of methods but also *how* the methods are implemented and the role taken by the researcher (Creswell, 2007, Crotty, 1998). The techniques and procedures (*methods*) that are used to gather and analyse data are part of a governing strategy or plan of action (*methodology*). The methodology is informed by *theoretical perspectives* or the philosophical stance that provides a context for the process and the choice of criteria. Embedded in this theoretical perspective is the researcher's understanding of knowledge and reality (*epistemology* and *ontology)* (Crotty, 1998). This is not necessarily a linear process going in one or the other direction. In a constant dialogue between theory and data, a philosophical stance (including epistemological and ontological views) develops. For example, my assumptions about reality and human knowledge have changed considerably over the last years since my background as researcher was previously in the natural sciences.

Epistemology and ontology

To apply the lens of practice theory implies more than studying practice as an empirical object. A practice lens represents epistemology as a way of seeing and understanding knowledge (see Corradi et al., 2010). Practice theory embraces practical knowledge – not in the sense of practitioners' professional knowledge or the sum of the single minds, but as a kind of collective, shared knowledge of the practice. This knowledge is largely implicit and also historically-culturally specific

(Reckwitz, 2002). The practice lens also has ontological implications as a way of understanding social reality. I have already outlined Schatzki's (2003, 2005) notion of site ontologies, with the understanding that social reality is always situated in time and space. Practices are composed *in* sites and *of* resources found in the particular site. Furthermore, the site is *prefigured* as is it shaped by previous as well as current practices (cf. Kemmis and Grootenboer, 2008).

In this study, knowledge and learning are viewed as complex*, situated,* and *constructed* phenomena, which is in line with a constructionist view of knowledge. Crotty describes constructionism in the following way:

> It is the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context (Crotty, 1998, p. 42).

Thus, meaning is constructed by human beings as they engage in the world they are interpreting. Meaning is, however, not created out of the whole cloth. In line with the "prefiguredness" of practices (cf. Kemmis and Grootenboer, 2008), Crotty (1998) underlines that we are born into a world that is already interpreted, and that we come to inhabit the pre-existing system of significant symbols: "We are inevitably viewing the world through the lenses bestowed upon us by our culture" (p. 54). For example, in attempting to gain insight into student teachers' academic practices, their "stories" are already interpretations of their experiences. These interpretations are strongly shaped by pre-existing and socially constructed meanings. A *lecture theatre*, for example, already has a meaning for the students; not everything can happen in that room. How the students interpret and make meaning of their experiences with lectures is influenced by the "pre-constructed" meaning of a lecture, e.g., what it (should) consist of and how various roles are assigned and played out. To view knowledge as constructed also has consequences for conducting research interviews. An interview is not a situation in which the researcher's aim is to "dig out" the hidden knowledge that resides within the interview object (cf. Kvale's (1996) metaphor of the researcher as a miner). It is a (research) conversation where meaning and knowledge is constructed within the social setting of the research interview.

Social constructionism is a very broad and multifaceted epistemological perspective, where researchers differ both in terms of how radical they are in terms of rejecting an objective reality and in the nature of *construction* (Alvesson and Sköldberg, 2008). I follow Crotty (1998) when he stresses that social constructionism is both realist and relativist. To say that meaningful reality is socially constructed is not to say that it is not real. People do, however, make

meaning of the same reality in different ways, and although constructionism implies that there cannot be one *true* interpretation, there can be more or less *useful* interpretations. Student teachers can (and will) interpret and construct meaning of the same learning situations in quite different ways. My task as a researcher is to present as well-founded descriptions of these experiences as possible, without categorising some students' interpretations as more true than others. Rather, I to try to understand *how* the students arrive at different interpretations. Thus, my research involves taking an *interpretive* but also a *critical* perspective.

4.2 Critical interpretive approach

With its aim to gain a deeper understanding of student teachers' learning practices from the student teacher perspective, this research is positioned within an *interpretive research tradition.* As a theoretical perspective (or philosophical stance), *interpretivism* emerged as a reaction to positivism and its attempts to develop a natural science of the social (Schwandt, 1994). Instead of seeking to identify universal features of society that offer explanation and predictability, the interpretivist approach "looks for culturally derived and historically situated interpretations of the social life-world" (Crotty, 1998, p. 67). Together with symbolic interactionism and phenomenology, hermeneutics is a theoretical perspective informing much interpretive research today, this study included.

The meta-principle in hermeneutics is the *hermeneutic circle* (or spiral). The core principle is the dialectical relationship between parts and the whole; parts of a text can only be understood in relation to the whole text, and the context in which it has been written, and vice versa. Neither can be understood without reference to the other (Alvesson and Sköldberg, 2008). In this project, the hermeneutic circle is visible in the movements between the students' stories and the context, between individual statements and the whole data material, as well as between the sub-studies and the data material as a whole. Drawing upon elements from Gadamer, Heidegger, and Ricoeur, Alvesson and Sköldberg (2008) present a second hermeneutical circle between *pre-understanding* and *understanding*. This circle is characterised by a "revealing" nature, which implies searching for hidden messages and the continual development of the researcher's understanding through the cyclical process of engaging with the data. Also in line with hermeneutic approach is the dialogical way of approaching the data: listening to what the text (i.e. the students) has to say, and listening actively by asking questions. This is not a monologist approach in line with positivism, and not a passive reception as in grounded theory, but an active, dialogical form (Alvesson and Sköldberg, 2008). The questions asked emerge from the researcher's pre-understanding, which is developed during the course of the process. Alvesson and Sköldberg (2008) suggest a humble but proactive attitude.

The *critical* perspective of this study is visible in that it aims not only to *understand* the student teacher perspective, but also to ask what structures and processes influence how the students arrive at their interpretations. Furthermore, the study *challenges* what is taken as given, for example the claim that teacher education is too theoretical. In addition to questioning the "taken-as-given", Alvesson and Sköldberg (2008) note that critical inquiry tries to picture alternative (and sometimes unusual) possibilities or explanations. Critical inquiry also acknowledges the influence of history and culture but directs particular attention to how these are related to power and social dominance. Finally, critical inquiry is sceptical to anyone or anything claiming to own the truth (Alvesson and Sköldberg, 2008, Kincheloe et al., 2011).

The critical perspective was not so much present in the beginning of this project, when the question that prompted the research was: *how can practicum be used to integrate theory and practice?* (cf. the PIL project). The critical perspective developed through my engagement with the topic, oscillating between the different parts of data material and research literature. It is thus an example of how my pre-understanding has been developed in a cyclical, spiralling process between pre-understanding and understanding.

Although empirical data is vital also in critical inquiry, the balance between theory and empirical data shifts slightly in that interpretation of empirical data is complemented by observations or interpretations that relate to the whole context. Alvesson and Sköldberg (2008) note that the reason that this balance shifts is the attention to social and communicative processes – a shift that was predominantly a result of applying the practice lens on student teachers' learning. Such processes are often unfolding "behind the participants' back" or as unconscious processes. It implies that what the students say must be interpreted in light of social processes and structures, or to use the vocabulary of practice architectures: in light of cultural-discursive, material-economic and social-political conditions. Another reason for a shift in balance between theory and data is that the phenomenon in focus, in this case student teachers' academic practices, should be discussed and interpreted in light of the combination of the whole and subjectivity. Hence, interpreting the phenomenon requires more than a confined (or limited) empirical material.

Finally, critical inquiry involves moving back and forth between nearness and distance, between understanding/meaning and explanation and between (conscious) outer structures and (unconscious) deeper inner structures (Alvesson and Sköldberg, 2008). This can be seen as an additional, third circle in the hermeneutic circle. Concluding from this addition, Alvesson and Sköldberg argue that critical inquiry can be understood as triple hermeneutic. How this can be seen in this study is described more in detail with the data analysis.

4.3 Methodology – a case study

As emerging so far, the issue of interest in this thesis is *student teachers' academic practices*. I wanted to explore this issue from different angles and to use multiple sources of data. As the study was set within a particular teacher education programme (and in the beginning within a particular project), the choice of case study was seen as an appropriate choice.

Whether or not case study can be defined as a methodology is interpreted differently in the literature. Crotty (1998) describes case study as a method (in line with technique and procedures), while Stake (2008) notes that case study is not a methodology but a choice of what is to be studied. Others present case study as a comprehensive research strategy or methodology (Creswell, 2007, Denzin and Lincoln, 2005, Yin, 2009). Yin (2009, p. 18) defines case study as "an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". Creswell (2007) adds to this that case studies are characterised by in-depth data collection involving *multiple sources* of information**.** I choose to view case study as a methodology since it, informed by practice theory, hermeneutics and critical inquiry, constitutes a comprehensive strategy or plan for action in this project.

The case in this study is the teacher education programme within this particular university, while the empirical "object" is student teachers' academic practice. Using the metaphor of "zooming in and out" on practices from the previous chapter (cf. Nicolini, 2009), each research question zooms in on particular parts of the students' practice, using different theoretical lenses. The "zooming in" is, according to Nicolini, obtained through "switching theoretical lenses and re-positioning in the field, so that certain aspects of the practice are foregrounded while others are bracketed" (Nicolini, 2009, p. 1391). For example, although the individual, belief-driven view of learning was problematised in the previous chapter, how student teachers think about theory (RQ1) highlights important parts of their *sayings*, and might possibly also say something about how this can affect their *doings*. Moreover, through focusing on what the students identify as critical issues (RQ2), practical concerns of their practice can be highlighted. The "zooming out" is done in the last part of this thesis, in which the four sub-studies are synthesised and discussed in light of connections with other practices within the teacher education programme.

How to choose an appropriate case is an important step in designing a case study (Stake, 1995, Yin, 2009). In this study, the choice of the particular case was partly a result of pragmatic consideration; the project started within the PIL-project and because I was a teacher educator at this university, the students were easily accessible. At the same time, these students can also be seen as representative for

this kind of teacher education in Norway. Moreover, in critical inquiry, empirical data is interpreted against observations or interpretations of the context, e.g. to explore the possibilities for alternative explanations or interpretations of prevailing ideas or the students' stories. In order to take this critical view and be able to spot possible inconsistencies and tensions, my "insider-knowledge" of the particular programme is invaluable. It is also important to emphasise that this study does not aim to present findings of a representative sample from which generalisations should be drawn. Rather, the aim is to explore aspects of student teachers' learning practices that have not been a topic of discussion to date and hence generate questions for future research. The exploration of this particular case can point to theoretical questions and connections that might not otherwise be raised. To use Flyvbjerg's (2001) words: we do case studies not in the hope of proving anything but rather in the hope of learning something from them.

Before I go into detail on the particular methods used in the study, it is necessary to provide a more detailed description of the case. The focus will be on structural issues of the education programme that are relevant in order to understand the following part describing the data collection.

4.4 The case

The programme in this study is a five-year secondary teacher education programme, in the following called 5LU[16]. It is a combined (integrated) degree programme, whose graduates are provided with teacher education combined with a Master's degree in one academic subject and one year of study in a secondary subject. Students can choose between five programmes: natural science and mathematics, languages, social science, history, and geography. Each programme offers many possible combinations of "primary" and "secondary" subjects.

An overview of the structure and timeline is provided in Table 2. The academic subjects are studied within the ordinary Bachelor or Master's programme of the student's academic discipline. The fifth term and the eighth term of the five-year programme are dedicated in full to education coursework. These parts will in the following be labelled PPU1 and PPU2[17], respectively, and are the only parts that have been studied in this thesis.

[16] Abbreviation of the Norwegian term for this programme: "Femårig lærerutdanning".

[17] Abbreviation of the Norwegian term for secondary teacher education: "Praktisk Pedagogisk Utdanning"

Table 2 The structure of the five year programme. The coloured parts indicate the teacher education part of the programme (PPU)

Term	Content	
1	Introduction TE	Discipline subjects
2	Discipline subjects	
3	Discipline subjects	
4	Discipline subjects	
5	PPU1 (pedagogy, subject didactics, practicum)	
6	Discipline subjects	
7	Discipline subjects	
8	PPU2 (pedagogy, subject didactics, practicum)	
9-10	Master thesis	

The teacher education part of the programme (PPU) consists of three parts: *pedagogy*, *subject didactics* in two school subjects, and 14 weeks of *practicum* conducted in internship periods in a school. An overall aim of the programme is to integrate these different topics into a cohesive whole. Even if pedagogy and subject didactics are assessed separately, these subjects are integrated through common lessons as well as an R&D project in which the students act as researchers of their own practices. The teaching is mainly conducted in smaller workshops (or seminars) with a high degree of student activity, in which the main aim is to draw on students' practical experiences. Each student is closely followed, receiving personal feedback both on written assignments and in one-to-one conversations about the student's personal development. The assessment form is a portfolio with tasks that are constructed to support the students in making connections between university courses and school.

As with all teacher education programmes in Norway, the programme is governed by the *National curriculum regulation for teacher education* (2003)[18], which defines three main areas for teacher knowledge: 1) the teacher and the student, 2) the teacher and the school organisation, and 3) the teacher and the society. This programme explicitly states two requirements for the competence of graduates. Graduates should master the more technical aspects of teaching such as classroom management, working with a diverse array of children and conducting

[18] In 2013, a new national curriculum was released for five-year combined degree programmes. However, the participants in this study were taught under the former curriculum regulations.

good lesson planning, and should also be able to systematically evaluate, reflect upon, and develop their own practices as well as those of the school (Haugaløkken and Ramberg, 2007).

The different practicum models

The material comprises students who participated in the PIL project as well as students who followed the ordinary model of this programme. The set-ups of these two models were quite different from each other. In the PIL model, the students followed lectures and seminars at the university parallel to being in practicum in school throughout the whole term (see Sletbakk et al., 2011, Wæge and Haugaløkken, 2013, for more details). In general they were on campus one or two days, and in school two (or more) days. In the ordinary model, 4 weeks of campus activities preceded and succeeded 6-8 weeks of practicum.

As will become clear through the next chapter, the focus of this thesis shifted away from PIL in particular to student teachers' academic practices in general. PIL is therefore not directly addressed in any of the four articles. Further particularities of the project and contributions of this thesis will, however, be discussed in detail in the last part of this thesis.

Chapter 5 Research design

In this chapter I present a detailed account of how the data collection and analysis of empirical data have been realised. In the last part of the chapter I discuss research quality and ethical considerations.

5.1 Data collection

The data collection was performed in two phases: a *pilot phase* and a *focal phase*. I will describe the procedure of selecting participants and collecting data for each phase separately.

The pilot phase

As already described, the point of departure for the study in this thesis was the PIL project, and the original plan was to examine questions about the relationship between theory and practice within the frames of this project. The obvious choice was therefore to focus on the students who participated in the PIL-project. When my PhD project started in August 2009, there were two groups of "PIL-students" from two successive years of the 5LU programme. One group, which is identical to *Student group 1* in Figure 5 had finished PPU1 in the fall term of 2008 and would come back to PPU2 in the spring term 2010. This group consisted of 25[19] students, which was about half of all the students enrolled in 5LU in the spring term 2010. As these students participated only in PIL, I will sometimes refer to this group as the "pure-PIL" students. Another group embarked on PPU1 in August 2009 with the plan to finish PPU2 in the spring of 2011. Most of these students[20] became part of *Student group 2* as shown in Figure 5. As the PIL-project terminated by the end of 2010, these students followed the PIL-model in PPU1 and the traditional model in PPU2. Both "PIL-groups" became subjects of study in the pilot phase, from which the further data collection was refined.

A timeline of the data collection is illustrated in Figure 5. The grey objects in the figure represent the data sources that have been subject to deep analysis related to the research questions, while the unfilled objects have status as supplementary data. These have certainly informed the analysis as they form an additional background for my interpretations, but they will not be described in detail.

[19] This number was erroneously set to 21 in Article 1. The correct number is 25.

[20] As not all students (for various reasons) follow a normal progression, the student groups in PPU1 and the following PPU2 are never exactly the same.

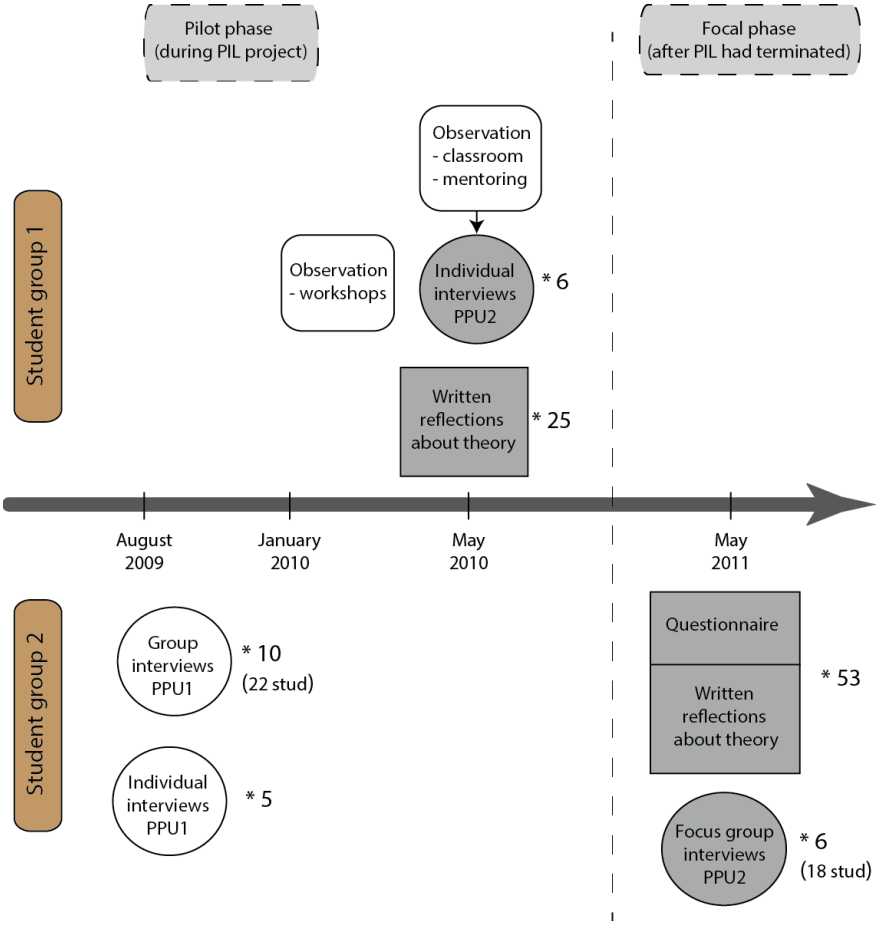


Figure 5 Timeline of the data collection

In the pilot phase, the strategy was to take a broad approach, and with a particular aim to follow the students' development through PPU1 and PPU2. The first step was therefore to conduct interviews with the students who had just started PPU1 (and later became part of *Student group 2*). The main focus of these interviews was to examine the students' views of teaching and of their own role as teachers when they entered the programme. These could then be compared to the interviews of the same students at the end of PPU2. All but one of the students agreed to participate; the student who did not agree to participate was unable to participate due to practical reasons. The students were interviewed in pairs. I also sent an open invitation to the other half of the students (those who did not follow

the PIL model), and I randomly chose five of the students who agreed to participate.

The second step was an extensive data collection of *Student group 1*. During the whole spring term 2010, I observed selected workshops with a particular focus on what was going on in discussions between the students. At the end of the term, six students were selected for in-depth interviews. In the selection for these interviews, there were two main criteria: there was to be an equal mix of students from the language programme and science programme, and the students were to have participated in the PIL project also in PPU1. As the main focus in this phase of the project was to explore questions related to the relationships between theory and practice, I wanted to link the interviews directly to the students' practical experiences. Therefore, the interviews were combined with observations in school. I observed the students in the classroom and also in the session with their mentor (or supervisor) that took place just after the lesson. The interviews were conducted directly after the mentoring session. The interviews were semi-structured with open-ended questions, and lasted about one hour. The students were asked to describe their teaching in the lesson that preceded the interview and then their teaching in practicum in general. The students were asked to relate their experiences to theory from university courses, and also to reflect upon their future role as a teacher. To reduce the possible resemblances with an assessment situation (considering in particular the questions about theory), I repeatedly emphasised that my intentions were not to assess them in any way. While three of the students seemed to be quite comfortable in the situation and talked freely, the other three seemed more uncomfortable with the parts that involved bringing in theoretical perspectives.

Finally, all 25 students answered questions about theory in writing. This was directly related to RQ1 about student teachers' conceptualisations of theory. For practical reasons, these written reflections were collected as part of an evaluation of the PIL project. The questions were:

1. Describe in your own words what theory is to you.
2. What role do you think theory has for you as a student teacher and later as a teacher?

It was specified in the instructions that *theory* refers to the theory they encounter in teacher education.

As illustrated in Figure 5, only the written statements and the individual interviews of *Student group 1* ended up as part of the core data, upon which the analysis in this thesis is built. However, the analysis process is not something that starts *after* and *separate from* the data collection. Kvale (1996), for example, notes that the ideal research interview is to a large degree interpreted within the time

frame of the interview. Hence, although the interviews that focused on the students' entering views (*Student group 2*) are not part of the final analysis, they were interpreted *during* the interviews as well as transcribed and analysed in terms of the students' language about teaching and learning in an early phase. As for *Student group 1,* the observations of the workshops gave me an impression of what the students had been doing throughout the term, and thus provided me with valuable information when the students made specific references in the in-depth interviews. Finally, the observations in school, gave me a point of reference when the students described their own teaching, and provided me with examples of conversations between students and mentors. Throughout this phase, observations were continually interpreted, and the pilot phase thus functioned as a process in which I began to gain a deeper understanding of the *student teacher perspective.* Until then, my knowledge of the teacher education programme was primarily based on experiences from the teacher educator and the administrative perspective.

The focal phase

Based on the experiences and initial analysis from the pilot phase, there could have been several interesting questions to explore in depth. Still, there was one question in particular that stood out. Although these students were part of a project with the overall aim to integrate theory and practice, and their statements were often directly related to particular aspects of the PIL-model, I could still easily recognise the same criticism that motivated me to start this study in the first place. The students were very critical towards much of the theory they had been taught, and they described pedagogy as largely common sense. The topics they appreciated most were those that they could see to be of immediate use in the classroom; it seemed to me that they were guided by the expectations of getting practical tips and methods even more than what I had heard from students previously. It all sounded very familiar both in terms of my own experiences from this particular teacher education as well as from the research literature (e.g. Lid, 2013, Ramberg, 2009, Reid and O'Donoghue, 2004, Smith and Lev-Ari, 2005).

The main outcome from the pilot phase was therefore the move towards a critical inquiry. Instead of accepting the claim that teacher education is too theoretical and asking the question of how to use practicum to integrate theory and practice, I wanted to ask: *why do student teachers think teacher education is too theoretical? Are there any alternative explanations than those, which have been reported in the research literature to date?* Student teachers' engagement with university coursework became the main issue of interest, and the focus of the data collection moved primarily toward the university courses and less on experiences from practicum. Keeping the written reflections and in-depth interviews from the pilot phase, four main changes were made for the next step of the data collection:

1. The study was expanded to include the whole cohort of students enrolled in the spring term of 2011, and not only those who had participated in the PIL project.
2. The interview guide was expanded with questions about students' strategies and experiences from their campus coursework (inspired by approaches to learning).
3. Interviews were conducted in focus groups to better stimulate discussion and to stay open to the views and agendas of the student teachers.
4. A questionnaire about various aspects of how the students work with their academic studies was introduced as additional data source (inspired by approaches to learning).

Focus groups

Focus groups can be regarded as a form of group interviews, in which the participants interact more with each other than with the researcher (Cohen et al., 2007). A main aim is to let the views of the participants emerge through interaction with each other; thus, to let the participants' rather than the researcher's agenda predominate the interview. The latter point is of particular importance for this study, since the aim was to seek the student teacher perspective.

The most obvious advantage of using group interviews in general is perhaps that it can generate a large amount of data and include a wide range of responses within a limited timeframe. However, the social gathering of a focus group has several other (and more important) advantages. Kitzinger (1995) notes that the interaction between participants in a focus group highlights their view of the world, the language they use about various topics and their values and beliefs about particular situations. Group processes can, according to her, help people discover and elucidate their views in ways that cannot be done in individual interviews. Through sharing views and experiences and asking each other questions in the group, forgotten nuances may be activated and understandings can be re-evaluated and reconsidered (Catterall and Maclaran, 1997). Furthermore, the social setting provides the researcher with many different kinds of communication such as irony, anecdotes, jokes or arguing. Although the focus group is still an unnatural setting, these different kinds of communication provide valuable information of the students' *sayings* when they talk with their peers.

Focus groups are, however, not without drawbacks. First of all, the discussions require skillful facilitation from the researcher in terms of allowing the discussion to flow but at the same time keeping the discussion focused on the topic. Another task for the facilitator is to provide space for all participants to contribute. For example, in one of the focus groups in this study there were two very talkative (and dominating) male students on one side, and a female student who tried to

interpose with critical questions and thoughts on these students' views on the other. In spite of my many attempts to make space for her, the others continually interrupted her. It is a fragile balancing act between making people stop talking and at the same time being polite and keeping a friendly atmosphere that stimulates and allows for discussion. Another challenge of group interviews in general is that the participants might offer a "public line" instead of a more personal, honest response (Arksey and Knight, 1999), or that the interviews may produce "group thinking" that discourages individuals that hold a different view from speaking out (Cohen et al., 2007). This was not seen as a big problem in this study, since the primary aim with the focus groups was to seek understanding of the student teacher perspective when they talk about their learning practices; thus, the more personal matters that can be withhold by individuals became less important.

A vital decision in all data collection is the number and selection of participants. With too few, the researcher will be unable to know whether the findings are unique to this particular group, while too many can lead to such large amounts of data that it prevents the researcher from going deep enough into the data material (Kvale, 1996). Morgan (1997) proposes three to five groups, since a "point of saturation" is often achieved with this number. I chose to have six smaller focus groups of three to four students, which turned out to be an appropriate number in terms of the saturation point.

In the selection of participants for the focus groups, there were several questions to consider. First, I wanted to secure an equal mix of students from different programmes. Second, in order to follow the same students through the whole programme, I wanted to include the students who had been interviewed once before (in the pilot phase). 16 of these students were enrolled in PPU2 that year. I sent an email to all of these students, and received 14 answers, all of them positive. A third consideration was that I wanted homogeneity in the groups along two lines: *study progress* and *subject disciplines*. The reason for securing homogeneity in terms of study progress was that due to changes made in assessment form, students within the same year might follow different versions of assessment. As I expected the students to be concerned with practical issues of the programme, I wanted to reduce the focus on clarifying practical differences in order to focus more on their learning practices. This particular year, a final oral exam had been introduced, and I chose to focus on those students who would be subject to this examination (none of them PIL students). 15 students met this criterion, from which I received seven positive answers and one negative. Due to practical difficulties and sickness on the day of the focus group, the total number of participants ended up to be 18 students: 12 PIL-students and 6 "non-PIL" students, four of whom were male. It would have been desirable to also secure a more equal mix in terms of gender, but this was difficult to achieve given the other criteria and also due to an overall predominance of female students.

Securing homogeneity in terms of *subject disciplines* was important because experiences from this programme (or university) show that there is a "divide" between students from the science programmes and programmes within social sciences and the humanities. As these programmes are also geographically on different campuses (although in only one location during teacher education), the students often refer to peers by the name of the campus[21], and not always in positive terms. In order to be able to capture such talk, which reflects *social relationships* and *discursive* aspects of the learning practices, I considered it to be important that the students were together with others from the same campus.

The focus groups lasted about two hours, and took place in a meeting room at the programme for teacher education (PLU). The students were served coffee and refreshments throughout the interview to try to create and maintain a relaxed atmosphere. The interviews contained about the same questions as the individual interviews in addition to questions about being a university student: questions about workload, how they approached the syllabus literature and written assignments, how they experienced the congruence between the literature and the workshops and lectures, and how they described relevance. The question about relevance was specifically linked to their expectations of the academic part of their teacher education, referring to what makes something relevant and what they think about the more general parts of the pedagogy subject that are not directly connected to classroom practice. I was conscious of letting the students talk without imposing my views and terminology on them. Although I was interested in their conceptions of theory and of learning, I did not ask about this in particular. This was to reduce the factor of them trying to give me the "correct" answers.

With a semi-structured interview guide and as small groups as three persons, one might ask if focus group is the correct term to use. In the literature, four persons are seen as a minimum for focus groups (Cohen et al., 2007), and the researcher usually brings in a topic for discussion without a more detailed interview guide. However, focus groups are a flexible form of data collection, and Morgan (1997) concludes that focus groups are a broad umbrella that encompasses many different variants. Although I posed questions from the interview guide, my role was withdrawn and the students primarily discussed with each other. I interrupted now and then to ask for more details or to bring the discussion further or back on track if necessary.

[21] The science and technology programmes are located at the "Gløshaugen" campus, while all other programmes are located at the "Dragvoll campus".

Questionnaire

An obvious advantage with questionnaires is that it includes data from a larger population. Still, the main purpose of the questionnaire in this study was to describe this particular teacher education programme rather than generalise about student teachers based on statistical analysis. Combined with in-depth interviews a questionnaire provides the advantage of covering breadth as well as depth, in turn giving a richer description of the case. Another advantage was that I could use findings from the questionnaire to explore further in the interviews. I considered the questionnaire to be particularly useful for exploring the students' conceptualisations of theory as well as how they worked with their studies. The questions about theory from the pilot phase were therefore included as open questions. To explore how the students worked or approached their studies, and also how this can be influenced by contextual factors, I chose to combine approaches to learning with perceptions of the learning environment.

With aspects from the SAL-perspective as theoretical underpinnings, the purpose of the questionnaire was twofold: 1) to use descriptive statistics to describe the students' approaches to studying and 2) to see if there were any relationships between particular aspects with the learning environment and the students' approaches. With its aim to supplement the focus group interviews it had a "secondary" status. This is different from what is often the case in research within the SAL-perspective, where the main data are questionnaires, while interviews are used to shed light on these. Because of its secondary status and also because of problems with reproducing the theoretical underpinnings (which will be elaborated more in detail below), the questionnaire will not be presented in as much detail as it would have been in a primarily quantitative study.

The questionnaire consisted of six sections: 1) background information such as age, gender, school subjects, and study effort, 2) approaches to studying (deep, surface, and strategic), 3) conceptions of learning, 4) preferences for teaching, 5) course evaluation, and 6) open-ended questions about the nature and role of theory in teacher education. Sections 2, 3, and 4 were contained within the Approaches and Study Skills Inventory for Students (ASSIST) (Tait et al., 1998), while section 5 was measured by means of the Course Evaluation Questionnaire (CEQ) (Ramsden, 1991). Both of these inventories have been translated into and validated in a Norwegian context (Diseth, 2001, and Pettersen, 2007, respectively), which was an important criterion for choosing which instrument to use.

The second section, which related to *approaches to studying,* consisted of 52 items based on statements made by university students when asked what they usually do when they go about learning. It consists of 13 subscales, reflecting the three overarching scales of deep, surface, and strategic. From the original version, one question was removed, and three questions were reformulated to adjust the questions to a teacher education programme, in which academic studies are

combined with practicum in school, and workshops are used as the main teaching activity rather than lectures. This does not seem to be taken account for in the original version. Furthermore, eight questions associated with the subscales "fear of failure" and "monitoring effectiveness" were removed. These subscales did not fit well to the programme, and "monitoring effectiveness" is also difficult to reproduce in a Norwegian context (Diseth, 2001). The participants indicated their relative agreement with these statements on a 5-point Likert scale (1: totally agree, 2: partly agree, 3: unsure, 4: partly disagree, 5: totally disagree). The participants were instructed not to mark 3 unless they really had to or if the statement did not apply to their learning situation. To remove or change items from an established instrument must be made with caution. However, it is important for the validity of the questionnaire that the students can relate the questions to the situation they are in.

The third section, *conceptions of learning,* contained the hierarchy identified by Marton et al. (1993)(see Chapter 1), which was expected to represent two factors corresponding with deep and surface approach. The fourth section, *preferences for teaching,* included questions about what kind of teaching the students generally prefer. The students were asked to indicate to what extent they like or dislike different types of lectures, exams, courses and books. Two factors should be extracted from this: supporting understanding and transmitting information, which correspond with the deep and surface approaches, respectively (Tait et al., 1998).

The fifth section*, course evaluation,* contained three selected scales from a Norwegian version of CEQ (EMS26 in Pettersen, 2007): *clear goals, student autonomy, and workload*. The decision to choose only three scales was primarily made due to a high number of questions, but also because these three topics corresponded with topics that had been raised by the students during the pilot phase. That students complain about extensive workload is also a recurring result in annual student evaluations of the programme. The same 5-point scale as for approaches to learning was used. The final part of the questionnaire consisted of the open questions about theory.

To secure a high participation rate, I made an agreement with the teacher educators of the pedagogy course, so that the questionnaire could be filled out during a pedagogy workshop. I was present in all workshop groups to inform them about the procedure (e.g. that participation was voluntary) and to be available for questions. Due to absences on that particular day, 53 out of 59 students filled out the questionnaire. The questionnaire was filled out before the focus groups, so that I could identify possible topics to investigate more in depth during the conversations.

The distribution of gender and academic discipline of all the participants in the study is shown in Table 3.

Table 3 Distribution of gender and academic discipline.

	Female	Male	Science	Language	*Social sciences
Student group 1	17	8	17	8	0
Student group 2	38	15	19	26	8
Total	55	23	36	34	8

*Note: "Social sciences" includes both social sciences and geography as these are often combined in the school subject of social science ("samfunnsfag").

5.2 Data analysis

Although the analysis and interpretation process is guided by methodological choices that are underpinned by the researcher's worldview, theoretical perspectives and methodological guidelines, it also contains a good portion creativity and fantasy. Data collection and analysis goes on in parallel and are followed by constant pendulum movement between analysing, exploration of research literature, and refining the research questions. It is first when looking back on the process, that it is possible to see the overall picture and draw the line one has followed.

The data analysis in this study has been done in four separate steps – one for each research question. Each analysis has been guided by the particular research question, used different parts of the data material, and has been summarised in a separate article. An overview of which parts of the data that have been focus for each analysis is provided below in Table 4.

Table 4 Overview of how the data material has been used for each research question

		Written reflections	Individual interviews	Focus groups	Questionnaire
RQ1	Conceptions of theory	X	X	X	Open questions
RQ2	Arrangements		X	X	Workload, study effort,
RQ3	Reading and writing practices			X	ASSIST
RQ4	Conceptions of learning		X	X	Conceptions of learning

In spite of the separate analysis processes, there is a common approach that describes the whole analysis process. Underpinned by both hermeneutics and critical inquiry, the overall approach can be described as triple hermeneutic (see Figure 6). According to Alvesson and Sköldberg (2008), single hermeneutics is about the participants' interpretations of themselves and their own subjective and inter-subjective (cultural) reality. The students' views that are expressed in the interviews are thus already interpreted "stories". Double hermeneutics includes the researcher's engagement with these interpretations when trying to understand and develop knowledge about their reality. As illustrated in Figure 6, this represents the most extensive part of the analysis process, containing qualitative content analysis, narrative analysis, and statistical analysis. In the abductive process of oscillating between data and theory, each research question has drawn upon different theoretical perspectives. Triple hermeneutics involves a critical interpretation of those structures and processes that might influence the participants' as well as the researcher's interpretations (Alvesson and Sköldberg, 2008). In my case, this involved critically scrutinising initial findings in light of social and discursive structures as well as power relations within the site of teacher education. In the spirit of critical inquiry, this final step had a particular eye for tensions, inconsistencies and constraints. The critical perspective is what has been mostly in focus in all of the four articles. In this part of the thesis, I will therefore confine myself to describe the (most extensive) part of the analysis that belongs to the second phase in Figure 6: qualitative content analysis, narrative analysis, and statistical analysis.

Qualitative content analysis

Qualitative content analysis is a systematic analysis of the contents of a data corpus (Saldaña, 2009), in this case written reflections, interview transcripts and analytic memos. The interviews were transcribed verbatim by me and anonymised before they were imported into NVivo together with all other written data (including all data from the pilot phase[22]). The very first step was to organise the data in terms of creating various folders and to auto-code the transcripts such that all text excerpts from one and the same student (including the initial group interviews from the pilot phase) were coded to the fictitious name of the student. Then, four separate analysis processes guided by a particular research question were conducted (in the following called *sub-studies*). Although each sub-study had its unique process, was at different stages of the research process, and was guided by different theories, they all followed the same overall structure.

[22] This includes interview transcripts from all conducted interviews (also the initial group interviews) and field notes from observations in school and campus workshops.

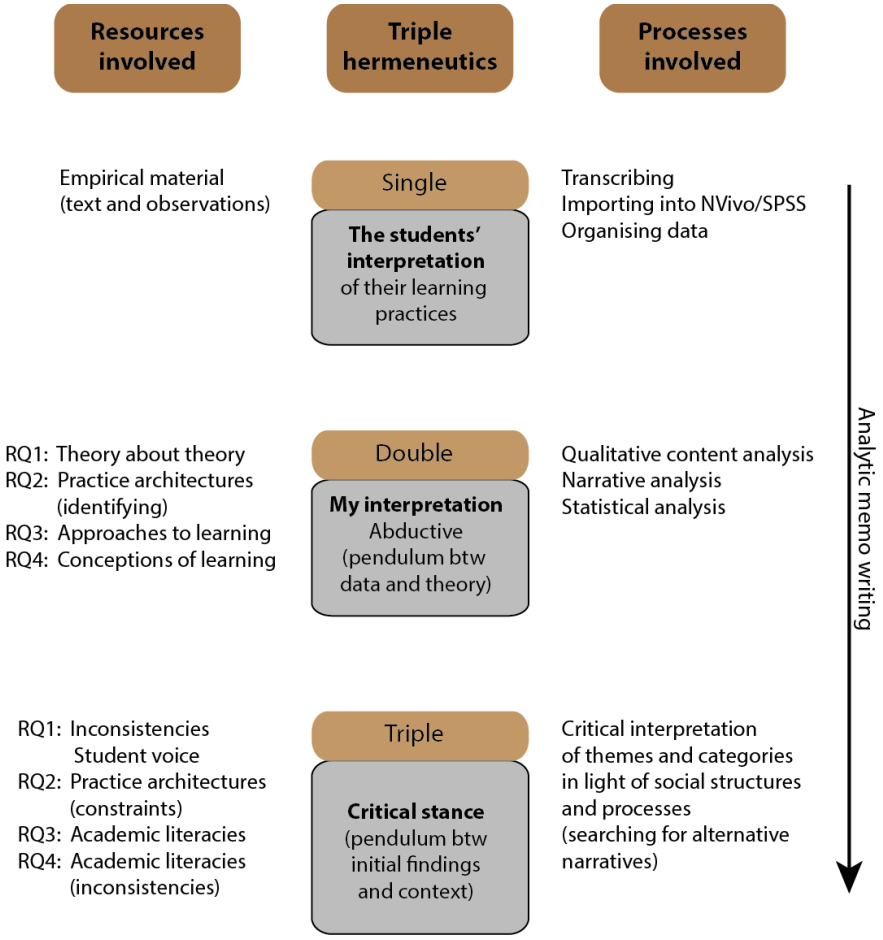


Figure 6 The overall approach of data analysis as triple hermeneutic

The process of each sub-study can be described as comprising four steps: 1) *sorting,* 2) *initial coding,* 3) *categorisation,* and 4) *abstraction.* The first two are what Saldaña (2009) calls first-cycle coding, while the last two are second-cycle coding. Each cycle consists, however, of constant recoding. As Saldaña points out: "Data are not coded – they're *re*coded" (Saldaña, 2009, p. 44). In the first step, the *sorting* process, the interview transcripts[23] were read through in detail to identify the parts that related to the particular research questions. For example in the first

[23] This was not done with the written reflections as they were already "sorted" to the students' views of theory.

sub-study (RQ1), text segments where the students talked about theory on a meta-level (what theory is or how it can be used) were identified. In the second sub-study (RQ2), in which the focus was to identify critical issues, the interviews were coded in terms of the *content* or *topic* raised in the text. The result of this step was large segments of data coded to a few nodes[24].

The second step was to re-read the nodes from the previous step with the strategy of *initial coding.* Initial coding is the coding method used in grounded theory (often referred to as open coding). It consists of breaking down the data into discrete parts for close examination and comparison (Strauss and Corbin, 1998) and the goal is to "remain open to all possible theoretical dimensions indicated by your readings of the data" (Charmaz, 2006, p. 46). The purpose of this step was to stay true to seeking the *student teacher perspective*. Although a researcher is never "blank" when approaching the data, I focused in this phase particularly on not imposing predefined theoretical perspectives on the data, such as different levels of theory (RQ1), practice architectures (RQ2), deep and surface approaches to learning (RQ3) and conceptions of learning (RQ4). The result of this second step was a lot of codes which were reduced by merging codes that were similar. The number of the codes was further reduced in the third step – *categorisation*. This step involved searching for patterns. Pattern coding identifies emergent themes from the data and is used to pull together a large body of material into fewer and more meaningful units of analysis (Miles and Huberman, 1994).

The fourth and final step, *abstraction,* involved an abductive process of a constant oscillation between theory and data (and between text extracts and the whole text) in which categories were further reduced and reorganised. Abduction involves a pendulum between inductive and deductive principles of analysis and is often used in case studies (Alvesson and Sköldberg, 2008). Its power lies in the dialectical process that moves between theory-laden empiricism and empirically laden theory (Eriksson and Linström, 1997).

The fourth step in particular was heavily supported by active use of analytic memos, which had been written from the very beginning (starting with reflections during data collection). I wrote memos both in the form of spontaneous "brain dumping" as well as in the form of systematic reflections on all categories at particular stages in the process. I also periodically reviewed these memos and sometimes composed "metamemos" (Saldaña, 2009) to summarise and integrate findings so far, both within and across the four "sub-studies". The purpose of memo writing is to think critically about what you are doing and why, and through this confront and challenge your own assumptions (Mason, 2002). For want of co-researchers with whom I could have discussed alternative interpretations of the

[24] A node in NVivo is the "placeholder" for text segments labelled with the name of the code.

same data, these memos became "sites of conversations" (Clarke, 2005) with myself about my data.

Narrative analysis – the power of examples

The main focus of the qualitative content analysis was to search for patterns. During the analysis of identifying critical issues within the teacher education programme (RQ2), it became evident that although the students seemed to be concerned with the same themes, there were substantial differences in terms of *how* they perceived or experienced them (see Article 2). In order to gain a deeper insight into these differences, a narrative analysis was conducted for two of the participants. I performed an initial analysis, which was then discussed and refined in collaboration with Østern as co-author of Article 2. A further motivation for doing this analysis was the question about whether there could be alternative narratives or counter-narratives (cf. Riessman, 2008) to the ones arising from the qualitative content analysis.

A narrative analysis is often based on in depth interviews or on repeated interviews with a person,. The interviews are read several times in order to identify central themes (Polkinghorne, 1995). In this study, the themes were already identified through the qualitative content analysis. Hence, the narrative analysis consisted of identifying how these topics unfolded for the two selected students. Since the focus of the content analysis had been to search for patterns (similarities), the focus of the narrative analysis was on *differences*. I chose two students who had very different stories in terms of background (including subject discipline), interests and motivation. The interviews were connected with data from the students' answers from the questionnaire, and one of the students had also participated in the initial group interview in the beginning of PPU1. We followed Polkinghorne's (1995) definition of narrative analysis and ordered the data elements into a coherent story with a plot, and the story was constructed from the perspective of the researcher. The themes that were identified in the content analysis were used as a skeleton for the stories.

Due to space constraints of the article format, the originally constructed narratives had to be considerably shortened. Still, the narratives (as presented in Article 2) provide valuable insights into two student teachers' experiences. In the analysis process and further interpretation process, although not presented in full in the article, gave important basis for the next (critical) step of the analysis. An example of this insight can be seen in Oliver's (the science student) narrative (see Article 2). Oliver was one of the few students, who did not think the workload was very high, and his estimated study effort was among the lowest of all. The narrative analysis revealed that this was not necessarily because he was "lazy". He was intrinsically motivated to become a teacher and gave an impression of working considerably harder with his discipline studies in mathematics and physics. The

main reason was that he did not really care about the teacher education part of his studies beyond acquiring a toolbox for teaching. He dismissed pedagogical theories *as theories.* Some of his resistance could be understood in the light of his encounter with pedagogy and the lack of support in that matter. This insight about the influence of his conceptions of theory would not have been visible in the mere search for patterns.

Statistical analysis

The intended use of the questionnaire was to use descriptive analysis to describe the study approaches of this particular group and also to analyse possible relationships between these approaches and contextual factors (workload, clear goals, and student autonomy). In order to use the questionnaire for this purpose, the instrument (CEQ and ASSIST) needed validation. Each of the 13 subscales was analysed with factor analysis to investigate construct validity, and each factor's inner consistency (reliability) was analysed by means of Cronbach's α. Although these instruments have been extensively validated in different settings, also including some Norwegian studies, the theoretical underpinnings turned out to be difficult to reproduce. Although this is an interesting finding in itself (which is discussed in Article 3), it also meant that the questionnaire could not be used as originally planned. A sample size of 53 is far too low to perform a solid statistical validation of an inventory with as many as 52 items and 13 subscales (see Field, 2009). Instead of going into the validation process in detail, I will therefore highlight the problems that were identified and how these can be understood in light of the findings from the interviews. This will also illustrate how the use of such questionnaires across different contexts can be problematic.

The different subscales of ASSIST are listed in Table 5. Two of these, "Fear of failure" and "Monitoring effectiveness" were already removed while constructing the questionnaire. In validating the instrument, the problems were particularly related to three subscales, which did not load as expected in the factor analysis, or had very low or even negative alfa-value. The first was *interest in ideas* (deep approach). A closer look at the content of the questions shows a possible ambiguity related to the word "study". For example, the question: "I find that studying academic topics can be quite exciting at times"[25] might refer to academic subjects in general, while the next question: "Some of the ideas I come across in the course I find really gripping"[26] might point to teacher education in particular. Another question within this scale is: "Regularly I find myself thinking

[25] "Jeg mener at det å studere akademiske emner til tider kan være ganske spennende."

[26] "Noen av ideene jeg møter i studiet finner jeg fengslende."

about ideas from lectures when I'm doing other things"[27]. Considering findings from the qualitative data in this project that the students are very critical to the lectures given in this programme (see Article 2), this question might evoke different kinds of responses from the participants that are not necessarily connected to a deep approach to learning. The whole subscale of interest in ideas was removed from further analysis.

The second "problematic" subscale was *unrelated memorising* (surface approach). While one explanation might be that the students are *not* directed towards reproducing or memorising, the most plausible explanation for the low reliability for this subscale is that the questions do not apply to this particular programme. The students do not need to memorise facts. Furthermore, the statements "Much of what I'm studying makes little sense: it's like unrelated bits and pieces"[28] or "I often have trouble in making sense of the things I have to remember"[29] might also apply to students, who have a deep approach to learning. Analysis of the students' reading practices revealed considerable problems in dealing with the language in pedagogical literature (see Article 3). They might *want* to understand and to search for meaning, but are still unable to find it. Also in this subscale there is a question about lectures, which might evoke different reactions with the participants that are unrelated to a surface approach to learning. This subscale was therefore also removed.

Table 5 The main approaches of ASSIST with the corresponding subscales

Deep	**Surface**	**Strategic**
Seeking meaning	Lack of purpose	Organised studying
Relating ideas	Unrelated memorizing	Time management
Use of evidence	Syllabus boundness	Alertness to assessment
		Monitoring effectiveness
Related subscale:	*Related subscale:*	*Related subscale:*
Interest in ideas	Fear of failure	Achieving

After a process of removing single items, a factor analysis was performed on all subscales, the result of which is shown in Table 6. As can be seen from Table 6, the subscale *Lack of purpose* is also problematic, as it does not load on the same factor as *Syllabus bound* as expected. A lack of purpose refers to "seeing little value or meaning in either the course or the tasks" or to "studying without

[27] "Jeg får ofte assosiasjoner til tanker og ideer fra forelesninger når jeg holder på med andre ting."

[28] "Mye av det jeg leser gir liten mening, det er som usammenhengende biter av kunnskap."

[29] "Jeg har ofte vanskeligheter med å finne noe mening i det jeg skal huske."

reflecting on either purpose or strategy" (Entwistle and McCune, 2004). The questions are, however, formulated as "Often I find myself wondering whether the work I am doing here is really worthwhile" and "There's not much of the work here that I find interesting or relevant". Considering many students' reactions to a perceived high workload (and losing motivation, see Article 2) and also the criticism that parts of the courses are irrelevant, these questions are not necessarily connected to what is described as a surface or "poor" approach to studying (as in Entwistle and Peterson, 2004).

Table 6 Factor pattern matrix

Factor	1	2	3
Deep approach			
Seeking meaning		.800	
Relating ideas		.725	
Use of evidence		.913	
Surface approach			
Lack of purpose	-.466		
Syllabus boundness			.727
Strategic approach			
Organised studying	.888		
Alertness to assessment			.804
Achieving	.724		
Time management	.718		

Extraction Method: Principal Axis Analysis. Rotation Method: Oblimin with Kaiser Normalization. Factor loadings <0.3 are not included.

The statistical analysis also consisted of correlation and regression analysis in an attempt to find relationships between the CEQ and ASSIST part of the instrument. Of particular interest was the connection between perceived workload and approaches to learning. These analyses were, however, unsuccessful in establishing such relationships.

Taken together, the analysis of the questionnaire points to several problematic issues in this questionnaire. One is related to how to understand "meaning", which was problematised in the previous chapter, and which will be an important topic also in the following chapters. Another is related to the application within teacher education. It is difficult to know what part of the studies the students are thinking of while they are answering the questions. Nevertheless, based on the scales that were possible to reconstruct, Table 7 shows descriptive statistics, which

have been used as a background for the interpretation of the results. Questions related to workload and conceptions of learning have also been used as supplements to the qualitative analysis.

Table 7 Descriptive statistics for the different approaches

	Mean	SD	Skew.	Kurt.	α
Deep approach	2.33	.48	-.015	-.29	.77
Seek meaning	2.47	.67	.85	1.25	.41
Relating ideas	2.13	.52	.24	-.63	.62
Use of evidence	2.60	.68	-.00	-.22	.57
Strategic approach	2.71	.59	.25	-.39	.72
Organised studying	2.69	.70	.32	-.82	.42
Time management	2.67	.83	.52	-.53	.62
Achieving	2.75	.65	-.20	-.53	.57
Not loading "correctly"					
Lack of purpose	2.73	.85	-.17	-0.41	.59
Syllabus boundness	2.51	.73	.024	-.45	.54
Alertness to assessment	2.66	1.24	0.55	-0.94	.83

5.3 Trustworthiness

Within a quantitative tradition, research quality is commonly discussed in terms of validity, reliability, and generalisation. Validity refers to how well an instrument measures what it is meant to measure, reliability to the consistency and repeatability over time, whereas generalisability concerns the capacity to generalise the results to a larger population (Denzin and Lincoln, 2000). Although these terms are also common in qualitative research, there are a range of other terms such as *trustworthiness, credibility, dependability, rigour, authenticity,* and *transferability* to mention but a few (see, e.g., Denzin and Lincoln, 2000, Miles and Huberman, 1994, Savin-Baden and Major, 2013). While all of these terms aim to describe research quality, the terms focus on different aspects of research quality. According to Savin-Baden and Major (2013), the different terms seem to be compatible with different philosophical stance, signalling different research goals. *Trustworthiness* is, according to Savin-Baden and Major, congruent with ideas of a critical perspective, which holds the view that we cannot separate ourselves from what we know in a search for objectivity.

The most threatening factor to the trustworthiness of this study is the "solitary researcher". Extensive analyses have been done without the possibility to

go into detail on alternative categorisations or interpretations. One co-authorship (Article 2) and peer-review processes did, however, offer some possibilities for critical discussions. Interpretative research is above all a moral issue, and trustworthiness can be promoted by ethical consciousness and carefully documenting the research process (Angen, 2000). This is particularly important in light of the "solitary researcher". Both in the description of the theoretical framework and in a detailed description of the methodology in this chapter I have attempted to make the research process transparent. My main aim has been to provide a detailed and honest description of the research process. In this last part, I will highlight some additional issues in this regard.

Methodological coherence

Methodological coherence refers to the congruence between the research questions, methods, data, and analytical processes. The challenge in all qualitative research is, however, that the research process is not linear (Savin-Baden and Major, 2013), which has also been documented for this study. As the study was not originally set up to study practices (as an expanded view of learning developed through the engagement with theory and data), the practice theory lens has not informed the data collection. If it had, the instruments of ASSIST and CEQ would hardly have been used. In studying practices, the *actual happenings* are important, and not merely the participants' interpretations in hindsight. It is rather common to describe our own actions through our intentions rather than our actual actions (which may or may not have been visible to us) (Kvernbekk, 2005). Studying practices needs ethnographic methods, detailed observations, and includes various perspectives (such as teacher educators *and* student teachers).

On the other hand, the critical shift indicates that at least I did not force my findings into a predefined theoretical framework or pre-understanding. The latter is what Wideen et al. (1998) refer to as the "self-fulfilling prophecy" in research. The critical approach provided the possibility for a fresh perspective on the data, opening up for alternative interpretations.

Insider-outsider

Haug (2010) criticises research on teacher education in Norway for being conducted almost exclusively from an insider perspective. Most research is conducted by teacher educators, and the object of study is "their own" students or programmes. In this study I am also an insider, which has some obvious advantages. Most of all it has been crucial for the critical perspective. In order to be able to "reach beyond" the students' interpretation and to recognise possible inconsistencies and tensions my insider knowledge of this particular programme has been indispensible. Nicolini (2009) argues that in order to study practices, one

must *recognise* practices, which requires a certain knowledge of the practice one is studying.

However, the insider perspective also has certain challenges. As a researcher and teacher educator, I am myself participating in language games, activities and relationships that are part of research practices and teaching practices within the same site as the student teachers I am studying. Such communicative processes are "hidden" to me as well. Kemmis (2009) writes about this as "melting of horizons" between researcher and participants. Both are part of a specific practice with distinctive sayings, doings, set-ups and relatings, which might distort or obliterate each other. One sign of the challenges of this insider perspective of my research was the emotional aspect. During the whole analysis process I was confronted with an array of different feelings. I switched between understanding and empathising with the students to being annoyed by their criticism and seeming lack of attention to their own role. I could also feel loyalty challenges between different roles within the site, such as students, other teacher educators, or participants within the PIL project. This insider perspective needs to be taken into consideration for readers of this thesis.

Lost in translation?

Transcribing means to transform – a shift from one form to another. The students' statements in the interviews have undergone two transformations. The first transformation is through the transcription from speech to text, which reduces a social setting including atmosphere, body language, or expression quality (e.g., pitch, emotions) to text on a paper (see Kvale et al., 2009). In this process, vital information is lost and meaning can be distorted. In order to get the most of the information from speech to text, I have transcribed all interviews myself, as well as listened to the interviews several times. Both the voices and the images of the students were still with me when I read the transcripts; I could often literally see (and hear) the particular student sitting in front of me.

The second transformation is the translation into English. In this translation process I have encountered two challenges. The first is about which words to use. Translated words often do not carry the exact same meaning in another language. One obvious example is the term "pedagogy" – a word that was used in a range of different ways that is difficult enough to distinguish as a Norwegian. It becomes almost an impossible task to communicate in another language. Another challenge was that I had to leave out illustrative quotes due to the strong connection to cultural context. One example of this was a student who compared pedagogy with "the law of Cardamom". With this comparison he referred to the children's book "When the robbers came to Cardamom town" by the Norwegian author Thorbjørn Egner. This small, idyllic town has a chief constable who works by one law only: "You shall not bother others, you should be good and kind, but otherwise you can

do as you please." To those readers who know this story from their childhood, this comparison immediately evokes some images – images of the kind and *naïve* chief constable who pretends as long as he can that everything is just fine, and of the robbers who turn out to be very nice in the end. It will probably evoke images of the life in Cardamom town, but also images of the typical children's book of this time – the simple life where even the "bad guys" are quite nice, and where every story had a clear moral. Even when providing some context, the depth of this example can never be fully translated, which is why it had to be left out.

5.4 Ethical considerations

The study in this thesis has followed the research ethical guidelines for social sciences and the humanities in Norway (NESH, 2006). The ethical guidelines are largely related to demand for consent (voluntary participation), demand for information (that the participants know what they are participating in), and demand for confidentiality. Accordingly, all data (students and teacher educators) were anonymised and given pseudonyms, and all recordings and information about the participants have been securely stored.

One topic that is often discussed in terms of trustworthiness and ethical considerations is *member checking*. Along the way, I often considered doing some kind of member checking with my participants, in particular with the narratives. The aim of returning the researcher's interpretation to the participants would be to allow the participants a voice in the findings and also the opportunity to correct possible misinterpretations (Savin-Baden and Major, 2013). However, considering the critical approach of this study, aiming to reach *beyond* the students' statement in a search for the "tacit" and "implicit", such a member checking would be problematic. Whereas I aimed to gain a deeper insight into the student teacher perspective, the aim was not to re-present the stories as told by the students.

PART III: Findings and Discussion

Tell and I will forget
Show me and I will remember
Involve me and I will understand
Step back and I will act

- Old Chinese proverb

Part III consists of two chapters. Chapter 6 presents and discusses the findings. A brief summary is given of each of the four articles before these findings are synthesised through the lens of practice architectures. Taken together, this chapter provides a detailed description of the student teachers' academic practices. Chapter 7 discusses the findings in light of the PIL project, which was the point of departure for my study. The main argument that is followed up in this last part of the thesis is that when implementing new models (or in developing teacher education in general) one needs to pay closer attention to the whole enterprise of teacher education.

Chapter 6 Student teachers' academic practices

This chapter provides a description of the student teachers' academic practices. In the previous chapter, it was described how the case study was approached with four different research questions, each with separate data analysis. In this chapter, the results from the sub-studies are synthesised through the lens of practice architectures. I will first summarise the findings of each of the four articles in the same order as they were written. Then, I will synthesise the results through the lens of the intersubjective spaces of the practice: the semantic, physical and social space. Each article contains rich examples from my data material, but I will include a few selected quotes or expressions for illustration purposes.

6.1 Article 1: Student teachers' conceptions of theory

Sjølie, E. 2014. The role of theory in teacher education - reconsidered from a student teacher perspective. *Journal of Curriculum Studies*, 1-22.

RQ1: What characterises student teachers' conceptions of the nature and purpose of theory in teacher education?

The findings show that the students tended to have a narrow view of the concept of theory – a dichotomous view in which theory belongs to the university and is largely observed as the opposite of practice. When asked about the role (or the purpose) of theory, the students' views were considerably more nuanced and also included views of practice as theory laden. Considering the common claim that student teachers expect from teacher education to fill a 'bag of teaching tricks' (Loughran, 2006), students could be expected to see the theory presented in teacher education as something to be transferred into practice. Although this view was common among the participants, they described other purposes of theory to be just as important. For example, it seems to be a common view among the participants that teachers need a shared theoretical background in education. This resonates with other studies, in which student teachers seem to have internalised the value of academic preparation in education (e.g. Roness, 2011b, Smith and Lev-Ari, 2005).

Additional findings

In addition to the categorisation of the students' conceptualisations of theory, there were two other important findings. The first was that the students seemed to distinguish theory in general from pedagogical theory in particular. Many students referred to pedagogical theories as 'common sense' or 'intuition', which just confirmed what they already knew. In the article, I identified this finding as the

students' *problematic encounter with pedagogy.* More specifically, the student teachers' encounter with a new academic discipline – with a different epistemology than the one they know from their discipline studies – seems to cause difficulty and tension. Although these challenges were found across the different disciplines, science students seemed to have particular difficulties.

The second finding was that the students' views developed during the course of the interview. In conversation with their peers and with me as a researcher, the student teachers challenged and developed their assumptions about theory. I use this finding to argue for the importance of having meta-conversations with the students. In having conversations about theory on a meta-level, the assumptions of *both* student teachers and teacher educators can be made explicit, in turn informing the teaching practices of both. I also argue in this article that such meta-conversations include more than just listening to the students. In this argument I build upon scholars who have presented a variety of arguments for the importance of creating space for dialogue between students and educators and for a shared responsibility for learning. Of particular interest is the dominant metaphor in higher education of the "student as consumer" (McCulloch, 2009). McCulloch warns that encouraging the student to take on the role of the consumer of what is provided by the university, for example in annual course evaluations, de-emphasises the student's role in learning.

Conclusion

The main conclusion of this article is that the way student teachers conceptualise theory influences the ways in which they engage with theory in their university courses. This might in turn influence the way they engage with theory later as teachers. In light of the question about whether or not teacher education is too theoretical, the article points to the students' ambivalence to theory (a conclusion also reached by Ramberg, 2009). On the one hand, teacher education is too theoretical. On the other, theoretical knowledge is important. The student teachers see learning to be a teacher as more than just acquiring a set of professional skills, and they understand that teacher education can provide them with important theoretical insights in that respect. However, pedagogical theory is not really theory, but rather an articulation of what they already know. Some of the participants used this as an argument to devalue and denigrate pedagogical theory.

6.2 Article 2: Practice architectures of teacher education

Sjølie, E, Østern, A. L, (In Review), Student teachers' learning within the practice architectures of teacher education. *Educational Research*

RQ2: What issues are identified as being of critical importance to the student teachers during their academic teacher preparation?

Four themes were identified as being of critical importance to the student teachers' learning practices: 1) perceived workload, 2) encounter with pedagogy as an academic discipline, 3) credibility of teacher educators, and 4) (dis)connection between university courses and experiences from practicum. In this article, constraining arrangements within teacher education are identified. The four themes are first presented through the narratives of two student teachers. The stories illustrate large differences in terms of background, interests, motivation, and beliefs about theory in teacher education for their academic studies. The students had in common that they were very critical towards parts of the campus activities and that both were disappointed with their supervisors in practicum.

The themes

Perceived workload

With just a few exceptions, the participants reported that the workload in the study was too high. These answers were compared with their own estimates of study effort and scrutinized more closely in terms of what they were complaining about. It seemed that the problem was not the total workload in terms of hours, but rather a combination of many *different* requirements, an overloaded curriculum (which left no time to go into depth), demanding time in practicum, and compulsory participation in teaching activities.

Encounter with pedagogy as an academic discipline

This theme builds further on the findings in Article 1 by elaborating on the students' difficulties beyond the epistemological differences. The students' challenges can largely be attributed to the unspoken expectations of academia, and the main challenges were related to reading and writing. An important finding is that the students' frustration with these "hidden codes" seemed to have produced much negativity, which fed into a negative student discourse. The students pictured a discourse of negativity, to which it was difficult to oppose and in which they had taken part themselves.

Credibility of teacher educators

Whether or not a teacher educator is found trustworthy might influence what or whom student teachers choose to believe in. A general complaint across several courses was the communication of the motto "do as I say, not as I do". The most important factor for a teacher educator to be trustworthy was the amount of school experience. Academics were labelled with negatively laden words ('living in a bubble'), while those with school experience and current school teachers were described in positive ways ('the real ones'). These descriptions seemed also to have been reinforced by comments made by some teacher educators about other teacher educators.

(Dis)connection between university courses and experiences from practicum

The original analysis went more into depth on this issue, but due to space constraints, only three main aspects are (superficially) discussed in the article. The first relates to perceived relevance, which was not only related to content. Relevance could be experienced either as a short-term or long-term relevance, for practicum, for the profession, for assessment in university courses, or just out of pure interest. The key factor to the 'experience of relevance' was the teacher educator. The second aspect relates to written assignments. From the student teacher perspective, these assignments were primarily seen as assessment rather than as a mean to link university coursework with practical experiences. Some of the students were dissatisfied with the fact that they were assessed on their skills to write rather than teach. This view seemed to have been supported by several supervisors in the schools. The third and final point is related to the role of supervisors in helping the students see connections between school and university courses. Although the students had very different stories about the perceived quality of their supervisors, none of the students thought they had been given support in seeing those connections.

Practice architectures

Although the research question was "open" in terms of looking for enabling as well as constraining factors, the critical voices of the students resulted in a discussion of *constraining* factors. The most important influence was identified within *cultural-discursive* arrangements. The students seemed to draw upon at least three discursive resources associated with different "communities" the students must relate to: academia, school and the student community. The constraining function of the academic discourse can be related to unfamiliar language and an epistemology that remains implicit and that is combined with unspoken academic expectations. The fact that the research interviews contained so much criticism is in itself a sign of a stored frustration – despite that the questions were not directed towards evaluation. We ask in this article if these frustrations are closely related to

the complex and often dysfunctional process of learning to teach. We also argue that frustration is a prerequisite for learning. The students seemed to have difficulties in canalising their frustrations; although they criticise teacher educators and teacher education, there is a great deal of ambivalence in terms of what they really want.

Conclusion

The article has both theoretical and practical implications. Theoretically, the concept of practice architectures proved to be useful for capturing the complexity of the student teachers' experiences. Practically, we concluded that the study allowed us to look beyond the spontaneous critical answers and to point out alternative causes for the student teachers' frustrations in the midst of the complex and chaotic process of learning to teach. Considering the strong influence of cultural-discursive arrangements, these must be taken into consideration in designing and conducting research on teacher education.

6.3 Article 3: Student teachers' writing and reading practices

Sjølie, E. (In review), When form stands in the way of content – a study of student teachers' reading and writing practices, *Education Inquiry*.

RQ3: How do student teachers describe their reading and writing practices?

The focus of this article is on how student teachers describe their reading and writing practices. Hence, it goes into depth on topics covered superficially in Article 2. The analysis is based on the 6 focus groups with a total of 18 student teachers as well as the ASSIST part of the questionnaire. It argues for a need for closer examination of student teachers' academic practices with particular attention to communicative practices.

Reading and writing practices

The overall finding was that the students reported to be predominantly meaning oriented, but also strategic (cf. students' approaches to learning). They read for understanding or not at all. The students did, however, report on considerable difficulties in understanding much of the literature. They blamed authors for poor writing and seemed to be "put off" by the reading before they had even begun. The findings suggest that the intention of reading for understanding is not enough; the students also need to be able to deal with different text genres. Hence, the findings support the findings from Francis and Hallam's (2000) study in that previous "academic" experience may not be suitable for new texts and new courses.

The main enabler for reading, i.e. a decisive factor for the choice of reading texts in depth or not, were written assignments. The combination of reading and writing seemed to work together; writing about a particular topic supported both their understanding of the topic as well as triggered their interest for reading. Above all, reading and understanding were enabled by the possibility to study a topic *in depth*. However, they also talked about difficulties related to writing. When talking particularly about writing, the focus shifted from *learning* and *understanding,* to *assessment* and to show what they have learned. Several of the participants described how writing academic assignments was a matter of learning the "rules of the game".

Another interesting finding in this article was the students' experience of *relevance* and search for *personal meaning*. When the students characterised interesting texts, they revealed two main categories of the source of that interest: recognition and transformation. The students recognised themselves in the text (on a personal level), and sometimes this led not only to confirming and supporting personal experiences, but also to transformation. The topics of the texts that were brought up as good examples covered a range of different topics from the university courses – including the more general topics about the role of education in society.

Conclusion

The article concludes that in order to understand the persistent criticism against teacher education, closer attention to student teachers' academic practices is needed. Although the article problematises the use of questionnaires such as ASSIST across various contexts, the article demonstrates that research on student learning in higher education provides valuable insight also for teacher education. The article points to three aspects of students' academic practices: 1) learning is not only an induction into a body of knowledge but also into communicative practices, 2) the most important factor for experiencing relevance is that the students recognise themselves in the theory on a personal level, and 3) in order to engage with reading and writing for understanding, the students need *time*. The latter is related to the time they seem not to have, and can thus be seen in relation to the findings from Article 2 about workload.

6.4 Article 4: Student teachers' talk about learning and teaching

Sjølie, E. (in review). In the tension between idealism and practicality – student teachers' meta-awareness of learning and teaching, *NAFOL Year Book 2014*.

RQ4: How do student teachers talk about learning and teaching?

The focus of this article is on student teachers' *sayings* (and *thinkings*) about learning and teaching. It explores how the participants talked about learning and teaching when they described their experiences from the various parts of the program (school and campus) and also when shifting the perspective between teacher and learner.

The frequently used claim that student teachers have narrow views of teaching and learning is not supported in this study. Both in the questionnaire and in the interviews, the students communicated "developed" and constructivist views of learning both for pupils' learning (school) and for their own learning (university). Constructivist views were present with each and all of the interviewees. This finding is in line with Richardson (2003), who contends that a growing number of teacher candidates now hold strong constructivist beliefs (see Chapter 1).

When the students talked about "the ideal teaching" in school they described student centred teaching, in which the fundamental aim is to meet the need of the individual pupil. The words they used to describe teaching methods that were in line with this ideal were "fun", "innovative", "creative", and "fancy" – words that were also used by supervisors. In their own learning in university, they said that they preferred student active workshops and that it was important to be taken seriously and to be treated as an adult. However, the students' talk about teaching also revealed inconsistencies and tensions towards more "traditional" views. These tensions could be found along two lines: *idealism – practicality* and *school – university*.

Idealism – practicality

Tensions along this line were about the difficulties in teaching according to the "ideals". While some of the examples could be related to the strong pressure that student teachers are under during practicum and the early stage they are in as teachers, other examples were related to the discourse and power within teacher education. When elaborating on why they did not teach according to their ideals, the participants revealed that the ideals were not so much theirs but rather the teacher educators' ideals. Several examples were used to illustrate that the students felt they were not allowed to oppose these ideal views. This finding points to a further representation of the "theory-practice gap" in teacher education: the

difference between teacher educators' ideals and values and student teachers' images of learning and teaching.

School – university

When the students described teaching in a university setting, there was a noticeable shift to a transmission model of learning. In other words, their "rich" views of learning were not necessarily transformed to their own situation as learners in higher education. While the focus in school was to *change* traditional practice, they seemed to *expect* traditional teaching in university, at times also resisting when it was not. The university, as a culturally and historically situated site for learning, carries strong connotations in terms of what the students expect and how they interpret their learning experiences.

Conclusion

The article highlights two dimensions of student teachers' views of learning and teaching. The first is related to the normative character of teacher education and the argument for a more realistic exploration of teaching and learning. Might teacher educators, rather than supporting the students to *challenge and explore* their views about learning and teaching, attempt to *replace* the students' views? The second dimension is that rich views of learning are not necessarily transferred to the students' own learning strategies. This finding points to a need for raising student teachers' awareness of their own learning. If the students are not able to transfer their views of learning to themselves as learners, how are they to transfer these views to their pupils' learning?

6.5 Synthesis through the lens of practice architectures

While each article focuses on a separate research question, I will use this section to synthesise the results in order to provide a fuller description of these students' academic practices (cf. Figure 4 in Chapter 1). In Article 1 and 4, I zoomed in (cf. Nicolini, 2009) on *sayings* and *thinkings* about "theory", "learning", and "teaching" while in Article 3 I focused on the student teachers' *doings* in the form of reading and writing. In Article 2, I zoomed in on the students' practical concerns, which made it possible to identify critical *arrangements* of the site seen from the student teacher perspective. When these studies are seen together, it is possible to zoom out and to draw some lines to other practices such as supervisors' mentoring practices and teacher educators' teaching practices.

Semantic space

As put forward in the presentation of the theory of practice architectures, semantic space gains its meaning and comprehensibility through *sayings* and *thinkings* in the medium of language. This space includes expressions and concepts used to

describe learning within teacher education, and can be described as "what the practice sounds like". It is also characterised by content, i.e. what is talked about or what is *not* talked about.

The particular focus of this study – students' sayings and thinkings about theory, learning, and teaching – can be seen to reflect *beliefs* about these concepts, which makes it possible to discuss the findings in light of other research (cf. Chapter 1). Research has shown that student teachers' educational beliefs influence both learning outcome and how they study. It is argued that these beliefs need to be explored and made explicit. The findings in this thesis point to a need for more explicit and critical dialogue amongst teacher educators and student teachers about the concepts of theory, practice, teaching and learning.

Theory and pedagogy

As indicated in the discussion about the theory-practice gap in teacher education (section 1.3), the use of the word "gap" implies a dichotomous view of theory and practice, as well as it indicates a wish for congruence or equilibrium. Such a request could also be recognised in the students' language. Some students said that they used experiences from practicum to decide what is relevant or not in teacher education; they used expressions such as 'theory is relevant when it is in *accordance* with practice'. Furthermore, even though Article 1 showed that the student teachers also had more nuanced conceptualisations of the role of theory in teacher education, the student teachers' language contained "sedimented" (and perhaps unconscious) patterns of how they talked about university and schools (Article 2). University was largely referred to as an 'artificial world' as opposed to the 'real world'. Teacher educators were referred to as 'the guys up on the hill', and words such as 'academics' and 'research' often had negative connotations, while 'those out there' or 'those connected to real life' had positive connotations. To treat theory as something dry and boring (and as opposite to practice) is a natural part of everyday language and contributes to maintaining dichotomous conceptualisations of theory and practice.

At the same time, when the students described teaching methods they had learned about in subject didactics (which were considered as theory by the students), they used words such as 'fun', 'innovative', and 'fancy', while common teaching in school was described as 'boring' and 'traditional' (Article 4). Furthermore, when the students were explicitly confronted with questions about the role of theory both through written reflections and in the interviews, the students expressed predominantly *positive* attitudes towards theory. Theory was described as 'important', 'interesting', and 'fundamental in order to raise the status of the teachers'. Several of the participants criticised people who seemed to think that teaching is easy. There was, however, a tension between when they talked about theory and when they talked about pedagogy. A continuous topic in all four articles

of this thesis is the many negative descriptions and dismissal of pedagogical theory: 'pedagogy is common sense wrapped in difficult language', it is 'just a torrent of words', 'too general' and thus irrelevant for practice. Similar to how the theory-practice dichotomy is ingrained in everyday language, one might also ask how other practices student teachers take part in (for example discipline studies) shape their language about pedagogy. Pedagogy is often used synonymously with (the rather simple process of) imparting or disseminating knowledge to others[30]. Sometimes it is even used in more negative ways such as "dumbing down" or something needed only for younger children.

A complicating factor with the analysis is that it is not unambiguous what the students referred to with the word 'pedagogy'. Sometimes it referred to the *university course* with the label pedagogy, which is distinguished from subject didactics. Some used the expression 'peden'[31] to denominate *teacher education as such* – an expression that is widely used in everyday language in Norwegian. Many of the students expressed that they had problems understanding what pedagogy is really about. Oliver (narrative Article 2), for example, distinguished a pedagogue from a teacher. In his meaning of the word, pedagogy seemed to refer to the *topics* that were not directly related to the classroom (which is *one part* of the university course pedagogy). The notion of 'pedagogical theory' seemed to comprise theory in all university courses, as they brought in examples from the pedagogy course as well as subject didactics. 'Pedagogical theory' also seemed to refer largely to *texts*. Whereas the students complained about pedagogical theory, they were highly satisfied with both the pedagogy workshops and the classes in subject didactics. Pedagogy workshops were valued because they provided a space for discussions between students and teacher educators, while subject didactics were valued because of the concrete methods that they could use in the classroom. Almost all negative comments about teaching activities were directed towards lectures, which all students attended. These lectures comprise a mixture of topics from pedagogy and subject didactics, and the negative comments were related to the lecturers' performance. As put forward in the introduction chapter, 'pedagogy' is not easily translated into other international settings. This study indicates ambiguity within the context of one and the same teacher education program.

Relevance and meaning

Another common word is 'relevance' or perhaps even more common, 'irrelevance'. It is also one of the most frequently used words in the criticism against teacher education. The findings illustrate that relevance is not easily explained. It seems easier to say that something is irrelevant than to explain what

[30] This assertion is made on the background of personal experiences as a teacher educator.

[31] An abbreviation of the word "pedagogikken" used in definite form (*the* pedagogy).

makes something relevant. This is illustrated in the way the focus groups developed. It was first after at least an hour of discussions and elaborations on their *positive* experiences that the students were able to explain relevance more in detail. The students then used words such as 'useful', 'meaningful', and 'interesting'. As one of the students said about a text he had read: 'it did something to me'. Bengtsson (1993) emphasises that for (formal) theory to have impact on practice, one must recognise oneself in the theory, which is also how the students described it (Article 3). A good example from my data is a curriculum text that was brought up by several of the students in the interview independently. The text is entitled "The potential of vulnerability[32]" and is a philosophical text about the teacher *as a person,* drawing upon Martin Buber's notion of "meeting". The students explained how this text 'struck a chord'. Furthermore, it is interesting that while the main focus in research literature on higher education is to *reduce* surface approach, this study behaviour could not be identified at all with these students (see Article 3). From the broad literature review from Chapter 1, I have yet to find a study that has reported similar findings.

This study did not explore in depth how students experienced relevance. It only indicates that the use of the words 'relevance' and 'irrelevance' is many-sided, and should not be taken merely as a proof that there is something wrong with the *content* of teacher education. Relevance is inextricably intertwined with the search for personal meaning, whatever that might be. It is thus an area for further research.

Discursive resources and borderland discourse

In Article 2, it was described how the student teachers draw upon at least three different discursive resources. Article 3 and 4 introduced the notion of code switching; different arenas (university and school) or different topics (reading and writing) evoke different ways of talking. In the academic literacies approach, code switching is used as the requirement to switch practices between one setting and another and to deploy an appropriate repertoire of linguistic practices (cf. Lea and Street, 2000). The different settings are here within the university, but in teacher education this kind of code switching takes place both between different settings within the university, but *also* between the different settings of university and schools. Not only must the students switch between school and university, the discourses are also somewhat competing. These differences have been a particular focus for scholars inspired by system theory (e.g., Rasmussen et al. (2007), see also Chapter 1).

[32] A curriculum text by Geir Karlsen (2002): Sårbarhetens mulighet. Om utfordringer i den personlige lærergjerning [The potential of vulnerability. Challenges in personal teaching].

It is typical for the student teachers that they are *in between*. They are in between two locations or learning arenas, and they are in between two different roles – student and teacher. They are no longer pupils, but also not yet teachers, in some settings university students, in others "becoming" teachers. In the literature this "being in between" has been referred to as being in a liminal phase, or being in a borderland (e.g. Cook-Sather, 2006, Van Rijswijk et al., 2013). The findings in this study add to the "being in between" the influence of a student discourse, in particular the described *negative* discourse. This discourse is shaped by current as well as previous students (cf. the site as historically and culturally situated). In light of the finding that the students described pedagogy as common sense, one might also question to what extent the student teachers integrate the academic discourse into their sayings (or professional language).

Explicitness

A recurring topic across all studies is the need for *explicitness*; explicit theory-practice dialogues, explicitness in dealing with genre and writing academic texts, explicitness about expectations, and explicitness about teaching. In light of the theory-practice discussion in teacher education, one might perhaps also add explicitness about *projects of a practice.* What if student teachers' project of their learning practices is to develop basic skills and competences, while the project of the teacher educator is to foster critical reflection (relating to the overall aim of educating reflective teachers). In such case, the "theory-practice gap" can perhaps be represented as students and teachers having different projects. The main problem is, however, not that the projects are different, but that they remain tacit and implicit (which they often do, cf. the "tacit" dimension of practices).

The "sound" of the practice

If the semantic space is what the practice "sounds like", the critical views of the student teachers draw a rather negative picture of the practices. In addition to the already mentioned negative associations with theory and pedagogy, the student teachers spontaneously used descriptions such as 'labour-intensive' (high workload), 'irrelevant' and 'boring' (much of the theory), and 'incompetent lecturers'. This might be an effect of the interview situation itself, and that the participants saw the interviews as a possibility to provide feedback about what they were unsatisfied with. Positive examples were often mentioned just in passing. However, when they talked about the teaching profession and their future as teachers, they were much more positive. Then they used expressions like 'passionate about becoming a teacher', 'can't wait to get my own class' and generally expressing a deep wish to become teachers. A more thorough exploration into the semantic space as it unfolds *during* their learning activities would perhaps

have provided a more nuanced picture of the negativity that was expressed through interviews and questionnaire.

The semantic space is also characterised by content: what do participants talk about? The articles offer rich accounts of the topics that are important to the students. These particular topics arose partly as a result of the questions that I asked as a researcher, but also from their own concerns. An interesting question then, is: What did they *not* talk about? While elaborating on their learning practices, they talked a lot about what they *did*, and also about what other people did, such as peers, supervisors and teacher educators. They did, however, talk little about *their own role in learning*, which is also reflected in how they talked about learning in the university setting (Article 4). Explanations were primarily sought in factors outside themselves: workload, poor quality teaching, lack of information, etc. This probably reflects a tendency we all have, i.e. to look for explanations outside ourselves. It can, however, also reflect the role of the student as a consumer (Article 1). This will be discussed more in detail in relation to the social space.

Physical space-time

Student teachers' academic practices are characterised by distinctive activities and actions and are shaped by material-economic circumstances (Kemmis et al., 2014). The time-space refers to particular *ends* or *motivation* that guide the activities. Ends and motivation are related to the project of a practice –the answer to the question *what are you doing.* As this study was not designed to follow student teachers in their activities, I have only their own accounts of their doings. Nevertheless, some conclusions could be made from the students' stories. Article 2 and 3 point to a possibly overloaded curriculum, while the enabling role of written assignment is discussed in Article 3.

One structure that has only just been mentioned in the articles is the *lecture.* The topic of lectures was, however, rather dominating in the interviews. The students were generally critical and claimed to have learned little from lectures, although they also emphasised that it varied from lecture to lecture. In one way, lectures are result of material-economic conditions as the justification for having them is partly economical (smaller groups are more expensive). Such lectures are often what is criticised as being the main teaching activity in traditional teacher education programs (cf. Korthagen et al., 2006). At the same time, the students were not generally negative to the lecture as *an activity.* On the contrary, those who commented on this said that lectures have a natural place in academia (in addition to workshops). They predominantly put the blame on 'incompetent lecturers'.

The reason I have not discussed the topic of lectures more in the articles (despite their being a big issue for the students) was that the interviews gave little support for making any conclusions. First, with a few exceptions, the students had

diverging views of which lectures they rated as good and bad, which in turn seemed to be strongly related to the "pre-defined" meaning of a lecture (Article 4). Second, as noted above, the students did not talk about their own role in learning (e.g., what did *they* do during the lectures?) Third, the fact that the students *had to* be there (compulsory participation) seemed to have had a strong influence on the students' perception. The main conclusion about this issue is therefore that it needs further exploration, but the students' comments did not warrant getting rid of lectures altogether. The students brought up examples of lectures that 'really stuck with them' and 'challenged them to think'. Similar to their stories about reading and writing and the search for meaning, lectures are also about 'being touched' (for analysis of the dramaturgy of a lecture, see, Strømme, 2014, Østern, 2013) .

Time-space

Ends and motivation in the students' academic practices can be related to the topic of relevance and meaning as discussed above. In time-space the students' activities were predominantly guided by the short-time perspective of use in practicum or assessment in a university course. A more long-term perspective was directed towards the teaching profession and what the students imagined to be relevant. They emphasised how important it is that teacher educators help them become motivated and help them see (or *feel*) this long-term relevance. The tendency of being mostly concerned with the "here and now" can, however, also be understood by the main emerging theme within this space: *the lack of time.* Across all research questions (although not explicitly stated in all articles), there was a general call for more time: 'You can hear how I'm constantly asking for more time', 'innovative methods take too much time', or 'there was never time to sit down and think'. The time issue was particularly visible with the topic of workload. In Article 2, several explanations were offered, such as an overloaded curriculum, practicum as physically and mentally intensive, part-time work, or leisure activities.

The experience of insufficient time must, however, also be seen in relation to what the students want to achieve (cf. the *project* of the practice). This, in turn, is related to expectations that students take on themselves as well as from teacher educators and supervisors. Several of the students who said that they were totally exhausted (without exception female students), also seemed to have very high expectations for themselves. They found it difficult to live up to the ideals of teacher education in practicum (Article 4), they were 'short on time in order to use theory in practicum' and they called for more time to read about interesting topics in the university courses. They asked for 'air' and 'time to think'. For these students, the perception of a high workload can perhaps better be understood as a *feeling of inadequacy* in a situation of competing requirements. Elliot (1991) notes something similar about "learning to teach" when he suggests that the only way out of the feeling of always falling short is to consider teacher education as too

theoretical and useless. Then, the students can no longer be "blamed" for not living up to the ideals communicated in teacher education. In terms of the theory of practice architectures one might ask: Are the practice architectures contributing to setting students up for failure? Alternatively, are the practice architectures supporting a project of surviving rather than a project of developing as a person or as a teacher? Some students described teacher education as not particularly labour intensive, and they felt they did well in practicum. However, they did not find teacher education particularly important beyond acquiring a toolbox for teaching, and they seemed to only do what was necessary to get through. When interpreting evaluations and students' accounts about workload, these aspects should be taken into consideration.

Social space

Social-political arrangements of a site make possible the relationships between people through the medium of power (cf. Kemmis et al., 2014). Of particular interest in the social space as captured by this study are the student teachers' relationships to peers and teacher educators. The relationships with peers were talked about as both enabling and constraining. Positive in the sense that discussions with peers were very helpful in particular in workshops on campus (articles 2 and 3), but also as support during practicum. Negative influence was visible in their frustrations about negative peers or those who did not take teacher education seriously. This is related to the aforementioned negative student discourse. The interviewees referred to peers and did not themselves express these negative views in the interviews. They pictured a student community where critical voices were heard and which was difficult to oppose. They pictured a community in which frustrations were allowed to "blossom" and dominate – perhaps without interference from teacher educators. Considering that this study points to the fact that the student teachers' complaints and dissatisfaction with teacher education might also be an expression of the complex process of learning to teach, the issue of a negative student discourse should be taken seriously.

In terms of the relationships between student teachers and teacher educators, I will highlight two dimensions: responsibility and resistance.

Responsibility

An interesting topic to explore further is student teachers' understandings of roles and responsibilities in the learning process. In describing their experiences, the blame was predominantly put on the teacher educators for being poor lecturers, for not being able to make the topics interesting ('pushing the right buttons'), and for not preparing the students well enough for the reality they met in the classrooms. An example of the latter was Elisa (narrative in Article 2), who was angry with teacher educators after her traumatic meeting with practicum. She thought she

should have been told that this could have happened to her. She did, however, not reflect upon how being told *about* this in advance would have helped her in that particular situation. In Oliver's case of a positive learning experience (also narrative in Article 2), he saw it as a failure on part of teacher education that he learned about a topic by himself (through writing and reading about it). Article 4 deepens the discussion by pointing at the differences in how students talked about learning from a *learner's* perspective compared to from a *teacher's* perspective. Without removing any responsibility from teacher educators, these findings *do* raise the question: how do student teachers see their own role (and responsibility) in learning?

In Article 1, I argue for the importance of authorising the student teacher voice and to create spaces for dialogue between students and educators that can emphasise a shared responsibility for learning; this challenges the metaphor of the "student as consumer" (cf. McCulloch, 2009). Important in the discussion about roles is the power dimension. Cook-Sather (2002) stresses that authorising the student voice involves rethinking traditional structures of authority, which should allow for doing teacher education *with* the students and not *to* them. Rethinking traditional structures is, however, not the same as uncritically and unreflectively privileging the students' voices. "When students better understand how teachers work – the complement to teachers better understanding how students work – they can participate more constructively in the educational process." (Cook-Sather, 2002, p. 10)

Resistance

Intimately connected to the aforementioned student discourse is the topic of *resistance*. The main criticism that both Haggis (2003) and Malcolm and Zukas (2001) direct towards common perspectives on learning in higher education is the construction of a learner without agency (see Chapter 1). Wideen et al. (1998) also found that in research on teacher education, the student teacher is often constructed as an object to be changed. This could be to change student teachers' beliefs about learning and teaching, or to change the context to stimulate certain behaviour in students (cf. deep approach). Haggis (2003) argues that such constructions fail to include the agency of the learner. Students might have any number of reasons to not want to respond to institutional agendas.

Taking the findings together, there are several indications of resistance. The first is related to compulsory participation in lectures and workshops. In the students' eyes, they are adults with a strong passion for the teacher profession, who can take responsibility for their own learning. The feeling of being forced and treated as a pupil rather than an adult caused considerable resistance (Article 2), in turn feeding into the negative student discourse. From the section above one might

argue that that the students do not necessarily take this responsibility. But is it also possible that the feeling of being treated as a pupil reinforces such a role?

Another sign of resistance is seen in the discrepancies between what they know – or have heard 'over and over again' – is right and what they end up doing or see other teachers do (Article 4). Some of the students talked about how they ended up having teacher-led teaching since it was easier to control learning that way. Other examples were found with students who expressed that the theory they espoused was the theory that confirmed their existing views, as they already had strong opinions about what characterises good teaching (Article 1). One part of these discrepancies or resistance to change can be understood in light of the robust nature of beliefs (cf. Chapter 1), or simply that the students are in an early stage of their professional development. A further possibility is a more active resistance. One sign of this is many students' dismissal of pedagogical theory as such. Other indications are that some of the students said explicitly that there had been little room for questioning prevailing views of learning, in particular socio-constructivist views of learning. One of these students expressed her concerns about some teacher educators who *acted* as *experts* instead of using their *expertise* to support and empower the student teachers (Article 4). She highlighted the importance of feeling that her knowledge is important – 'that it counts for something'. She also pointed out that to act as an expert is contrary to prevailing views of good teaching in school. Other examples are from a student who complained that while the university holds a view of what is right or wrong, there is room for many different views in school, or from another student who claimed that 'sometimes it becomes more like a morality sermon than actual teaching'.

As argued by Lea and Street (2000), teacher-student relationships work also to maintain relationships of power, for example the question of what constitutes valid knowledge. The questions that emerge from the discussion above are therefore: How do these findings fit with the aim of fostering critical reflection in students? Whose values and knowledge is teacher education imposing?

6.6 Summary

The focus in this chapter has been to describe the case of this thesis: student teachers' academic practices. In the four articles, I have "zoomed in" on particular parts of the practice. By "zooming out" to a macro-level it was possible to describe the practice through the three intersubjective spaces that compose a practice, and also to see how teacher educators' teaching practices create practice architectures for student teachers' learning. All three spaces above overlap and connect with teacher educators' teaching practices in a complex and dynamic interrelationship. It is important to note that the influence goes both ways: teachers create conditions

under which learners can learn, and learners create conditions under which teachers can teach.

Through its detailed but holistic focus on the *academic* part of teacher education, this case study provides additional and valuable perspectives on the criticism of teacher education. Particular contributions are the findings related to the semantic and the social space. Issues of discourse and power are rarely discussed in research on teacher education (or higher education more generally). However, a limitation of the study is that it focuses on the student teacher perspective only. With more observations and the addition of the voices of teacher educators, particularly the interrelationships between practices could have been studied more in detail. In the next chapter, I will draw upon my insider knowledge as a teacher educator in this particular program to provide a fuller description of the case and to further discuss the contribution of this thesis to the theory-practice debate in teacher education.

Chapter 7 Back to start: Theory and practice

In this chapter I will return to the point of departure for my research project: the search for new and better models of teacher education that can strengthen the link between theory and practice. Many of the students in this study followed an alternative practicum model (PIL) with the overall aim to integrate theory and practice. As described earlier, this PIL model involved a continuous alternation between campus activities and practicum in school. Such efforts to develop new models can be seen both in relation to the political climate in Norway (cf. 2003, 2009) as well as to the general shift internationally towards policy-oriented research (cf. Cochran-Smith and Fries, 2008, see Chapter 2). A particular aim in policy-oriented research is to build empirical, research-based knowledge about successful programs, which in turn can inform political decisions and reforms. It follows from this that the conclusions we draw from empirical projects for developing teacher education are critical, since these conclusions can have a major impact on future decisions. A question that remains to be answered is therefore: what conclusions can be drawn from the findings of this thesis about the implementation of the PIL-model?

First I will discuss the conclusions that can be made and how these conclusions relate to other published results from the PIL project. Some of the findings about PIL that are referred to in this chapter are not included in the articles in this thesis because the PIL-model was not of particular focus for the separate research questions that I have explored. In the last part of the chapter, I use the practice theory lens to argue that in developing new models for teacher education, one needs to pay attention to more than practical arrangements – implying the need for studying teacher educators as well as student teachers.

7.1 The influence of an alternative practicum model

Although the aim of my study was not to compare the PIL model with the ordinary (or traditional) model of this program, my research included students from both models as well as the students who had tried a combination of both. In terms of *satisfaction*, the students following only the PIL model reported being satisfied with the alternative way of organising practicum. Interestingly, I found that the participants following only the traditional model perceived the traditional model as better because it made it possible to focus exclusively on teaching while in practicum. However, the students who had tried both PIL and the traditional model were ambivalent regarding which model was the best. They liked the close connection between workshops and teaching practice, but also reported that constantly having to move back and forth prevented them from being fully present

in either place. Three out of twelve students explicitly stated that, in hindsight, they preferred the traditional model. Hence, from evaluating only satisfaction it is not possible to conclude which model is the better one.

Exploring the four research questions revealed no noticeable differences either. The students' understandings of theory and learning (Articles 1 and 4) and the themes that were identified in Article 2 (workload, credibility, encounter with pedagogy, and connection practicum-university) were similar across the three groups of students. The students had similar concerns and were equally critical regarding the education. There were, however, differences between students from different programs (science, humanities and social science). Students from the science program were more inclined to dismiss pedagogical theory and seemed to experience more challenges in their encounter with a new academic discipline. A conclusion that can be drawn from this study is therefore that the practical arrangements of the two different models seemed to have little importance in terms of how students communicated about and engaged with theory.

Such a conclusion differs from other published results from the PIL project (see Sletbakk et al., 2011, Wæge and Haugaløkken, 2013). These publications conclude unambiguously that the PIL-model was a success in its "fundamental aim of integrating theory and practice" (Wæge and Haugaløkken, 2013, p. 240). In these publications it is concluded that the students had learned more and that the constant alternation between campus and school helped the students see the connections between theory taught on campus and teaching practice clearer. It is, however, unclear what the expressions "more" or "clearer" refer to since the evaluation only includes students who participated in the PIL project and not in the traditional model. As a consequence of these results published so far from the PIL project, the PIL-model is about to be implemented for future student teachers at NTNU (and perhaps used as "best practice" for other Norwegian universities).

In the critical approach to student teachers' learning that is described in this thesis, I have challenged the taken-as-given and asked different questions than many other studies exploring student teachers' learning, including the referred publications from PIL. In all four articles as well as in the synthesis, I have emphasised the need for reaching *beneath and beyond* student teachers' spontaneous answers if we are to understand more of the persistent criticism towards teacher education; this insight is needed in the current efforts to revise teacher education. In the following, I will use the example of the PIL project to show how moving beyond the surface of the students' reports in this thesis provides valuable insight into student teachers' learning. I will also show how the practice theory lens has proved to be fruitful in terms of foregrounding parts of teacher education that are rarely discussed.

7.2 Different questions – different answers

In order to illustrate the value of reaching beyond the surface of the student teachers' answers, in this section I discuss two conclusions or recommendations from the PIL project that are in conflict with the results from my research. Also, in light of the aim of the PIL project to integrate theory and practice, I will take a closer look at the theory-practice discourse of the project. As emphasised in the previous chapter, the findings in this thesis direct attention to the semantic and the social space of student teachers' academic practices. In terms of the theory of practice architectures, teacher educators are co-participants and co-producers of these spaces (cf. Kemmis et al., 2014).

Relevance

The first recommendation from the PIL project I will discuss is the recommendation that the more general topics of the pedagogy subject (referred to as "education science") should be left out in favour of topics that are of particular concerns to the students while they are in practicum. In connection with this recommendation, the need to rethink the concept of theory in teacher education is highlighted: "The concept of theory should be given a new content so that theory knowledge is perceived as more relevant for the teaching profession. The teaching of theory should enable students to consider theory as a tool to analyse and plan their own teaching" (Sletbakk et al., 2011, p. 8, my translation). Sletbakk et al. emphasise that within this definition of theory in teacher education, the pedagogy subject is considered an "auxiliary subject"[33]. Pedagogy, it is argued, has little meaning if not connected to the subject that is taught in the classroom.

These conclusions are largely based on evaluations of the weekly activities on campus (one day a week), in which the students identified what they thought was relevant and what was not so relevant. Hence, the question that was asked was: which parts of the *content* (or topics) did the students find relevant? Wæge and Haugaløkken (2013) conclude that the students perceived different topics from the university courses to be relevant, and that the students' use of theory seemed to have been eclectic, i.e. depending on their current concerns. The authors use this finding as an argument that teacher education should choose topics of theory that match the specific concerns by the students during practicum: "students' understanding of educational processes may be enhanced by the use of relevant theory at the optimal stages of their professional education" (Wæge and Haugaløkken, 2013, p. 246).

One contribution from this thesis is related to understanding the difficulties in interpreting students' statements about 'relevance' and 'irrelevance', in

[33] "Hjelpefag" in Norwegian.

particular as part of evaluation forms. As illustrated in my findings, after first complaining about irrelevant topics the students then later argued that the same topics were both interesting and important. This contradiction emerged through the interviews when I asked the students to elaborate on their learning practices and on how they had worked with different topics. It is important to emphasise that I did not as a researcher focus on understanding their satisfaction. Instead, I asked a different question: what makes something interesting or relevant? The students then talked about specific learning experiences that stood out to them as highly meaningful. Examples of this were topics like school history, political issues, or Bildung (see Article 2); it is noteworthy that all of these are topics that the final evaluation report of the PIL project suggests removing from the program (cf. Sletbakk et al., 2011).

As outlined in the previous chapter, the experience of relevance is closely connected to the feeling of meaningfulness. Although the student teachers in this study were directed towards the "here and now" either in practicum or in the university course (assessment), an important factor for the feeling of relevance was *recognition;* the students needed to recognise themselves and their own situation. As one of the students said, they are passionate about becoming teachers, and there are many different buttons to push to hook them on. The main problem, according to the students, lies in teacher educators' failure to find those buttons. In other words, teacher educators need to *create relevance.* The experience of relevance and how students create meaning from teacher education is an important topic for future research, and the content of teacher education might be one part of that discussion. However, the findings in this study also direct attention to teacher educators' teaching practices. This is in line with a study by Smith and Lev-Ari (2005), who found that students who received support in seeing the relevance of education science course were better able to appreciate the theoretical perspectives.

Following the trail of the influence of teaching practices, it is necessary to provide a more detailed elaboration on some practical arrangements of the two models. The traditional model consisted largely of three main campus parts over the week: 1) joint lectures (containing elements from both subject didactics and pedagogy), 2) workshops in pedagogy directly after the joint lecture, and 3) lectures/workshops in subject didactics on a different day. The students in this study were highly satisfied with 2) and 3). They highlighted the pedagogy workshops where they had interesting discussions with peers and their teachers based on readings, practical experiences and personal engagement related to educational issues. The weekly gatherings in PIL lasted a whole day from 8am to 2pm and were generally divided in three: 1) a lecture about a topic from the pedagogy course, 2) lecture/workshop about a topic from subject didactics, and 3) a topic of "high practical interest" such as first aid course, drugs and criminality among youth, or how schools handle crisis. In the PIL evaluation report, it is

explained that some of the topics from the pedagogy course were included only because the project was not allowed to have a different curriculum or assessment form than students in the traditional model (Sletbakk et al., 2011). Ideally, the project group (consisting of the teacher educators responsible for the teaching on campus) would have liked to choose all topics exclusively for this project. In general, subject didactics is presented as the most important subject, while "pedagogy is considered an auxiliary subject" (Sletbakk et al., 2011, p. 70).

The main result from the evaluation of the weekly gatherings in PIL[34] were that the students were not so satisfied with the *lectures* in the first part, they were satisfied with the subject didactics part and very satisfied with the hands-on and practical topics in the last part, in particular the first aid course. The students reported in the evaluation form that the three parts of the day were often disconnected and that it was difficult to change focus from the one part to the other. My study is not designed to make conclusions about the these workshops, but the findings do raise the question: Are the students' negative attitudes to the topics from pedagogy in this group a result of the topics as such, or is the issue also about the teaching (or more specifically: *lectures*)? Another question can be raised about the status given to the pedagogy subject. Pedagogy is described as an "auxiliary subject" and many of the topics from pedagogy were only included because they had to be. These are the same topics that have been suggested for being left out in the future. Such descriptions about an irrelevant pedagogy subject reflect, I argue, cultural-discursive arrangements of the PIL project. *Is it reasonable to expect that students find these topics important if their teachers do not?*

Written assignments

Another conclusion from PIL is related to the role and nature of written assignments in university courses. In the PIL evaluation report it is recommended that written assignments should be reconsidered. This recommendation is based on the students' complaints about too many requirements in the university courses (in particular written assignments), which in their opinion made it difficult to focus while in practicum. It is therefore suggested that written assignments in university courses should be removed if they are not directly connected to particular teaching experiences (Sletbakk et al., 2011). In my study, written assignments for the portfolio were identified as the main enabler for understanding texts in their university courses; having the time and possibility to go into depth on a topic triggered both interest *and* the feeling of relevance. The main challenges associated

[34] For this statement I have relied on the specific plan for the term and the end evaluation of PIL from spring term 2010. The group who answered this evaluation is identical to Student group 1 in this study.

with writing were connected to challenges of learning to write within the discipline (Article 3) and a workload that was perceived as too high in general due to an overloaded curriculum and the many *different* requirements (Article 2). The need to focus on just one arena (practicum or university studies) at a time can be understood in light of Saugstad's (2005) contribution where she argues for acknowledging different learning modes (see Chapter 1). By trying to make practical experiences into an academic exercise or academic studies into a practical exercise, Saugstad argues that we risk neglecting the learning of both. Of all the requirements the students had to attend to, such as log writing, planning documents, smaller tasks and the larger portfolio assignments, the portfolio assignments were held as the most meaningful (although they had been frustrating and labour intensive).

Theory-practice discourse

The final topic I want to look into is related to a potential contribution of the semantic space of PIL more generally. Reading the referred texts from PIL (Sletbakk et al., 2011, Wæge and Haugaløkken, 2013) in light of the theory-practice discussion from Chapter 1, these texts are largely dominated by a dichotomous theory-practice discourse. Theory and practice are described as separate entities, and the fundamental goal is to integrate them. While practice seems to mean either school as a geographical place or the practice of teaching, it is often not clear what theory refers to. It sometimes seems to refer to university (as opposed to school) and sometimes to the topics that are taught in the university courses. In a few places in the texts, theory seems to refer to formal theory or research based theories (as opposed to personal practice theories). Moreover, the role – or the *use* – of theory is predominantly used as being *for* practice (cf. Kvernbekk, 2005), in the form of *applying* theory to practice or as a *tool* for practice. For example: "when theory and practice are taught concurrently over an extended period of time, the students experience that theory knowledge can be used as a tool in the performance of the teaching profession" (Wæge and Haugaløkken, 2013, p. 245).

While the student teachers in my study (see Article 1) described different purposes of theory and found theories *about* practice as well as theory *for* practice to be important, this seems to be described more narrowly in the publications from PIL. I have already argued through my findings that there is a lack of explicitness about the nature and role of theory, and also that how students think about theory influence how they engage with theory. The discourse in these publications that is pictured by teacher educators raises some additional questions: How do such sayings shape the cultural-discursive arrangements for the students in their engagement with theory? Are student teachers' dichotomous and instrumental understanding of theory and practice, in which they call for concrete methods and

tips, reinforced? Is this in turn strengthening students' dissatisfaction with theory that is incompatible with this understanding? An example from one of the PIL students is: 'It has been difficult to see the *exact* connection between what has been done in practice and what has been presented in the workshops' (my emphasis).

My main concern with the discourse in these texts is not to discuss the conceptualisation of theory and practice. Theory and practice are complex concepts that have their well established and commonsensical use in everyday language. It is a balancing act to be consistent and clear in its use. My concern is whether and how teacher educators' *sayings* shape cultural-discursive arrangements for the students' learning practices in ways *that are not being discussed*. Instead, findings are attributed to the practical arrangements of an alternative practicum model. It follows from this argument that in order to attend to the semantic and social space of student teachers' learning practices, one must also attend to the semantic and social space of the site of teacher education more broadly.

7.3 The semantic and social space of teacher education

In the PIL project as well as in a substantial part of research on teacher education, a fundamental aim is to *integrate* theory and practice. Integration in general is a key issue in Norwegian teacher education. According to the national curriculum regulations (KD, 2003), a main ambition is to make the different parts into an *integrated totality* and to create *coherence* within the courses. As a result of this overall aim, a new *integrated model* of teaching was introduced in the teacher education programme at NTNU, in which the courses of pedagogy and subject didactics were brought together in combined teaching activities. Furthermore, the 5LU program, in which the participants in this study are enrolled, is a rather recent program in Norwegian teacher education, which is labelled *five-year integrated teacher education.*

The findings in this study support the need for coherence. An important factor for the students in experiencing relevance is that the students need to understand *why*: Why are we learning about this? How does this fit into the overall plan? What are the connections between the different parts that we are studying – between university courses and school practice, between different topics or university courses, and between teaching and assessment? Finally, the need for making connections is encompassed in the "academic ideal" of a deep approach to studying (cf. Chapter 1). A student is expected to make "the task coherent with their own experience; relating and distinguishing evidence and argument; looking for patterns and underlying principles; integrating the task with existing awareness; seeing parts of a task as making up a whole" (Prosser and Trigwell, 1999, p. 3).

Notwithstanding the importance of integration and coherence, in a discussion about integration, I argue that teacher educators risk moving into a

"discourse of harmony and conformity". Indications of such a discourse are found in descriptions of the overall aim in teacher education as making the different parts *fit seamlessly* into each other, or to *close the gap* between theory and practice. The words we use shape practices, which in turn shape other practices (cf. Kemmis et al., 2014). There is, for example, a difference between talking about a "practice shock" (which is easily associated with something unwanted) and talking about the conflicting and frustrating process of learning to teach – in a tension between idealism and practicality (e.g. in Johnston, 1994).

As noted by Britzman (2003) (cf. section 2.1), learning to teach is often dominated by a discourse in which contradictory realities are underplayed and difficulties and frustrations of learning to teach are left unspoken. As a result, the student teachers end up blaming themselves for failing rather than reflecting upon the complexity of pedagogical encounters. In my study, blaming teacher educators for inadequate preparation and dismissing "innovative" and "fancy" teaching methods in subject didactics as "unrealistic" seemed to be another logical reaction. In a longitudinal Swedish study, Linnér and Westerberg (2009) also concluded that it is of utmost importance that teacher education supports student teachers in discovering and realising the reality of conflicts between university and school.

A discourse of harmony is problematic for several reasons. One problem is that the role of frustrations is underplayed with the consequence that students' frustrations and complaints are predominantly regarded as something negative. The indicator of success is student evaluations (cf. the student as consumer, McCulloch, 2009) – evaluations in which the students are asked how they value the *integration* of theory and practice and the *coherence* within the program. Students' complaints should be taken seriously, but my study has pointed out that there are alternative explanations for frustrations to the one pointed out by the students in the first place. Frustration is a necessary part of learning, and it is crucial that student teachers as well as teacher educators accept *and emphasise through their sayings* that teaching is permeated with tensions and conflicts (cf. Britzman, 2003). This study illustrates how frustrations, if not attended to, might feed into a negative student discourse that constrains learning.

A second problem of a discourse of harmony and conformity is that it might conceal vital tensions, differences, and contestation within the site. In the previous chapter I suggested that the students draw upon at least three different discursive resources. The academic discourse was then presented as *one* discourse. The students also often referred to university teachers as *one* homogeneous group of academics. Lea and Street (2000) stress the fact that the academy is not a homogeneous culture. This is perhaps particularly true for teacher education. The teacher education faculty in this study comprises any number of combinations across at least three dimensions: 1) from current schoolteachers with a part-time position at the university to "pure" academics, 2) from background in education

science to the various academic disciplines (or combinations thereof), and 3) from professors to administrative staff. It is reasonable to believe that this heterogenic nature implies contradictory ideas and understandings of core concepts between the participants in various practices within the site (such as "theory" and "practice" or "integration" and "coherence"). A question that remains open for investigation for future research is: what characterises the semantic and social spaces of this heterogenic faculty? And how do these spaces shape practice architectures for student teachers' learning?

Several of the findings in this study point to potential influences from the social space of teacher education. An overloaded curriculum, for example, *might* be a result of tensions and contestation about what teacher education should encompass. As a result, too much is included. In the analysis of *credibility,* there were concrete examples where the students observed teacher educators showing lack of trust in other teacher educators. The students also reported that it was difficult to unpack what kind of writing was required for written assignments, partly because of conflicting advice from different teachers. Finally, it is impossible to imagine that vital concepts such as "theory", "practice", or "reflection" carry the same meaning for all participants. I have already pointed to some potential influences in terms of the semantic space of PIL. How do different understandings of "core concepts" play out between the participants and how do these differences influence the students? Might differences within the site also reflect different practices (with different projects), which are still talked about as one and the same?

Let us for a moment consider teacher educators as participants of the same (meta-) practice of educating teachers. This practice contains many *projects* on different levels. As explained in Chapter 3, the *project* of a practice is the answer to the question *what are you doing,* and encompasses shared or individual *intentions* of the people within the practice (Kemmis et al., 2014). One project could be to prepare students for particular situations that they may encounter in school. The PIL workshop with hands-on first aid course might have had such a project. Another project can be to create coherence across the different courses within teacher education, which might have been foregrounded in lessons combining the courses of subject didactics and pedagogy. Yet another project (foregrounded in another lesson) could be to foster critical reflection. In such a lesson, the students could be asked to read an article (or several, for example, voicing different views) followed by other activities such as role-play, group discussion, or writing a text. There is nothing new about such a claim – that different tasks have different aims and intentions resulting in different teaching activities. The point I am trying to make is that these projects, which not only guide our doings, but also our sayings and relatings, often remain tacit and implicit as "the way things are"(cf. Kemmis et al., 2014). In other words, the problem is not that the practice contains different

projects, but the fact that they might be concealed in a discussion about practical arrangements (for example the organisation of practicum).

7.4 Summary – taking the *site* seriously

In this chapter I have discussed the findings of this thesis in light of the PIL project, which was the point of departure for my research. It was concluded was that the alternative way of organising practicum in the PIL project seemed to have had little importance in terms of how the students communicated about and engaged with theory. This conclusion does not, of course, imply that practical arrangements are without importance. Nor does it deny that a practicum model with constant alternation between practicum and campus activities can be a fruitful way of organising teacher education. What the discussion in this chapter *does* emphasise is that the *complete site* of teacher education must be taken seriously. Learning and teaching take place in a particular context, and this study illustrates the complex, dynamic interrelationship between student teachers' learning and conditions within this context. Considering the strong influence of discourse and power relations, it follows that the same model (for example PIL) can produce very different (learning and teaching) practices in different contexts. It also suggests that a new model can make little difference unless one attends to the whole "ecosystem" of teacher education.

Finally, the detailed discussion of a particular case has demonstrated how the practice theory lens can be a fruitful approach to studying teaching and learning within teacher education, emphasising the need for studying *both* student teachers and teacher educators. As discussed in this chapter, teacher educators are part of one and the same practice of educating teachers. Although teaching is largely described as "practice", it is still often treated as an individual matter (the teacher and the students). Considering the heterogenic nature of a teacher education faculty, there are many interesting questions to explore for future research: How do conditions within the site influence teacher educators' teaching? How are different projects understood by different participants or *groups* of participants? How do the *different* practices within the site relate to each other? Are the different practices sustaining or suffocating each other? Finally, and most importantly, how do the answers to these questions relate to student teachers' learning?

Concluding remarks

With the persistent criticism of teacher education as a backdrop, this thesis set out to explore student teachers' engagement with university coursework. The overriding question that has guided the study is: *What characterises student teachers' academic practices?* I have used practice theory as a theoretical framework as well as drawn upon research on teacher education and research on higher education more generally. While the last two chapters have provided a detailed answer to the overriding question, this chapter will highlight some important contributions of this study, in particular in light of future efforts to develop and revise teacher education. The contributions are mainly a consequence of the critical approach and the application of a practice theory lens.

A first contribution is related to the theory-practice discussion in teacher education. In the research literature, the blame for student teachers' dissatisfaction with teacher education is more often than not put on traditional teaching methods and a prevailing theory-into-practice view of teacher educators (e.g., Korthagen et al., 2006). I argue that this is a far too simplified and generalised description of teacher education programs around the world. I also argue that the constant focus on "solving the theory-practice issue" or "integrating theory-practice" might sustain the (inappropriate) dichotomy of theory and practice. Perhaps it also prevents us from considering the whole "ecosystem" of teacher education (cf. Wideen et al., 1998); it is just taken for granted that the "problem" needs to be solved. The literature review in the beginning of the thesis pointed to the many attempts to redefine the concepts of practice and theory to overcome the dichotomy. Practice theory is an example of such an approach. I also pointed to the many different representations of the "theory-practice gap" in the literature. Findings from this thesis add further possible representations or explanations: lack of explicitness to theory-practice relationships, differences between teacher education's ideals and student teachers' personal stance, as well as possible different projects of student teachers and teacher educators (which remain tacit). For example, while students might be directed towards developing skills and competences, teacher educators might aim to foster critical reflection. More than being a "gap" between theory and practice, it can thus be understood as lack of shared understanding between students and teachers (see also Lea and Street, 2000, Storch and Tapper, 2000, Wideen et al., 1998).

A second contribution is a call for caution when basing important decisions about teacher education on "evaluative questions". This thesis has emphasised the importance of reaching *beyond* the students' spontaneous answers. It has also pointed out that asking different questions can give different answers. One example in this thesis is that I changed the question from *how can we use practicum to*

integrate theory and practice to *is teacher education too theoretical, and if so, why?* Another example is from the interviews when I asked the students to *describe* their practices rather than *evaluate* their experiences. Furthermore, the students' criticism seemed to be strongly influenced by a negative student discourse – a discourse that also reflected frustrations related the complex process of learning. These frustrations must be taken into consideration when interpreting student feedback.

In the endeavour to reach beyond the surface of the students' practices, the practice lens has proved very useful. The critical power of the practice lens lies partly in its focus on revealing hidden knowledge of a practice (cf. Gherardi, 2009). In the attempts to capture the implicit, this study has directed attention to the dynamic relationship between conditions within the site of teacher education and the practices that unfolds within them. The importance of paying attention to the *site* when attempting to implement new ways of organising teacher education was thoroughly discussed in the previous chapter. It follows from this discussion that the idea of building evidence-based research on successful models of teacher education is problematic. It is not to say that knowledge cannot be shared across contexts, but at the very least, one needs to study the *site* in order to be able to report on its findings. As emphasised repeatedly in this thesis, such investigation must also include the semantic and social space of teacher education.

The third and final point is related to the suggestion to rethink traditional structures of authority in teacher education. In other words, the need to include the students as active, *responsible,* participants of their own learning practices, rather than consumers of what teacher education has to offer. As explicated through the previous two chapters, the theory of practice architectures puts students and teachers into the same practice. Teacher education is not merely something we do *to*, *for*, or even *with* students. The students are inherently part of teachers' teaching, as are teachers inherently a part of students' learning.

Recommendations for further research

This thesis has perhaps raised more questions than it has answered, opening for a large array of questions to be investigated further. Although many questions have been raised throughout the thesis I will highlight two topics of particular importance considering the backdrop for this thesis. The first is the need for more investigation into student teachers' *and* teacher educators' "sayings" and "thinkings" about theory. Just as student teachers' conceptualisations about theory influence how they engage with university courses, teacher educators' conceptualisations might shape both teaching and learning practices. The second topic is about students' experience of *relevance* and *meaning* within teacher education. The main criticism against teacher education is that much of what is taught is "irrelevant" and "meaningless". If we are to react to this criticism, a

closer investigation into this area is needed, and in doing so perhaps focusing more on "relevance" than "irrelevance". Moreover, arguing for a practice view of learning and teaching also has some methodological implications. If *practices* are made the empirical object of study, these practices need to be studied *as they happen.* As Schatzki (2012) concludes: in order to acquire the hidden knowledge in a practice, the researcher has no choice but doing ethnography. It follows from the argumentation throughout this thesis that these observations must include a range of different participants – students as well as teacher educators.

Above all, this thesis offers an important contribution to teacher education because it directs attention to a topic that is not discussed in the research literature. Although student teachers are students in higher education, their *academic learning* is rarely a topic. "Practice" is largely used synonymously with school. This thesis suggests that we start paying more attention to the practices that unfold within the university part of teacher education.

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ØSTERN, A.-L. 2013. Close-up of the craft of making a multimodal lecture for teenagers about the universe: the importance of a meaningful context and supporting colleagues. *Reflective Practice,* 14**,** 801-813.

THE ARTICLES

Article 1
Sjølie, E. (2014). The role of theory in teacher education: reconsidered from a student teacher perspective. *Journal of Curriculum Studies.*

Article 2
Sjølie, E. and Østern, A.-L. (in review). Student teachers' learning within the practice architectures of teacher education. *Educational Research.*

Article 3
Sjølie, E. (in review). When form stands in the way of content – a study of student teachers reading and writing and practices. *Education Inquiry.*

Article 4
Sjølie, E. (2014). In the tension between idealism and practicality: student teachers' meta-awareness of learning and teaching. *NAFOL Year Book 2014.*

ARTICLE 1

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ARTICLE 3

Sjølie, E. (in review)
When form stands in the way of content –a study of student teachers reading and writing and practices
Education Inquiry

When form stands in the way of content – a study of student teachers' reading and writing practices

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Abstract

Despite the fact that a recurring criticism is directed towards the academic part of teacher education, little research has focused on student teachers as they engage with their academic studies. Reporting on a study of 53 Norwegian student teachers, this article explores student teachers' reading and writing practices in university courses in education. The study draws upon perspectives from approaches to learning as well as more recent developments in academic literacies. The findings reveal that the student teachers are predominantly meaning oriented. Moreover, writing academic texts acts as an enabler for reading in supporting a deeper understanding of the texts as well as triggering the students' interest in reading. However, the findings also suggest that the intention of reading for understanding is not enough; the students also need to be able to deal with different text genres, and previous experience from other courses may not be suitable for new texts and courses. The article concludes that in order to understand the persistent criticism against teacher education, closer attention to student teachers' academic practices is needed, in particular communicative practices.

Keywords: *teacher education; pre-service teachers; student teachers; approaches to learning; academic literacies; learning practices; higher education*

Introduction

"The form you guys use in your articles gets in the way of the content!" This comment about pedagogical literature was made when I was teaching a group of student teachers in a Postgraduate Certificate in Education course. There were two things about that brief comment that caught my attention. First, the way the student said "you guys" – me being one of *them* – indicated that he did not consider himself as part of the same community. Second, it once again confirmed my impression that many of our students experience difficulties with reading pedagogical literature, and that they tend to have little confidence in the authors.

Through decades, the academic part of teacher education has been target of criticism, from fresh graduates, school administrators, politicians and researchers alike. The main criticism is related to the academic part of teacher education: that teacher education is overly

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theoretical and distant from practice. Research repeatedly shows that student teachers struggle with contradictory realities of teaching and learning (Britzman, 2003). At the same time, particularly in the Scandinavian countries, teacher education has increasingly become an academic discipline. It is a widely held belief that teachers need a sound theoretical base in education as well as in subject disciplines (Floden and Meniketti, 2005) – a belief that seems to be shared by Norwegian student teachers (Roness, 2011, Sjølie, 2014).

Despite the fact that the criticism is directed towards the academic part of the studies, little research has focused on student teachers as learners in higher education, i.e. how they work with their academic studies and the challenges they encounter. Research on student teachers' learning in university courses has been dominated by small-scale studies on innovative teaching methods (see review by Cochran-Smith and Zeichner, 2005). Furthermore, research on teacher education has been largely isolated from research on student learning in higher education (Grossman and McDonald, 2008).

The focus of this article is on student teachers' *academic learning practices* in terms of support and challenges. The study is set in a Norwegian secondary teacher education program and draws upon perspectives from student learning in higher education as well as more recent developments in academic literacies. The use of the term learning practices refers to a view of student learning as social practices that take place within sites of discourse and power (cf. Kemmis et al., 2014, Lea and Street, 2000). The study aims to understand the student teacher perspective and places a particular emphasis on the students' reading and writing practices.

Reading in higher education

A particularly influential perspective in research on student learning in higher education is the notion of approaches to learning. The main concern within this line of research is how to design teaching and learning environments that encourage "good learning behaviour". "Good learning behaviour" is mainly associated with a deep approach to learning as opposed to a surface approach to learning – a distinction that originates from Marton and Säljö's (1997, 1976) research in Sweden in the 1970s. One of the main assumptions within approaches to learning is that deep approach leads to high learning outcomes and surface approach to poor ones (see, e.g., Diseth and Martinsen, 2003, Diseth, 2007, Kember and Leung, 1998, Lizzio et al., 2002, Pettersen, 2010, Prosser and Trigwell, 1999, Trigwell and Prosser, 1991). While the original studies by Marton and Säljö focused solely on reading, the notion of deep and surface approaches to learning now comprises a larger framework that includes a broad range of concepts describing learning and teaching in higher education (see Biggs and Tang, 2011, Entwistle, 2009, Prosser and Trigwell, 1999).

Approaches are usually described as being guided by the student's intention, characterised by certain learning strategies, and also reflecting a particular kind of motivation. A deep approach is seen as guided by intrinsic motivation and the intention to understand ideas and seek meaning. Using this approach, students adopt strategies that include relating ideas, looking for patterns and underlying principles, and seeing tasks as making up a whole (Prosser and Trigwell, 1999). A surface approach, on the other hand, is guided by extrinsic motivation and the intention to meet the course requirements with minimum effort (Entwistle and Peterson, 2004). The strategies applied are directed towards memorising facts and carrying out procedures. Some researchers (see Tait et al., 1998) also operate with a third approach, a *strategic* approach. A strategic approach includes the influence assessment has on students' studying, and the intention to do as well as possible in a course. It is more an approach to studying rather than learning, as it involves the ability to switch between deep and surface approaches (Volet and Chalmers, 1992).

Studies on reading that build upon the original research by Marton and Säljö have shown that a deep approach might be a necessary but not a sufficient condition for understanding a text (Marton et al., 1992, Marton and Wenestam, 1988). Following this line, Francis and Hallam (2000) explored how students studying for higher degrees in education understood different text types. They found that the ability to deal with text genre is another necessary condition for thorough understanding. The students in their studies attributed difficulties with reading to aspects of style, organisation and language of the text. A frequently reported effect was to skip or ignore texts that at first sight appeared to be difficult to understand. The authors also reported that rather than considering the idea that texts can be written in different ways for different purposes, the students simply blamed authors for poor and unclear writing (Francis and Hallam, 2000). Their studies imply that prior experiences (also within the academy) may not be suitable for new texts or new courses. They stress that it is important that awareness of genre should be cultivated in relation to the texts used within the very practices of learning and teaching (Francis and Hallam, 2000).

Another implication from Francis and Hallam's studies is that student learning is not only an induction into "correct" behaviour and knowledge held in academic communities; it is also an induction into *communicative practices*. It involves a view of learning as a social practice, which in turn challenges the individual view of learning that dominates research on approaches to learning. A growing body of research on academic literacies (Francis and Hallam, 2000, Jones et al., 1999, Lea and Street, 1998, Lea and Street, 2000, Lillis and Scott, 2008) has taken this view and studied writing and reading practices in higher education. Lea and Street (2000) argue that from a student's point of view, a dominant feature of academic literacies is the requirement to "switch practices between one setting and another, to deploy a repertoire of linguistic practices appropriate to each setting, and to handle the social meanings

and identities that each evokes" (Lea and Street, 2000, p. 35). This kind of code switching not only takes place between different disciplines but also within courses and modules. Their observations are in line with those of other researchers who have argued that habits of thinking, codes and conventions of academia are often taken as given (e.g. Gibbs, 1994, Graff, 2002).

Meaning and relevance

The main aspect of a deep approach to learning is the focus on "meaning". A deep approach is defined as including a search for personal meaning, based on intrinsic interest, curiosity and a desire and ability to relate learning to personal experience (Prosser and Trigwell, 1999). Haggis (2003) notes that "meaning" is an extremely general term that can be interpreted in a variety of ways. Often, meaning is interpreted as finding the "correct" connections, exemplified by Marton and Saljö (1997, p. 43) when they refer to students "who did not get the point" and McLean (2001) who notes that "a meaningful experience is thus likely to arise only once a student has been able to grasp the principles". Although the literature largely argues for a constructivist view of learning, in which the students construct their *own* point of view and develop a critical disposition, there are nonetheless some correct answers. On the other hand, it is perfectly permissible to criticise authority as long as the criticism is well argued and done in a correct way. Laurillard (2002) points to the paradox that "we want all our students to learn the same thing, yet we want each to make it their own." This understanding of meaning is highly constrained by disciplinary boundaries, cultural norms and assessment mechanisms (Haggis, 2003).

The search for meaning is a general characteristic of human being, which means that personal meaning can be tied up with many aspects of life that are not directly connected to studying. Perhaps studying is only a small part of whatever meaningful activities a person is engaged in (Haggis, 2003). In teacher education, the debate evolves much around "relevance". Claiming that something is "irrelevant" is kin to saying that it does not feel meaningful. Based on the persisting criticism that much of what is taught in teacher education is irrelevant, the topic of *relevance* and *meaning* will be a particular focus in analysing the students' stories about their reading.

The study

The data for this study have been collected from a whole year cohort of 53 student teachers from a five-year secondary teacher education program in Norway. In this program, the students are provided with teacher education combined with a Master's degree in one academic subject as well as one year's study in a secondary subject. The academic subjects are studied within the ordinary Bachelor or Master's programs of each academic discipline, while two terms – the fifth and the eighth[1] – are dedicated in full to coursework in education.

The main assessment form in this program is a portfolio, and the students are assessed in three different courses: *pedagogy* and *subject didactics*[2] in two school subjects. The portfolio consists of written assignments in which the students are expected to reflect upon practical experiences or educational issues in light of theoretical perspectives from their university courses. The portfolio also includes an R&D project in which the students do research on their own practices. In addition to the portfolio, the students have a written test in each of the subjects after the fifth term of the program. Due to changes being made in the assessment form this particular year, half of the participants also had an oral exam in pedagogy, while the other half had only portfolio. The data were collected at the end of the eighth term, just before they were about to finish their exams. The research question that has guided the analysis is: *How do student teachers describe their reading and writing practices?*

Data collection and analysis

The main data comprise six focus group interviews with 18 student teachers. The selection process was based on an open invitation, and a mix of subject disciplines was secured[3]. The interviews, which lasted between 90 and 120 minutes, were semi-structured with open-ended questions to facilitate group discussion. The interviews covered different aspects of the student teachers' learning practices, including questions about experiences from

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[1] Each year has two terms. Hence, it is the first part of the third year, and second part of the fourth year.

[2] The concepts of *pedagogy* and *didactic* are not understood in the same way in an Anglo-Saxon tradition and a Continental tradition (see, e.g., Ax and Ponte, 2010, Gundem and Hopmann, 1998). For the purpose of this article, *pedagogy* can be compared with foundations in education, while *subject didactics* can be compared with *curriculum* courses.

[3] The participants belonged to either the science programme or the languages programme. In the science programme, the students studied mathematics and one science subject (chemistry, biology, or physics), while in the language programme, the students studied either two of the following languages: Norwegian, English, German, French, and Spanish, or one of those languages in combination with social science, geography or religion.

practicum and questions about being a university student. The transcripts were analysed in full, but the findings presented in this article are predominantly from the parts where the students were asked about their reading and writing practices. The questions focused particularly on reading, and two specific texts from the students' reading list were used as that background for an opening question. The students talked about how they usually go about when reading and writing assignments as well as relating this to their overall experiences with their academic studies. In addition to the focus groups, the whole year cohort was asked to fill out a questionnaire. The questionnaire combined the Approaches and Study Skills Inventory for Students (ASSIST) (Tait et al., 1998) and the Course Evaluation Questionnaire (CEQ) (Ramsden, 1991). Both of these inventories have been translated and validated in a Norwegian context (Diseth, 2001, and Pettersen, 2007, respectively).

The questionnaire

Originally, this study set out to explore student teachers' approaches to learning and also possible relationships with the perceived quality of teaching and conceptions of learning. The primary data were set up to be the focus groups with the questionnaire as a supplement to provide a picture of the whole cohort of students and not only the ones selected for interviews. However, a factor analysis only reproduced two of the main factors: deep and strategic approach to learning. It was not possible to demonstrate a surface approach to learning by using the ASSIST items.[4]. One explanation for the lack of any clear surface approach can probably be found in the fact that the assessment form (portfolio) did not ask for facts or reproduction. A surface approach might therefore not be present with these students. Furthermore, factor analysis and validity tests indicated that questions relating to the surface approach might not have made much sense to the students and might therefore have been interpreted in a different way. For example, the statement "Much of what I'm studying makes little sense: it's like unrelated bits and pieces" can also apply to students who have a deep approach to learning. As will be discussed in the findings section, the students reported considerable problems in dealing with the language in pedagogical literature. They might *want* to understand and to search for meaning, but are unable to find it. The data sample is not large enough to go into deeper analysis of the reliability of the instrument, and the results from the questionnaire therefore serve merely as a background for the discussion of the findings.

Descriptive statistics for the deep and the strategic approaches are given in Table 1. As can be seen from the table, the students reported to be predominantly oriented towards a

[4] Reliability tests with Cronbach's α and exploratory factor analysis were performed.

deep approach, but also strategic (1 = totally agree, 5 = totally disagree). Of 53 students, only three students had a mean value above 3 (the neutral value) for deep approach.

Table 1 Descriptive analysis for deep approach and surface approach (1=totally agree , 3=unsure, 5= totally disagree). Sum scores for each subscale and approach were calculated and normalised.

	Mean	SD
Deep approach	2.28	0.41
Strategic approach	2.59	0.52

Data analysis of the interviews

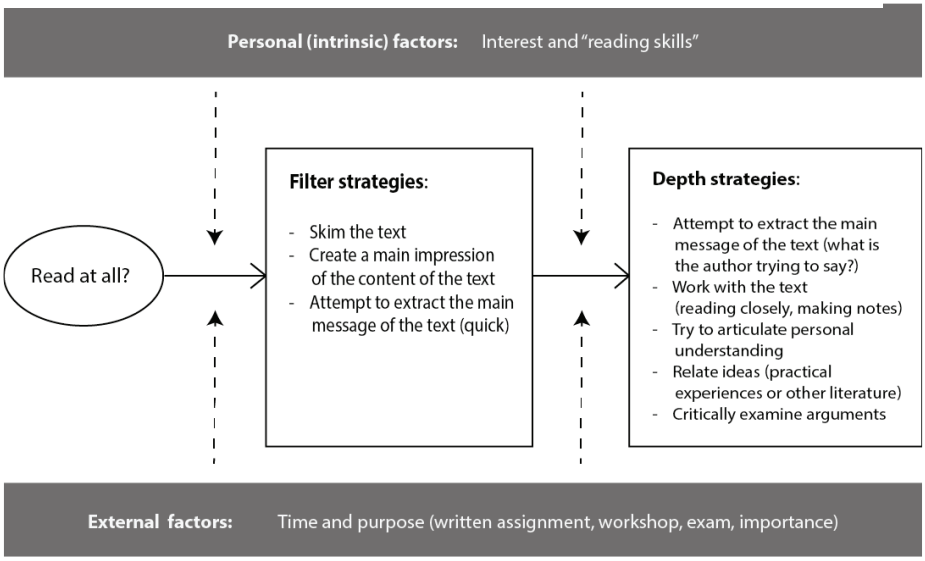
All interviews were conducted and transcribed verbatim by the author. The interviews were anonymised and imported into NVivo. Although the theoretical framework of approaches to learning informed parts of the data collection, the intention was to remain open to the student perspective. The analysis was therefore was conducted using a conventional qualitative content analysis (Hsieh and Shannon, 2005). In this kind of analysis, themes are identified directly from the text data without imposing preconceived theoretical perspectives. Initial (or open) coding, categorisation and abstraction (Saldaña, 2009) were used to search for patterns within the data. The emerging categories were then analysed in light of approaches to learning and academic literacies.

Approaches to learning have been studied widely within research in higher education. It is not my intention to compare the findings in this article with other studies from various discipline studies, nor is it to generalise about teacher education in general. Rather, in its combination with perspectives from academic literacies, this study can – through analytic induction – point to important theoretical questions and connections that might not otherwise be raised or seen.

Findings

In light of approaches to learning, the overall finding from the interviews is that the students are oriented towards meaning and understanding, which supports the findings from the questionnaire and the problems of reproducing the surface approach. The overall aim of the students is to *understand* the texts that they read, and there were no signs of surface approaches in the students' descriptions of their reading. The spontaneous answers about their reading practices were, however, related to the question whether the students should bother to read the text at all. The findings indicate a strategic behaviour that seemed to be guided by various factors. Because of this strategic behaviour I have labelled the students' reading behaviour as *strategies.*

Figure 1 Patterns in the students' reading practices



Two main groups of reading strategies could be identified: *filter* and *depth strategies.* Generally, filter strategies were applied first, and then, depending on the situation, depth strategies were applied or not applied. Filter strategies can be interpreted as a strategic approach as the students used filter strategies to decide if they should bother to read the text more in depth or not. However, it can better be understood as a combination of a search for meaning and pragmatic (or strategic) consideration. The depth strategies have much in common with a *deep approach*. How the students worked with texts was influenced by personal or intrinsic factors as well as external or contextual factors of the program. In the following, the influence of these factors will be presented in detail. Figure 1 shows an

overview of influencing factors and strategies that emerged as patterns from the students' statements.

External factors

> Every time I read it is for a particular purpose, whether this is going to be tested in the exam, or it is needed for writing an assignment or that it is simply important for me *now*. There is so much of the syllabus that I have not read at all that probably would have been very interesting. (Fanny)

Fanny sums up very well the essence of what the students say about their reading. They were guided by *time*, since time limited how much they were able to read, and forced them to prioritise and make pragmatic choices to cope with the *here and now.* The perceived workload of these students was generally very high (see also Sjølie and Østern, In review). In addition to time, three other factors were identified as having influence on the choice of strategy: written assignments, preparation for workshops, and exams or reading lists.

Written assignments

Written assignments were undoubtedly the most decisive factor for the students to work with the text in a "deep" way. When reading with a particular assignment in mind, they reported working with the text in more depth; they claimed to seek to *understand, to critically examine arguments, to relate with other ideas* (practical experiences or literature)*,* to *create their own understanding,* and they wanted to be able to *use the theory independently.* These aspects can also be recognised from the ASSIST questionnaire under a deep approach to learning. Below is an extract from the data material that illustrates the effect of having to write an assignment:

> The only time I read difficult texts that are relevant is when I know I need it for something, whether it is for an assignment or if I'm going to be assessed on it in some way. I had this article ... I had to read it for the assignment in mathematics didactics. It had this model in it, which is very complicated. But I liked it and I kind of saw that it could be used. So I had to force myself through this heavy academic text and understand it. I think I spent a whole day trying to understand what was in that article. The article was only six pages or something, but I kind of had to force myself through it because I wanted to use it. If it hadn't been for that, I would just have skimmed through it. (Ben)

It was the combination of reading and writing that were seen as most meaningful to the students. Having a topic in mind made it easier to focus their reading, and writing about the topic helped them to use what they had read and to formulate their understanding. There was, however, an interesting shift of perspective when they changed from talking primarily about reading to talking primarily about writing assignments for the portfolio. When they talked about their reading, the focus was primarily on *understanding* and the *search for meaning,* and writing was almost without exception described as an enabler to achieve a thorough understanding of the topic. When they switched to talking about writing, the focus was primarily on *assessment* (to show what they had learned) and on the *difficulties* they had when trying to learn how to write academic texts.

Primarily, the students reported that it was difficult to understand what characterises a good text, particularly because this seemed to be different between the courses, depending on the teacher. It could apply both to the structure and content of the text, but also to the "style of writing". Some said writing became more a matter of learning the "academic game" than about demonstrating understanding. One example is Kenneth:

> I get the feeling that it does not test my ability to *use* the literature as much as my ability to cram in names. So… namedropping, and then I kind of like blaaah […] Yeah, I made duplicate references. You want more references, I'll give you some. It's not difficult, I'll just use the theoretical material. (Kenneth)

Preparation for workshops

The second factor that had the potential of influencing the students' reading practice in a positive way was pre-readings for workshops. When reading was in preparation for workshops, the students reported that they did not read in depth as much as they did when they were working with written assignments; all the same, their aim was to understand the main message of the texts. The discussions in the workshops helped them process and work with the text afterwards. The students generally described these workshops as very worthwhile and as an enabler for their understanding of the texts, since they could discuss the texts in relation to cases or personal experiences. The condition for such an effect seemed, however, to be closely connected to how the workshops were organised, which is illustrated by the following quote:

> In the pedagogy workshops, there tends to be a clear connection between what we should read and what we use. Gradually, many people have started to read in advance because it is actually expected that we discuss what we have read. While in mathematics and physics didactics I feel we are given pre-readings in

> order to have a backdrop for what is covered in the lessons. It doesn't feel so useful, especially when you don't get anything out of an article of 20-30-40 pages. (Oliver)

Oliver points here to the fact that the students needed to *experience* the advantage of reading in advance. They experienced that they were able (and expected) to contribute actively in the workshops, and through discussions with peers improve their understanding of the topic in question. A general comment across all interviews was that despite the "reading plan" that provided an overview of how different texts from the reading list fit into the teaching plan of the whole term, the students soon realised that they did not really have to read in advance. When the lecturers were able to add something to their understanding of the texts, many of the students claimed that they would read in advance. But they first needed to see how reading and teaching were connected to each other. Oliver's quote also indicates difficulties with reading, which will be commented more in detail under *intrinsic factors*.

Exams or readings lists

Factors that did *not* enable reading (i.e., depth strategies were not applied) were when the students were reading for a test[5] or because it was on the reading list for the course. As one of the students said when commenting on these tests, the focus shifted from *understanding* to: "what do they want to hear from this?" Other students called it the "typical university thing – rote learning" or that "it felt entirely meaningless". These negative comments also signal that the students were predominantly oriented towards understanding, as they were dissatisfied with structures that "forced" them to be otherwise. Some of the students had an original aim of reading all the literature in the course (and a few also did), but a lack of *focus* (which included reading for tests) and *purpose* made it difficult:

> Fanny: We need some kind of focus when we read, but we often don't have that. You don't really know what you're supposed to use it for, but you must learn it.
>
> Cecilie: Yeah, that's often how it is at university. When we read, we just read for reading's sake.

[5] After the fifth term, the students had three written tests/exams in pedagogy and the two subject didactics.

In general, reading had to feel *useful* and they had to feel that they "get something out of it". This feeling of usefulness, which in turn influenced their strategies, was, however, also guided by personal or intrinsic factors.

Intrinsic factors

The quote below captures the two topics that can be related to intrinsic factors: *interest* and *reading skills:*

> The articles are about 20 pages each and it's pretty heavy stuff. A number of authors write for a higher audience than students, although some claim that it is written for students. And then it's a bit like… what I feel is useful and good with an article or chapter is that I become a bit interested when I start reading it. I notice the difference for example between Skemp and Yong, they're like two different worlds. Skemp is talking about something that I can relate to, he talks to me in a language that I understand, and he uses examples from everyday life. Also, he's talking about my future life as a teacher. While Yong – fair enough it's in English but that's not a problem for me – I had to read a paragraph two or three or four times before I got it, that means: how would I say this sentence in Norwegian to another person? I kind of understood what he said, but how can I translate this *really*? That's when you begin to realise how complicated he actually writes. It's funny, some of the articles that I have read in this term, it 's like... I *want* to finish the article, but…. And that's how it often is when we are given pre-readings of like 20 pages each. (Kenneth)

Reading skills

Reading skills refers to how the students regarded their own skills in reading the discipline specific literature of pedagogical texts[6]. Some of the students labelled themselves as "poor readers" of pedagogical literature, but a more common complaint was about the language and form (cf. the quote in the very beginning of this article). The students found the language in much of the literature unfamiliar and difficult, "unnecessarily complicated", sometimes "just a torrent of words", and many of the interviewees concluded that pedagogical literature is largely common sense written in a difficult language. The problematic encounter with pedagogy as an academic discipline is discussed more in detail in another article

[6] Refers to literature within teacher edcuation

reporting from the same study (Sjølie, 2014). In line with Francis and Hallam (2000), the students blamed the authors for poor writing. As a result, unless they were "forced" through it, they gave up or just did not bother trying at all.

Interest

While strongly guided by external requirements, the students' reading was also guided by an intrinsic interest and motivation. If the text was interesting, they would read it even though they did not *really* have to. "Interest" is often used synonymously with "relevance", and because teacher education is often criticised for being irrelevant, I was particularly interested in exploring how the students described relevance. What makes something relevant?

In the interviews, this topic required several levels of questioning from me as a researcher. The first, spontaneous answers about relevance were that what they read needed to be useful *in short-term.* In addition to written assignments and workshops, this could be that they were able to see the immediate relevance to their classroom practice. When elaborating further, they also referred to topics that could be related to the teaching profession in a broader sense and in a *long-term* perspective. As two of the students said: "I read as a teacher. Everything that is connected to my future as a teacher is relevant." Considering that *all* topics that are included in these courses are related to the teaching profession in a short- or long-term perspective, there is obviously more to the feeling of interest and relevance. This was, however, not easily put into words. Many of the students described it through a general feeling of something being "exciting" or "engaging" and that "you just want to go on reading and learn more". They used expression like "it struck a chord" or "I get that good feeling when I read it". The topics that were brought up as positive examples covered a wide range: from specific teaching methods and texts related to the teacher as a person to bullying, history of education and the school's responsibility in society. The students were then asked to explain what it was with these *specific* texts that made them interesting to read.

When the students characterised interesting texts, they revealed two main categories of the source of that interest: *recognition* and *transformation*. The quote above from Kenneth contains several of the ways the students described the importance of recognition. Kenneth describes it as the feeling that the author is talking to *him* and that he uses examples that *he can relate* to and connect to *personal experiences*. Depending on the topic of the text, some students said that texts did not make much sense until after the students had been in practicum. This is what Tessa refers to below when she talks about a text about guilt:

> It was much easier for me to understand it after I had been in practicum and seen it. "Yes, this is exactly how it is", and he uses very many concrete examples of situations, he has certainly done plenty of research, and ... I thought: "oh my

> gosh, I've seen this in the school I was placed in. And what he writes about guilt and emotions in teaching, I could really identify with it. (Tessa)

The most common explanation within this category was that a text became interesting when it *confirmed* and *supported* their experiences.

When interest was described as being *transformative* it was not only recognition but also an expansion or bringing in new perspectives. There were only a few examples of this in the data. One student described it as an experience of seeing the bigger picture of her teaching practice from a societal level – things she had not thought of before. Others said that the text was an "eye opener", that it "triggered some thoughts" or "challenged me to think". Below is an example of an "eye opener":

> I had the same feeling when I read that text. Suddenly... there was something... my understanding of learning was kind of…. it was extended. I understood more of how I understand things, and how others around me understand things. And I realised why there is a difference... that I understand math in a different way than others understand math. Why do people have trouble understanding math for example. I got that one! (Ben)

Above all, interest seemed to be triggered by reading in depth about a particular topic. The participants said that when they had an assignment to focus on, they read many texts that were not on the reading list. This, in turn, made reading more interesting. Some described that it made them see connections, experience coherence, and *understand* a topic more thoroughly.

Discussion

This report of a group of student teachers has significance both for student learning in higher education in general and for teacher education in particular. For higher education, the significance of this study is related to an approaches to learning perspective, which has become the canon for educational development across various disciplines (Webb, 1997). The students' descriptions of their reading practices within this teacher education program draw a picture of a program in which surface approach is not stimulated (or present at all). Based on the findings from both the questionnaire and the interviews, the students in this study are predominantly intrinsically motivated and meaning oriented; they read for understanding or not at all. On the other hand, they were also highly strategic. They described writing as enabling for reading, but the main motivation for reading in the first place was having to write

an assignment for assessment. In the perspective of approaches to learning, the assessment form of portfolio as well as active use of pre-readings for workshops can be seen as contextual factors that stimulated the application of depth strategies (cf. Entwistle and Peterson, 2004). The strategic behaviour can be understood in light of time management. Other studies have found that an overload of curriculum can enforce a strategic approach to learning (e.g., Diseth and Martinsen, 2003).

The findings, however, have further implications, which would not be captured by focusing solely on approaches to learning. First, the findings seem to support the claim that an intention to understand a text (with a deep approach) is not a sufficient condition for understanding. Although this study did not focus on the students' actual understanding of different texts, they reported considerable difficulties with reading. Similar to Francis and Hallam's studies (Francis and Hallam, 2000, Hallam and Francis, 1998), many of the students seemed to be "put off" by the reading already before they had begun. They blamed the authors for poor writing, but also themselves for being incompetent readers. As the student quoted in the beginning of this article said: *the form gets in the way of the content*. For teacher education, these findings should be understood in relation to the critique that teacher education is overly theoretical. While one possible explanation could be an inappropriate selection of course readings, an alternative explanation could be lack of attention to *communicative practices* and insufficient support in learning to deal with texts within an unfamiliar discipline (cf. code switching, Lea and Street, 2000).

An additional dimension added by this study is the feeling of *relevance*, which can be understood as the search for personal meaning. If the text was not perceived to be relevant (a decision that included the ability to deal with the language of the text), it was not read, although reading it was expected as part of the course. The "search for personal meaning, intrinsic interest and curiosity" (cf. Prosser and Trigwell, 1999) was not surprisingly directed towards becoming a teacher rather than the academic interest of learning a new discipline. What turned out to be meaningful was, however, highly individual. Contrary to the claim that is often made about student teachers being merely directed towards acquiring a set of professional skills (e.g., Loughran, 2006), this study indicates otherwise. In asking the students to describe "relevance" rather than "irrelevance", the students could identify highly meaningful experiences in their encounter with academic texts of *various* topics. While the importance of perceived relevance might be particularly important in professional education, it also points to a more general aspect of learning. As argued by Haggis (2003), personal meaning may be tied up with many aspects of life that are not directly connected to studying. This is not often discussed in research literature, where "meaning" is commonly used as finding the "correct" connections in terms of the subject area.

A third implication is related to workload. The students reported to have read predominantly for written assignments because of time pressure, reading difficulties, and interest. On the other hand, reading in depth about a topic made reading more interesting, in turn stimulating more reading, interest *and learning* about the specific topic. Perceived relevance and thus personal meaning seemed to be nurtured by reading and writing in a "virtuous cycle" that allowed time for reflection. This directs attention to workload and the relationship in a curriculum between breadth and depth. Perceived high workload and overloaded curriculum are of general concern in higher education (e.g., Kember and Leung, 1998) and in teacher education in particular (e.g., Niemi, 2002). In this study, a perceived high workload did not seem to produce a surface approach, but rather that the students were highly selective in what they chose to read. This can be explained by the use of a form of assessment that made such a selection possible. A common counterargument when discussing workload in higher education is to use student diaries or student questionnaires to show that the time students spend on their studies is not more than it is reasonable to expect (e.g., Kember et al., 1995). However, as also stressed by Francis and Hallam (2000), time spent on studies tell us little about the quality of study and the work needed to understand texts is often underestimated. As pointed out by the students in this study, many had the feeling that the written assignments were often more a matter of learning the game of academic style than demonstrating understanding. In turn this might shift the focus from seeking further understanding to applying the rules that are needed to get through the assignment.

Concluding remarks

Seeing the findings as a whole, this study suggests the need for closer attention to student teachers' *academic learning practices.* It has also demonstrated that research on student learning in higher education provides valuable insight also for teacher education. Above all it suggests that there might be alternative explanations to student teachers' criticism of an overly theoretical and irrelevant teacher education – a criticism that is largely taken as a given background for research. To summarise, the article points to three aspects of student teachers' academic learning. First, it emphasises what others also have argued (e.g., Francis and Hallam, 2000, Kemmis et al., 2014, Lea and Street, 2000): that student learning is not only an induction into a body of knowledge held by the academic community, but also an induction into communicative practices. Second, it suggests that the important factor in students' engagement with theory is not necessarily that it can be used immediately in the classroom, but that they recognise themselves *as persons.* Third, the article raises the question about the balance between breadth and depth, and how to make time available for reading for understanding. Perhaps, in some way, less is more.

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ARTICLE 4

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In the tension between idealism and practicality:
student teachers' meta-awareness of learning and teaching
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In the tension between idealism and practicality: student teachers' meta-awareness of learning and teaching

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Introduction

"Learning" and "teaching" are perhaps the two most central words in teacher education, since they describe the core of teachers' work. Student teachers – as *teachers to be* – learn about learning and teaching in a range of various (and sometimes competing) ways. In university courses in education they learn *about* learning and teaching (the content) as well as *from* teaching (teacher educators' practice). They also learn about learning and teaching from their teaching experiences in practicum. Finally, student teachers already have well-established views of learning and teaching as a result of many years of experience and observation in the classroom (cf. apprenticeship of observation, Lortie, 1975).

The centre of attention within the school setting is *pupils'* learning. Student teachers are, however, not only students of teaching. They are also *students in higher education*, engaging with academic studies in education as well as in various subject disciplines. In university, they are *learners* in academic studies – developing awareness of (their own) learning. The focus of this article is on how student teachers talk about learning and teaching within the complex setting of teacher education. It aims to explore student teachers' awareness of learning and teaching both as learners and as teachers.

Research on conceptions and beliefs

Research literature in abundance explores pre-service and in-service teachers' beliefs or thinking about learning and teaching – aiming to understand how such thinking develops and influences teaching practices (see, e.g., Britzman, 2003; Lortie, 1975; Richardson, 2001; Wideen, Mayer-Smith, & Moon, 1998). A particular focus has been on student teachers' beliefs upon entering teacher education; these beliefs are often characterised as idealistic, optimistic and traditional (Richardson, 2003; Wideen et al., 1998). There is considerable support for the idea that student teachers' already existing images of learning and teaching strongly affect what student teachers learn from teacher education. A main aim for researchers has been on changing students' beliefs – often from "traditional" to "constructivist" views (see Richardson, 2003). A common conclusion is that in order to be able to change the students' highly robust beliefs,

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those beliefs need to be made explicit and critically explored and challenged through the course of teacher education. However, findings that confirm that changes in belief actually take place have been questioned by some researchers. They claim that while superficial change may come about in the academic part of teacher education, teaching experiences usually send student teachers back to their pre-existing beliefs (Cochran-Smith, 1991; Wideen et al., 1998).

Conceptions of learning have also been in focus in research on student learning in higher education. A considerable body of research exists on how conceptions of learning relate to study behaviour and academic learning outcomes (see, e.g., Entwistle & Peterson, 2004; Marton & Säljö, 1997; McLean, 2001). One influential perspective in this regard is students' approaches to learning, originating from research in Sweden in the 1970s (Marton & Säljö, 1976, 1997). Within this perspective, conceptions of learning are seen as developing along a path of expanding awareness of learning – from a low level of understanding to a "fully developed conception of learning" (see Entwistle & Peterson, 2004). It is suggested that

> … people with a fully developed conception of learning become aware of the different purposes for which alternative processes of learning can be used, and so become consciously aware of their learning and able to adopt processes appropriate to varying tasks (Entwistle & Peterson, 2004, p. 411).

A particular focus in higher education has been on developing models and inventories for measuring beliefs and conceptions in larger samples and across different contexts (see, e.g. Entwistle & Peterson, 2004; Schommer-Aikins, 2004).

There is an interesting paradox emerging from the large body of research on conceptions and beliefs: although it is repeatedly emphasised that changing beliefs is extremely difficult, research continues to focus on how to change them (see Haggis, 2003; Wideen et al., 1998). Researchers' concern with examining beliefs is based on the assumption that teachers' beliefs and value systems shape and influence their performance in the classroom (see Pajares, 1992; Wideen et al., 1998). This link between beliefs and teaching practice has, however, been difficult to establish (see Cheng, Chan, Tang, & Cheng, 2009; Wideen et al., 1998). Another assumption is that student teachers transfer knowledge about learning and teaching from their own situation as learners to their situation as teachers in school (see, e.g., Loughran, 2006; Lunenberg, Korthagen, & Swennen, 2007). It is therefore emphasised that teacher educators should model good teaching – to "preach what they teach" (Swennen, Lunenberg, & Korthagen, 2008). The link between role models and actual teaching practice has, however, not really been researched. Since research on teacher education and research on higher education exist almost

in isolation from each other (Grossman & McDonald, 2008), little research has focused on how student teachers' metacognitive awareness of learning and teaching *as learners* relates to their awareness of learning and teaching *as teachers.*

Alternative approaches

Some researchers have suggested that student teachers' thinking about learning and teaching might not be a very useful way of understanding student teachers' learning to teach (e.g. Cheng et al., 2009; Johnston, 1994). Johnston (1994, p. 76) asks: "Are student teachers so uncertain in their thinking that images of teaching come and go, sometimes to be replaced by very contradictory views about teaching? Is this part of learning to become a teacher?" Others have also been concerned with the transitional phase that student teachers are going through. The transition phase from being a student to being a teacher has been described as "rites de passage" (McNamara, Roberts, Basit, & Brown, 2002), as being in a "borderland" (Alsup, 2006), and "betwixt and between" (Cook-Sather, 2006). Some researchers have explored how images of learning and teaching as well as teacher identity are constantly reshaped and negotiated through this transition phase (e.g. Sexton, 2008; Van Rijswijk, Akkerman, & Koster, 2013). In this research on the transitional phase, the focus is predominantly on student teachers as *teachers to be*, and thus does not include the role as students in higher education.

Other perspectives challenge the individual and cognitive approach of research on conceptions and beliefs. Rather than seeing learning as an individual, cognitive process, in which the learner comes to possess certain values, concepts or skills, learning is viewed as a practice. This learning practice takes place within sites of discourse and power that are historically and culturally situated (see Haggis, 2003; Kemmis et al., 2014; Lea & Street, 2000). A practice view of learning emphasises a theory of learning *as initiation into communicative practices* and is concerned with meaning making, power, and authority; it foregrounds the institutional nature of what counts as knowledge in any particular academic context (Lea & Street, 2006). It follows from a practice view of learning that student teachers' thinking of learning and teaching are not shaped or developed solely within the mind of the individual. In a complex and dynamic interrelationship with others within the large enterprise of teacher education, the students' thinking of what it means to be a learner or a teacher is constantly shaped and reshaped.

Informed by a practice view of learning, this article directs particular attention to communicative practices within teacher education and to how student teachers' thinking might be shaped within the institution of a teacher education programme. Of particular interest are the underpinning assumptions within research on conceptions and beliefs: that student teachers'

beliefs about learning and teacher educators' modelling of good practice are transformed into the students' classroom teaching practice. The aim is, however, not to explore beliefs, nor is the aim to examine *how* such beliefs transform into teaching practice. With particular interest in communicative practices, the following questions are asked: How do student teachers talk about learning and teaching across the various settings of school and university? How are views of learning and teaching integrated into their language? And finally, what lessons can be learned from analysing such talk?

Methods

In light of the above discussion, this article explores the following research question: *How do student teachers talk about learning and teaching?* The data comprise 59 student teachers enrolled in a five-year secondary teacher education programme at a Norwegian university. Graduates from this programme are provided with teacher education combined with a Master's degree in one academic subject and one year of study in a secondary subject. The academic subjects are studied within the ordinary Bachelor or Master's programmes of each academic discipline, while two terms – the fifth and the eighth[1] – are dedicated in full to coursework in education.

The primary data source consists of 12 semi-structured interviews with in total 24 student teachers as they were about to finish their eighth term of the programme. The participants were enrolled in two successive years. From the first year, six student teachers were interviewed individually, while the second group was divided into six focus groups[2]. The selection process in both interview rounds was based on an open invitation, and a mix of subject disciplines was secured. The interviews, which lasted between 90 and 120 minutes, were recorded, anonymised and transcribed verbatim. The interviews covered different aspects of the student teachers' learning practices, including questions about experiences from practicum and questions about being a university student. The students were, for example, asked to describe how they usually go about working with their university coursework. Since the focus was on how views of learning and teaching are integrated into the students' language, the participants were not asked directly about how they view these concepts.

To provide additional support for interpreting the interviews, direct questions about learning were asked in a questionnaire. 53 student teachers, the complete year cohort to which

[1] Each year has two terms. Hence, it is the first part of the third year, and second part of the fourth year.

[2] Interviews were conducted in April-May 2010 and in April-May 2011

the students participating in the focus groups belonged[3], answered the questionnaire. The students indicated their relative agreement with six statements about learning (1=very close; 2= quite close; 3= unsure; 4=rather different; 5=very different). The statements were based on the six categories of conceptions of learning as developed by Marton, Dall'Alba, and Beaty (1993). The statements suggest six ways of describing learning, starting from the lowest level through to a "fully developed conception of learning": 1) increasing one's knowledge, 2) memorising and reproducing, 3) applying knowledge, 4) understanding, 5) seeing something in a different way, and 6) changing as a person. The developmental process of conceptions of learning involves an expanding awareness; each conception integrates earlier (the "lower levels") within a more meaningful whole (see Entwistle & Peterson, 2004).

Data analysis

All interviews were conducted and transcribed by the author. Since the students were not asked directly to describe their views of learning and teaching, the initial step was to identify the parts that were seen to express such views. Descriptive coding (Saldaña, 2009) was used for this purpose. Learning and teaching are inextricably intertwined, and therefore difficult to distinguish from each other. When the students described the nature of learning or prerequisites for learning, their statements were seen as statements about learning (even though they talked about it through their descriptions of teaching). When the students talked about how they taught in practicum, about teaching methods, or about experiences with teaching on campus, their statements were seen as statements about teaching.

The analysis process was performed in two steps. The first step analysed statements referring to the school context and the university context separately. The transcripts were analysed and categorised with a focus on similarities and differences in ways the students talked about learning and teaching. The second step involved a search for differences, similarities, and tensions between the different contexts (school and university), perspectives (learner and teacher), and views of learning and actual (or reported) teaching. The main emphasis in the findings section will be on this second step of the analysis.

Findings

Figure 1 shows the results from the questionnaire about conceptions of learning. The results suggest that the students in this cohort hold "developed" or "sophisticated" conceptions

[3] The questionnaire also contained a whole range of other questions related to study behaviour. These are, however, subject for separate analyses (see Sjølie, In review; Sjølie & Østern, In review)

of learning (cf. Entwistle & Peterson, 2004; Marton et al., 1993). The students largely agreed to all of the statements except "memorising and reproducing". This finding can be understood in light of another analysis of the same student group, which reported that these student teachers are predominantly meaning oriented (Sjølie, In review). Memorising and reproducing are usually associated with a surface approach to learning (see Entwistle & Peterson, 2004 for elaboration of approaches to learning), which was not possible to detect in this particular student group. That memorising and reproducing do not necessarily lead to learning is illustrated by a quote from one of the focus groups when the students were talking about reading for the sole purpose of writing a test: "that doesn't lead to knowledge, that's just temporary".

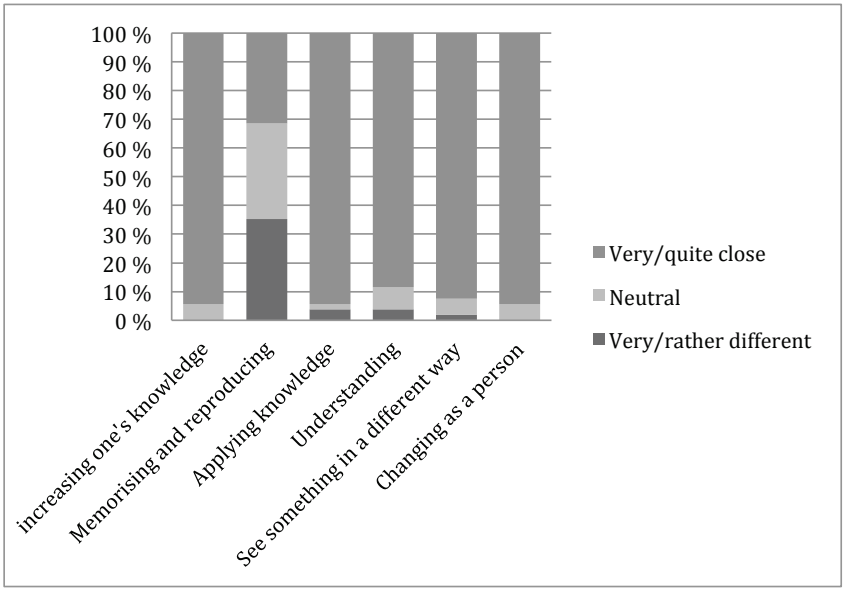

Figure 1 Conceptions of learning of the total year cohort (N=53). The answers indicate the participants' agreement with six statements about learning, e.g. "Learning is to build up knowledge by acquiring facts and information" (increasing one's knowledge)

In the further presentation of the findings from the interviews, a main focus will be on the *differences* between how the participants talked about learning and teaching across various contexts. The most important difference is – not surprisingly – that they talked about pupils' learning (school) from the teacher perspective and about student learning (university) from the perspective of the learner.

The students' talk about learning

Table 1 summarises the categories that were identified in the analysis as well as a short description of the main focus within each learning arena. An overall finding from the interviews was that the student teachers communicated a predominantly constructivist view of learning both in a school setting and in a university setting. A constructivist view was present with each and all of the participants.

When describing learning, the students revealed three main aspects of or prerequisites for learning: activity, constructing knowledge, and seeking understanding. Below is an example of how these aspects were visible in the students' talk:

> Finn: … you leave the talking to them, that they somehow can make their own knowledge and understanding through talking with each other and perhaps reflect. I may well know the subject matter perfectly well inside my body and my mind, but ... to transfer it to them… I think it is quite good that they create it themselves in a way, instead of me just telling them. Then it just becomes a bunch of moralising points that I impose on them. Unless they really take it in, it goes in one ear and right out the other. […] let the students research and discover […] the process of making something their own makes sure that it sticks better, it becomes in a way a part of you. Because then, there is a kind of deconstruction of what is written in the book, and then it is reconstructed in you.

In a school setting, keeping students active was described as essential for learning. When talking about the need for students to create their own knowledge and make it their own, many of the students justified this by using Piaget's schemata theory and socio-cultural theory as described by Vygotsky. In these descriptions, the students partly used professional language such as in the quote below:

> Kenneth: I rely a lot on a constructivist and socio-cultural view of learning, that learning requires activity with the students. It does not need to be physical activity, only an inner activity that allows them to *do* somethng. The easiest way for me as a teacher to ensure that this happens is to get them to participate in class. Either chat or discuss with each other, answer questions, make suggestions and comments… and this is also close to socio-cultural views, that learning occurs through dialogue, i.e. social interaction.

When talking about learning in a university setting (from a learner's perspective), there were no traces of professional language. The participants stressed the need to *actively process* the subject matter, for example through writing assessments, taking notes, group discussions, or in some way "post-processing" lectures. While the general aim in school was to activate pupils, only a few students mentioned that as important in a university setting. In their own learning they stressed the need to create their *personal* understanding – to make the matter their own and reformulate with their own words. Some also emphasised the need to be challenged to think and to develop their own opinions. Finally, many of the students also talked about learning as developing as a person – a process in which they learned about themselves as a person and as a teacher.

Table 1 Students' talk about learning

Learning	**School**	**University**
Active learners	Dialogue, activity is important	Discussions, experiential learning, processing the subject matter
Construct knowledge	'Make it your own', **'**discovery', Vygotsky/Piaget	'Make it your own', challenged to think
Seek understanding	Relational understanding, 'makes the matter stick'	*Want* to understand, seeking personal meaning

The students' talk about teaching

The students described student centred teaching as the ideal way to teach according to a constructivist view of learning. Student centred teaching in school was described as meeting the needs of the individual pupil and to build upon their previous knowledge and interests. The teacher-student relationship was therefore emphasised as being very important. Student centred teaching would typically consist of inductive, inquiry-based methods, allowing the pupils to discover by themselves (or together) and thereby make the subject matter "their own". Within the university setting, the students reported to value student active workshops much more than (passive) lectures. Some of the students also stressed how important it was to be taken seriously

and to be treated as an adult. It was important to feel that their knowledge "counted for something" and that they were given the freedom to choose what to engage with and how.

Table 2 Student teachers' talk about of teaching

Teaching	School	University
Student centred (idealism)	Fun, innovative, fancy	
	Get to know the pupils, build on previous knowledge (ZPD/Piaget)	Teacher listens to your experiences, teacher takes you seriously
	Inductive, inquiry-based, group work, meeting the needs of the individual	Workshops, discussions
Teacher centred (practicality)	Impart/share knowledge, feels safe, easier to control that learning takes place	Absorb lecturers' knowledge, university code
Motivation	Praise and grades, variation, fun, teacher's responsibility to stimulate intrinsic motivation	Intrinsically motivated, searching for meaning, need to understand *why*, teacher educators must help ('push the buttons')

An interesting finding emerged from looking closer at the adjectives the students used referring to teaching methods they had learned about in their university courses (predominantly student centred). Quite consistently, the students used words such as "fun", "innovative", "creative", and "fancy". Many of the participants said that they had largely observed what they called "traditional teaching" in practicum, and many supervisors had been reluctant to them trying out something different. In a way, the students described themselves as "agents of change"; they wanted to introduce *different* teaching instead of much of the boring teaching they had been subject to themselves in school and that they observed in practicum. Benjamin

explained: "I want to achieve differentiation. I want to make fantastic fun tasks that everyone thinks is fun and that stimulate activity in class."

When talking about teaching, the students' language revealed more traditional ideas than when they talked about learning. A summary of how the participants described student and teacher centred teaching as well as motivation within the different settings is given in Table 2. Tensions or inconsistencies in views of learning and teaching were found along two lines: between *idealism* and *practicality* and between *school* and *university*. I will comment on both separately and present them largely through excerpts from the interview transcripts. The differences were not found *between* the participants, but in the statements of the *same* students in different parts of the interview.

Idealism – practicality

One kind of tension was between "ideal teaching" and the practicality of the particular classroom. Fanny, for example, expressed a general frustration which can be related to the aforementioned wish to be creative and innovative: "In the end I was like 'what can I do to get the students with me? I'm surpassing myself in creativity here, but it just doesn't work.'" Other examples were about how the students seemed to fall back on traditional teaching. The reluctance to relinquish authority, which is often required in student centred approaches, was shown to be present in several of the students, and is illustrated below with Leah's example. The first quote is from a part of the interview where she talks about what she tries to achieve in her teaching (talking about student learning), while the second quote is later in the interview about her actual teaching.

> Leah (talking about student learning): I want to get students to think for themselves, they have much stronger ownership of the knowledge then. Being able to ... be more active players in their own learning process, rather than just being passive recipients.

> Leah (describing her teaching): I have noticed that when I have blackboard teaching I feel that I ensure learning better than when I do other things. Perhaps that's why one often resorts to ... because then I have at least gone through the material. It is difficult to know what students are left with when you have other types of activities. I'm not sure if it is because one has too little knowledge about how learning is acquired… or how to measure it […(pause, thinking)…] It really has nothing to do with learning. What I really mean is that you have at least

> conveyed it, you've said it out loud, and then you know that at least someone had the chance to catch it.

Several of the students, in particular mathematics students, talked about how they ended up teaching in the way they felt most comfortable: "I feel that I teach the way I would like to be taught myself, in the way that works for me. I feel very comfortable with this way of receiving knowledge." (Benjamin when talking about traditional "blackboard teaching"). Leah's and Benjamin's statements, along with similar examples from others who were interviewed illustrate the particular challenges of being inexperienced and in the beginning of the process of learning to teach, but also the strong and robust images they have from previous teaching experiences.

The main explanation for not teaching according to the "ideal" was the time aspect. "Innovative" teaching methods take too much time, the students said. There is not enough time for preparation, and there is not enough time in class to let students find things out by themselves. Lily provides one example:

> Lily: we've talked a lot about it on campus that students need to be active in constructing their own learning and so on. Then it's okay to try that a few times too. But you realise that it takes much more time, and as a teacher you don't have that much time. […] There's no time to make that kind of fancy lessons every time.

What is indicated in Lily's quote (in addition to the time aspect) is a tension that could be seen with several of the students. In the interview, Lily described her teaching as rather traditional. She mostly relied on a "blackboard session" followed by individual task solving. In the quote above she indicated that facilitating students in constructing their own knowledge is something she should "try out a few times". It does, however, require "fancy" teaching methods. In the tension between idealism and practicality, it was not only a meeting between *her* idealist view and her meeting with reality, but between *teacher education's* idealist view and perhaps her image of teaching. When elaborating on their teaching and on why they did not teach according to the ideal views, many of the students used expression such as "we've heard over and over again that it is the right thing to do" or "I've heard that student activity is *in* now". Some seemed to regard it as a failure to not teach according to the ideals, while others described that they just made other choices. Nicolai is one example:

> Nicolai: They're really nice and very clever students, but when you start the lesson they're lying asleep on their desks. They fully respect you, but they have zero interest in learning. That has been a great challenge.
> Researcher: How did you deal with this?
> Nicolai: (sighs) well, then you're supposed to appeal to intrinsic motivation and this and that. But I just turned to grades and extrinsic motivation; ultimately they want to work with a vocation. And how can they work with a vocation? They need to get through school.

When asked to elaborate more in depth on their teaching, it turned out that for many students, the main motivation for having student centred teaching was to do something *different* – something "fun", "innovative" or "fancy" as opposed to the "boring" and "traditional" teaching that according to them dominates in school. They did not argue for student-centred teaching as a way to improve student learning other than the link between motivation and learning (that motivation leads to learning). Gine's comments are a good example of this. Below is her answer to the question of whether she had used inquiry-based teaching in mathematics:

> Gine: A little bit. But I'm thinking… I strongly doubt that everything should be inquiry-based. The students are in their final year of high school, they have to endure a bit [of theory], get used to it if they are go to university next year. They might not get any inquiry-based teaching there. They have chosen to take this subject so they ought to be a little interested. […] It's important that they get variety in teaching, but I also feel that when you're in the final year in high school you must be prepared for more theoretical teaching and not only fun stuff. Everything can't be inquiry-based.

Gine had a supervisor who actively resisted her doing anything other than a blackboard session followed by individual tasks. According to Gine, he said that this way of teaching was the fastest and securest way for the pupils to learn the whole curriculum. There was no time for trying out "silly discovery tasks".

Another example of a student who questioned the focus on "fun and creative teaching" was Elisa. She felt very strongly about the messages she thought were conveyed by her teacher educators:

> Elisa: Of course one should include the students, but I think it might have gone a bit far. There is a kind of 'fun hysteria' in school nowadays, which I think is totally crazy. I noticed it particularly in subject didactics that we should make everything so extremely fun for the students – whatever the cost. I don't understand that at all. Why can't we just say 'you know what, you're supposed to learn this'. Of course we should justify it in theory and curriculum and stuff, but I feel that it's not okay to say "you know what, we will learn this". There is so much fancy schmancy. I think we're getting too hysterical about it.

To equate ideas from teacher education with "fancy" and "innovative" seemed also to be shared by some supervisors. Benjamin told the following story of how his supervisor warned him in advance of his first lesson with a new class:

> Benjamin: I think it was a bit influenced by my supervisor. He said on the way to the first lesson that half the class are sport students, so they're going to make a lot of noise and they are not very motivated for mathematics. 'You must take that into account, so don't do very fancy stuff.'

Some of the students said explicitly that there had been little room to question prevailing views of learning, in particular socio-constructivist views of learning:

> Oliver: For example, you never get the chance to say "no, I don't think it's good to have rich tasks in mathematics". It's never challenged, or we don't get the opportunity to challenge such things. […]
> Leah: Yeah, I think you're onto something there. In subject didactics I've got the impression that it is desired that you do like this or like that, and it doesn't really matter what you think of it. It might well have been that I had come to the same conclusion myself, but we are not challenged to take a stance.

Several of the interviewees emphasised that teacher-led lessons are of course not incompatible with a constructivist view of learning. In teacher-led sessions, the teacher can activate the students through dialogue and discussions, inductive teaching and by connecting the subject matter to the students' lifeworld and build upon their prior experiences and interests.

School – university

When the students described teaching in a university setting, there was a noticeable shift to a transmission model of learning. Although the students seemed to strongly believe that learning involves making knowledge your own through activity (also in their own learning), and that they valued student-active workshops much higher than lectures, their language revealed tensions when they described *teaching* in university. One example of this was in Kenneth's words, who talked very much about how he tried to teach according to a socio-constructivist view of learning in school. He said: "Teacher educators should teach us how behave and what to think." Also Emilie, whose statements quite consistently reflected a constructivist view of learning in school: "we expect from the teacher educator that he's a good academic as well as being excellent in imparting knowledge to us so that we can pass it on to the students in school […] I want to absorb as much knowledge as possible". Yet another example was Leah who had just talked much about how she resented teacher educators who acted as *experts* rather than using their *expertise* to empower and challenge the students. That was, however, in relation with workshops in subject didactics. When talking about *lectures* she said: "I think that in lectures I expect an expert. But that's because lectures have always been like that."

The expectations of traditional teaching in university seemed to be rather strong with some of the students. Eve provided an illustrative example when she talked about her experience of one of the lectures she had attended. This lecture had two lecturers:

> Eve: In one of the lectures, one of the guys [lecturers] started by saying to the other one: 'I had an experience the other day, why don't you tell me how I experienced it?' And then the lecturers began to discuss with each other; they hadn't agreed in advance on how to organise the lecture!

Eve's main concern in this part of the conversation was that teacher educators did not "walk their talk". As student teachers they are told that it is important to prepare your lessons, and she was shocked to see that these lecturers had met unprepared to a lecture with more than 200 students. The particular lecture that Eve was referring to was kind of "untraditional" in its form. Two lecturers had a "performance" or conversation with each other instead of a traditional lecture (which of course was part of the plan). The fact that Eve concluded from this that the lecture was not planned in advance indicates that she did not understand this "meta-message" of the lecture. She was perhaps too bound by the way lectures are usually done in university.

Finally, there were examples of how students argued differently about learning within a school context and a university context. It illustrates how they talked about learning and

teaching in school through the *intention* of the teacher, but about learning and teaching on campus through the *experiences* as a learner. One example was the one group who after having talked about the general importance of stimulating activity in class, talked about student activity on campus:

> Nora: Activity is not always good. We had a seminar in the language cohort. We had been sitting for five hours and then: "now you're getting so tired, we're going to have a role-play".
> Vera: But this was actually an example I'd like to point out now, I remember it, it was the one with master suppression techniques? I remember feeling a lot of resistance, "role-play now?" But I got together with a group and we read the article we had been given, and we played it out. To this day, it is perhaps what I remember the most from that day.
> Nora: I only remember my resistance. I'm not usually against role-play, but come on, 'it's almost three o'clock, can't we just finish now?'

Other students referred to a passive student culture in general, in which many students expressed active resistance towards activities that were not in the form of either listening to lectures or participating in discussions.

Another example of arguing differently across the different contexts was found in Nicolai's description of his teaching in school; he said that he was very conscious of not revealing answers to the pupils unless they had worked on it themselves.

> Nicolai: Usually, the students decide. I decide the theme, I decide tasks, but they decide what comes up on the board. […] I don't want to bring in my opinion, I like the students to decide for themselves how they should do it. […] And then the world of discovery begins. When they have started this journey, it is perhaps easier to keep them hooked on.

Nicolai had also complained about a teacher educator who he claimed played what he called "guess what's in the teacher's head". In another part of the interview, where Nicolai talked about the research project they had been working on, he criticised his teachers for not being able to provide them with a simple explanation of the notion of *assessment for learning;* they had to find out by themselves. This bothered him, and he considered it a failure on part of his teachers.

The participants talked predominantly about the school setting from the perspective of a teacher, while they talked about the university setting from the perspective of a learner. On some occasions, they could take the perspective of the pupil in school (when referring to their own school experience), and they could take the perspective of a future teacher when talking about learning in university. There was, however, not one single example in the interviews, in which the students tried to see university teaching through the intention of the teacher educator. This was in spite of the fact that they many times referred to the "dual role" (cf. Loughran, 2006) of teacher educators: that student teachers not only learn *about* teaching but also *from* teaching; teacher educators should be their role models.

Discussion and conclusion

The frequently used claim that student teachers have narrow views of teaching and learning is not supported by this study, at least not for students who are at the end of their education. However, whereas the students provided rich views of *learning* both in the questionnaire and in the interviews, their talk about *teaching* revealed more traditional views. The question that remains to be answered is: what lessons can be learned from this report of student teachers' talk about learning and teaching?

A first lesson can be related to the much debated "theory-practice gap" in teacher education. Tensions between idealism (theory) and practicality (practice) did not only reveal the difficulties the students had in trying to transfer formal theory to particular situations in the classroom. The way the students talked about these challenges revealed an additional dimension – the dimension of discourse and power. Whose idealism were these students measuring their practice against? Was it formal theory, their personal images of teaching, or the ideals of teacher educators? Carlgren and Marton (2004) explain the idealism of newly graduated teachers with the normative character of teacher education. The didactic dimension of the teaching profession places emphasis on all the wonderful things that can be achieved in the classroom. Wideen et al. (1998) found that teacher educators often expect student teachers to be agents of change in schools, while Britzman (2003) point to a discourse of teaching within teacher education that explains teaching competency as the absence of conflicts.

Judging from these student teachers' stories, the normative character of teacher education might also have prevented the students from *challenging* and *developing* their own personal theories. Some of the students expressed that they felt they were "not allowed" to say certain things that opposed ideal views of learning and teaching. The students consistently described teaching methods they had learned about in subject didactics as "fun", "innovative",

and "fancy" – a description that was shared by some supervisors as well. They seemed not to see many of the methods they had learned first and foremost as means to promote learning, but as means to motivate (bored) students by doing something *different*. They did not necessarily believe in the use of the methods themselves, which is illustrated in Gine's example of inquiry-based teaching. The theory-practice gap is thus not only a difference between the ideal, formal theory and the reality of the particular classroom, but also between teacher educators' ideals (and values) and student teachers' personal theories.

A second lesson to be learned is that although the students have "developed" (cf. Entwistle & Peterson, 2004; Marton et al., 1993), constructivist views of learning, these are not necessarily transformed to their own situation as learners. Many of the students seemed to expect teaching in university to be traditional, and some students expressed frustration when it was not, feeling resistance towards activity, referring to a passive student culture more in general, and dismissing a lecture for not being performed in the "predefined" traditional way. The university, as a culturally and historically situated site for learning (cf. Lea & Street, 2000), carries strong connotations in terms of what the students expect and how they interpret their learning experiences. Furthermore, when describing teaching in school, the students wanted to change the boring, traditional practice with fun and innovative teaching, reaching out to each individual pupil. There were also traces of professional language. Taking the teacher perspective, the students deployed an appropriate language within the setting of teacher education (talking to me whom they knew as a teacher educator). When talking about teaching in university, the students used another language – that of a learner (and participant) within university and focusing on their experiences. Perhaps they also took the role as "evaluators", talking to me as a researcher with a potential influence to make changes.

These contributions to research on student teachers' thinking also carry methodological implications. The findings illustrate the complex situation of the student teachers in terms of being in a "borderland" (cf. Alsup, 2006; Cook-Sather, 2006) and at the same time shifting between the perspective of a teacher and that of a learner in higher education. How can, for example, inventories measuring students' conceptions of learning capture the different perspectives or contexts the students are thinking about when answering questions about learning and teaching? Also, whose voice are they using? Are they providing the "correct" and idealistic answers or their more "realistic" answers, and are they aware of these differences?

The practical significance of this study is that it points to the importance of a more realistic exploration of teaching and learning, and tries to meet the students where they are. As Eraut (2000, p. 572) noted: "The traditional problem of how to fit novices to the teacher education curriculum might be better reframed as the problem of how to fit the initial teacher

preparation program to the learning needs of student teachers." While some of the examples in the findings section could be related to the strong pressure that student teachers are under during practicum and the early stage they are in as teachers, other examples were related to the problems of teaching according to teacher education's ideals. What is open to criticism is not that the student teachers struggle with being change agents in school: What is open to criticism is that they feel they are expected to. Might teacher educators, rather than supporting the students to *challenge and explore* their views about learning and teaching, be attempting to *replace* the students' views?

Furthermore, the students' lack of awareness of the teacher educators' possible intentions behind their practice points to the need of making teaching more explicit. The student teachers in this study showed little awareness of themselves as part of a practice with an overall aim to educate teachers. They were predominantly concerned with their *student role*. This finding indicates that the mere modelling of "good teaching" is not enough for student teachers to transfer such teaching to their own teaching practice in school. It points to a need for raising student teachers' awareness of their own learning in a practice that educates teachers. If the students are not able to transfer their views of learning to themselves as learners, how are they to transfer these views to their pupils' learning?

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APPENDICES

Interview guides
Questionnaire

Intervju som ble gjennomført august-september 2009

PIL intervjuguide 1

Ikke alle spørsmål ble stilt, dette er en intervjuguide med mulige oppfølgingsspørsmål

Innledning

Husker du noen av dine tidligere lærere? Var noen av dem spesielt gode? Hva var det som gjorde læreren god?

Den gode time

Hva kjennetegner en god time? Kan du beskrive en god time?

- Lærerens rolle i en slik time?
- Hva kjennetegner elevenes aktivitet?
- Arbeidsformer?
- Faglige mål?

Undervisning

Hva vil du legge vekt på i din undervisning?

- Faglig
- Pedagogisk

Hva ønsker du at elevene skal lære eller bli gode på når det gjelder ditt fag. Hvordan vil du som lærer bidra til dette?
Hva vil du fremheve i undervisningen?
Hva vil du gjøre for å hjelpe elever som sliter med faget?
Hva vil du evt gjøre for å støtte elever som er sterke i faget?

Lærerrollen

Hvilken lærer ønsker du å bli?
Hvordan tror du studiet kan bidra til at du utvikler deg til en slik lærer?
På hvilken måte tror du pedagogikkfaget kan hjelpe deg? (hjelp: tenke tilbake på Expaed og Woolfolk-boka)
Hva kan du gjøre i løpet av studiet for å utvikle deg til en slik lærer?

Intervju som ble gjennomført mars-april 2010

Intervjuguide oppfølgingsintervju

Ikke alle spørsmål ble stilt, dette er en intervjuguide med mulige oppfølgingsspørsmål

Skriftlig bidrag om teori og refleksjon

1. I PIL-prosjektet har dere ofte fått høre at målet med prosjektet er å knytte teori og praksis nærmere sammen. Hva legger du i begrepet teori? Kan du beskrive med ord hva teori er for deg?
2. Studiet på PPU oppfordrer både i dokumentskriving og på seminar til refleksjon. Hva legger du i refleksjon? Hva vil det si å reflektere over egen undervisning?

Studentens undervisning for observasjon

Innlede om hvordan studenten opplevde timen. Stikkord:

- Hva var målet for timen?
- Hva slags forventninger hadde du?
- Hva slags utfordringer så du for deg? Hvorfor trodde du at dette kom til å bli et problem? Er det en spesiell situasjon du ønsker å trekke frem?
- Hva var det faglige innholdet, kapittel fra lærebok

Kan du gi en begrunnelse for noe av det du har nevnt over, som… ved hjelp av fagdidaktisk/pedagogisk teori eller forskning? Planlegging, gjennomføring, erfaringer, tanker etterpå

Eksempler

- Hvorfor gjorde du akkurat det valget? Hvorfor gjorde du ikke…
- Ønsker en teoribasert begrunnelse.

Var det noe du hadde lest eller hørt i fagdidaktikken eller pedagogikken som inspirerte deg i planleggingen av timen? (Stikkord: konstruktivisme, aktivitet, motivasjon, gruppearbeid, klasseledelse …)

Studentens undervisning generelt

Kan du skal beskrive noen kjennetegn for hva som har vært typisk for din egen undervisning? Stikkord:

- Hva er en typisk oppstart for timen? Hva sier du innledningsvis? Hvorfor?
- Greier du å få med deg elevene? Hvordan?
- Hva arbeider elevene med?
- Organisering
- Struktur
- Kan du gi et typisk eksempel på hvordan timene blir avsluttet?
- Fikk du inntrykk av at elevene hadde kommet dit du ville? Hvordan fikk du det inntrykket?

Intervju som ble gjennomført mars-april 2010

Kan du gi en begrunnelse for noe av det du har nevnt over, som… ved hjelp av fagdidaktisk/pedagogisk teori eller forskning? Planlegging, gjennomføring, erfaringer, tanker etterpå

Kan du si noe om hva som har vært av betydning eller inspirasjon for deg i planleggingen av undervisning (veileder, pedagogisk / fagdidaktisk teori, egne erfaringer)

Er det noe du hadde lest eller hørt i fagdidaktikken eller pedagogikken som har inspirert deg spesielt deg i planleggingen av undervisningen? (Stikkord: konstruktivisme, aktivitet, motivasjon, gruppearbeid, klasseledelse …)

Eksempler:
Du sa at du ofte introduserte nytt stoff på tavla – kan du gi et eksempel som viser mer nøyaktig hva du gjorde? Andre oppgaver enn fra boka?
Utdyp: På hvilken måte er for eksempel kunnskap om konstruktivisme nyttig?

Studentens utvikling i utdanningen

Kan du trekke fram et område / situasjon / problemstilling som du synes har vært spesielt utfordrende i praksis?

- Hvorfor tror du det har vært et problem?
- hvordan har du jobbet med det?
- hva har du lært?
- Kan du gi noen begrunnelse med perspektiver fra teorien som kan hjelpe til med å belyse problemet?

Har ditt syn på undervisning endret seg i løpet av utdanningen. Kan du i så fall beskrive hvordan?

Å trekke inn teori i planleggingen, gjennomføringen og refleksjonen av undervisningen. På hvilken måte trekker du inn teorier?

- Trekkes teorier inn i veiledningen?
- Diskusjoner med medstudent, planlegging, refleksjoner

Har det endret seg i løpet av praksisperioden?

Den gode time

Hvilke tanker har du om hvordan undervisningen i ditt fag bør være? Hva kjennetegner en god time? Kan du beskrive en god time?

- Lærerens rolle i en slik time?
- Hva kjennetegner elevenes aktivitet?
- Arbeidsformer?
- Faglige mål?

(Hva vil du gjøre for å hjelpe elever som sliter med faget?
Hva vil du evt gjøre for å støtte elever som er sterke i faget?

Refleksjon

Ta utgangspunkt i det studenten har skrevet om refleksjon:

Intervju som ble gjennomført mars-april 2010

- Hvilken betydning har det hatt for deg (når reflekterer du)?
- Hvem eller hva i lærerutdanningen har hatt betydning for deg når det gjelder refleksjon rundt din utvikling som lærerstudent?

Teori og praksis

I forrige intervju spurte jeg om ditt forhold til teori, og hvilken rolle det kunne ha for din utvikling.

- Hvordan vil du beskrive dine studievaner? Spørsmål om hvordan de har lest pensum, evt hva de har lest (evt kanskje bedre som spm på et spørreskjema, kanskje med avkryssing for tema)
- Kan du løfte fram et tema fra teoriundervisningen som du synes er spesielt interessant (understreke at man skal velge fra alle fokusområder)?
- Hvilken betydning tror du kunnskap om dette temaet kan ha for deg?

Hvordan føler du at studiet har bidratt til din utvikling som lærerstudent?

Hva tenker du om din utvikling videre som lærer, hva kan du gjøre for å utvikle deg til den lærer du ønsker å bli?

Åpent spørsmål

Om det er noe de ønsker å snakke om som de ikke har kommet fram med (sannsynligvis knyttet til prosjektet)

INTERVJUGUIDE FOKUSGRUPPER VÅR 2011

INNLEDNING

Snakke om selve intervjuet, hva vi skal gå gjennom, klargjøre at min rolle kommer til å veksle mellom å være tilhører og stille mer konkrete spørsmål. Påpeke at de ikke skal tenke på hva jeg ønsker å høre, det finnes ingen "riktige" svar. De skal snakke så fritt og så mye som mulig, så styrer jeg heller samtalen om jeg ser behovet for det. Ikke noe eksamen!!

Spørre om opptak er greit.

1. PROBLEMSTILLING FRA PRAKSIS

Mål med denne delen: Hvordan artikulerer studentene teoretisk kunnskap med utgangspunkt i hva de gjør i praksis?

1. **Problemstilling fra praksis:** *Legge frem en problemstilling fra praksis (ut fra hva de selv har sendt inn).* Be gruppa diskutere den med meg som passiv tilhører. Hvis det er interessante ting, be dem utdype nærmere.

   Etter ca 15-20 minutter diskusjon:

   - Kommentere gode innspill. Kan dere prøve å sammenfatte diskusjonen så langt, evt i form av å gjøre noen generaliseringer? (være spesifikk ut fra tema for å hjelpe dem i gang om det er nødvendig)

   - Er det noe fra pensum som dere kan trekke inn som kan hjelpe dere i forståelsen av problemet? (evt hjelpe dem i gang med spesifikk teori om nødvendig). Spørre konkret om det er ulike perspektiv som kan bidra til forståelsen.
     - Gå inn på forståelsen av selve teorien? Fokusere direkte på forskjeller mellom teoriene

   - Dere har selvfølgelig lang erfaring fra skolen siden dere selv har vært elever. Av det dere har diskutert nå, hva tror dere kommer fra deres tidligere erfaringer og hva har studiet bidratt med til hvordan dere tenker om dette?
     - Kom med eksempler på begge deler

2. HVORDAN JOBBER STUDENTENE?

Mål med denne delen: Å finne ut hva studentene gjør i universitetsdelen av studiet

- Hva tenker de om læring?
- Hvordan tenker de når de leser litteratur?
- Hvordan de tenker i undervisningssituasjon?

I studiet har dere ulike læringsarenaer. Dere er i skolen i praksisperioden, dere leser og skriver oppgaver, og dere har undervisning, som igjen er delt inn i ulike arenaer (forelesning, seminar, fagdidaktikk og faggrupper). Jeg vil først spørre om hvordan dere jobber i den delen av studiet hvor dere i utgangspunktet er overlatt til dere selv, nemlig lesing.

1. **Lesing**
   a. Ta utgangspunkt i Hargreaves kap 8-10 om lærerarbeid og skolekultur (forberedelse til seminar i april). *Fortell hvordan dere tenker når dere skal begynne å lese dette kapitlet*

      Oppfølgings- / hjelpespørsmål:
      - Hva er målet når du leser (ren interesse, innsikt og forståelse, oppgaveskriving, forklaringer på praksis, intern prøve)
      - Hva leter du etter, evt hva er du på jakt etter?
      - Hva legger du vekt på?
      - Kobler du det du leser mot praksis, egne erfaringer, undervisning? Forbinder du det med noe? Gi eksempler
      - Vise fram didaktisk relasjonsmodell i Engelsen (s 47) og forklare litt hva det er: hva tenker du når du ser en sånn modell?
      - Dersom svarene på spørreskjema viser at de svarer dette er annerledes fra disiplinstudiet, hva er annerledes?.

   b. **Fokusområder:** Studiet på PPU har 4 ulike fokusområdene (vis fram liste på ark): *Hvordan vil dere beskrive innholdet i disse områdene ut fra de temaene dere har hatt på pensum?*

      Oppfølgings- / hjelpespørsmål:

      - Eksempler på litteratur/tema som går under de ulike områdene?
      - De to første er mest i fokus i PPU1, de to neste i PPU2. Erfaringsmessig er studentene mest fornøyd med de to første områdene, fordi de er nærmere knyttet til praksis i skolen og har mer direkte relevans. Hva tenker dere om de to siste fokusområdenes rolle i lærerutdanningen?

   c. **Mest interessant:** *Av det dere har lest, hva har gitt dere mest? Er det noe av det du har lest som har gjort at du ser annerledes på din egen skoletid i dag?*
      - Kan dere gi eksempel?

Nå beveger vi oss over til en annen del av læringsarenaen universitet, nemlig undervisningen.

2. **Undervisning.** *Hva tenker dere om sammenhengen mellom litteraturen dere leser og undervisningen?*

   Oppfølgings-/hjelpespørsmål:
   - Er det sammenheng, evt er det ikke sammenheng? Gi eksempler på begge deler. Hvorfor ser de evt ingen sammenheng?
   - Er det noen forskjell avhengig av hvilken undervisning dere har (seminar, forelesning, faggrupper, fagdidaktikk)?
   - Hva er dere på jakt etter i undervisningen?
   - Hva forventer dere av lærerne?
   - Hva forventer dere av dere selv og deres medstudenter?
   - Er det noe du har opplevd gjennom undervisningen som har gjort at du ser annerledes på din egen skoletid i dag?

3. **Relevans.** Hvis dere tenker generelt på den teoretiske delen av studiet, altså når dere er her på universitetet. *Har dere møtt noen nye tanker? Evt hva har det gjort med deg?*

   Oppfølgings-/hjelpespørsmål:
   - *Hva forventer dere å få ut av den teoretiske delen? Hva er dere på jakt etter?*
   - En kritikk som ofte rettes mot lærerutdanningen er at mye av teorien ikke er relevant. *Hva vil det si at noe er relevant? Hva kjennetegner relevant teori?* Kom med eksempler på begge deler (relevant og ikke relevant)
   - Relevant for hva?
   - Hva er tidsperspektivet for at noe skal være relevant?
   - Hvordan innvirker relevans på hvordan dere studerer/leser/tenker om studiet?
   - Hvordan innvirker relevans på deres motivasjon for studiet?

4. **Arbeidsbyrde**. Det kommer fram av spørreskjemaene at mange opplever arbeidsbyrden i studiet som høy. *Hva tenker dere rundt dette?*

   Oppfølgings-/hjelpespørsmål
   - Hvordan innvirker arbeidsbyrden på deres studier?
   - Hva har det å si for hvordan dere tenker om studiene?
   - Hva har det å si for hvordan dere leser?
   - Hva har det å si for hvordan dere organiserer studiehverdagen?
   - Hva opplever dere som de største utfordringene i studiet?

3. KOBLING MELLOM TEORI OG PRAKSIS

Mål med denne delen: Hvordan studentene tenker om koblingen mellom teori og praksis, og hvordan de selv kobler

1. **Studenten mellom læringsarenaene:** Som studenter beveger dere dere mellom skole og universitet (legge fram figur), forklare figuren og spesifiser at universitetet igjen inneholder ulike deler, f.eks disiplinfag og PPU. *Hva tenker dere om hvordan det er å være studenten som skal navigere i dette feltet?* Oppfordre til å tegne videre på figur.

Oppfølgings-/hjelpespørsmål:

- Hva er hovedforskjellene mellom de to læringsarenaene skole og universitet?
- Lærerutdanningen blir ofte kritisert for at disse arenaene oppleves som to ulike verdener. Et eksempel kan være at den undervisningen man lærer om på utdanningen og blir oppfordret til å gjøre ikke stemmer overens med det dere ser i skolen. *Hva tenker dere om det?*
    - Nevne tavleundervisning om de ikke tar opp det selv
- Bør læringsarenaene være like?
- Hvordan opplever dere de ulike rammene dere må forholde dere til?
    - Krysspress?
- Hvordan virker deres egen bakgrunn inn? Evt stilt mer generelt, som en student sendte inn: *Hvor mye av undervisningen vi gjennomfører i praksis er basert på egne erfaringer fra vi selv var elever (eller oppfølging av det veilederen allerede har startet på), og hvor mye nyttiggjør vi oss av undervisningen vi får igjennom PPU*

2. **Teoretisk og praktisk kunnskap**
    - En annen måte å omtale de ulike læringsarenaene på er gjennom begrepene teori og praksis, og Et mål i lærerutdanningen er å koble sammen teori og praksis. *Hva vil det si å koble sammen teori og praksisarena?*
        - Hva trenger du for å kunne klare deg i studiet på universitetet?
        - Hva trenger du for å kunne klare deg i studiet i skolen?
        - Hvilken betydning tror dere kunnskapen fra den teoretiske arenaen har for deres lærerpraksis?

4. REFLEKSJONER ETTER INTERVJUET

Hva tenker dere om dette intervjuet, Har selve intervjuet ført til noen spesielle tanker? Evt. er det rom for lignende diskusjoner i lærerutdanningen?

Er det noe de ønsker å legge som vi ikke har fått snakket om?

SPØRRESKJEMA OM LÆRERSTUDENTERS LÆRING

TIL ALLE LEKTORSTUDENTER VED PPU VÅREN 2011

Dette spørreskjemaet er et ledd i et doktorgradsprosjekt som har til hensikt å bidra til økt forståelse av lærerstudenters læring i universitetsdelen av studiet. I forskning på lærerutdanning er det i de fleste tilfeller fokus på studentenes praksis, mens det er forsket lite på hva som skjer i universitetsdelen av studiet. Spørsmålene i skjemaet fokuserer på hvordan du lærer og studerer.

Det er frivillig å delta i undersøkelsen, og alle opplysninger vil bli behandlet konfidensielt. Datamaterialet vil bli anonymisert ved prosjektslutt, senest ved utgangen av 2013. Ved å levere inn skjemaet samtykker du i å delta i undersøkelsen. Det vil ikke være mulig å trekke seg etter at skjemaet er innlevert med mindre du har gjort avtale om intervju. Resultatene vil bli presentert slik at ingen enkeltpersoner kan gjenkjennes. Undersøkelsen er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS (NSD).

Ta utgangspunkt i PPU-delen av studiet når du besvarer spørsmålene. For å få en god generell dekning av forskjellige måter å lære på stilles en del spørsmål som til en viss grad overlapper hverandre. Det er viktig for kvaliteten på undersøkelsen at alle spørsmålene blir besvart. Ikke bruk for lang tid på hvert spørsmål.

Takk for at du vil dele dine erfaringer med oss!

Ela Sjølie
stipendiat

Anna Lena Østern
professor

NTNU
Det skapende universitet

Program for lærerutdanning (PLU)

LES DETTE FØR DU STARTER!	Skjemaet skal leses maskinelt. Vennligst følg disse reglene: • *Bruk svart/blå kulepenn. Skriv tydelig, og ikke utenfor feltene.* ***Kryss av slik:*** ☒. • *Feilkryssinger kan annulleres ved å fylle hele feltet med farge. Kryss så i rett felt.* • *Sett bare ett kryss på hvert spørsmål om ikke annet er oppgitt.*

A. BAKGRUNNSINFORMASJON

1. Kjønn: Kvinne... ☐1 Mann..... ☐2

2. Fødselsår: 19☐☐

3. Hvilken retning går du på lektorutdanningen? ⇨ Realfag....... ☐1 Språk.......... ☐2 Samfunnsfag .... ☐3 Geografi .... ☐4

4. Hvilke undervisningsfag har du?⇩ *Skriv fagene på hver sin linje.* STORE BOKSTAVER*, ett tegn pr. felt.*

1. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

2. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Undersøkelsen gjennomføres med bistand fra SVT-IT, NTNU

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål.

5. Har du avtale om å være med på intervju om lektorutdanningen? ⇨ Nei ..... ☐ 1 Ja..... ☐ 2

Hvis ja: Vennligst skriv navnet ditt her.⇩ STORE BOKSTAVER, *ett tegn pr. felt*.

Fornavn: | | | | | | | | | | | | | | | | | | | | | | | |

Etternavn: | | | | | | | | | | | | | | | | | | | | | | | |

6. Har du undervisningserfaring som lærer *utenom praksis ved studiet*? ⇨ Nei ..... ☐ 1 Ja..... ☐ 2

Hvis ja: Hvor mye? Oppgi antall år og måneder, uten hensyn til stillingsprosent (evt. bare år eller bare måneder). ⇨

Måneder	*År*

7. Hvor mange timer pr. uke bruker du gjennomsnittlig på studiearbeid utenom fastlagt undervisning og praksis i skolen?
NB: Husk at dette gjelder PPU-delen av studiet. Avrund til nærmeste antall hele timer. ⇨

8. Hvordan vurderer du arbeidsmengden i PPU-delen av studiet ut fra det du forventet? ⇨

Mye mindre enn ventet 1	*Mindre enn ventet* 2	*Som ventet* 3	*Mer enn ventet* 4	*Mye mer enn ventet* 5
☐	☐	☐	☐	☐

B. HVA ER LÆRING?

Hva innebærer begrepet «læring» for deg? Tenk nøye gjennom hvert av de følgende utsagnene, og kryss av ut fra hvor godt de stemmer med dine egne tanker om begrepet.

Læring er å …	*Stemmer svært dårlig* 1	*Stemmer ganske dårlig* 2	*Verken /eller* 3	*Stemmer ganske bra* 4	*Stemmer svært bra* 5
1. … forsikre seg om å huske ting godt	☐	☐	☐	☐	☐
2. … utvikle seg som person	☐	☐	☐	☐	☐
3. … bygge opp kunnskap gjennom tilegnelse av fakta og informasjon	☐	☐	☐	☐	☐
4. … kunne bruke den informasjonen du har ervervet	☐	☐	☐	☐	☐
5. … forstå nytt materiale for din egen del	☐	☐	☐	☐	☐
6. … se ting på en ny og mer meningsfull måte	☐	☐	☐	☐	☐

C. DIN TILNÆRMING TIL STUDIENE

1. Hvor enig eller uenig er du i følgende utsagn om arbeidet med PPU-studiet?

	Helt enig 1	*Delvis Enig* 2	*Verken /eller* 3	*Delvis uenig* 4	*Helt uenig* 5
1. Selv om jeg står fast i arbeidet mitt, klarer jeg som regel å finne måter å komme meg videre på	☐	☐	☐	☐	☐
2. Når jeg arbeider med en innleveringsoppgave, tenker jeg på hvordan jeg best kan imponere den som skal rette oppgaven	☐	☐	☐	☐	☐
3. Ofte tar jeg meg selv i å lure på om det arbeidet jeg gjør her er virkelig verdt min tid	☐	☐	☐	☐	☐
4. Vanligvis har jeg som mål selv å forstå meningen i det vi skal lære	☐	☐	☐	☐	☐

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Husk: Bare ett kryss på hvert spørsmål.

	Helt enig 1	*Delvis Enig* 2	*Verken /eller* 3	*Delvis uenig* 4	*Helt uenig* 5
5. Jeg planlegger lesningen min nøye for å få mest mulig ut av den	☐	☐	☐	☐	☐
6. Jeg føler at jeg må konsentrere meg om å lære utenat mye av det jeg skal lære	☐	☐	☐	☐	☐
7. Når jeg legger fram situasjoner fra egne praksiserfaringer liker jeg å finne flere mulige forklaringer på situasjonen	☐	☐	☐	☐	☐
8. Det er viktig for meg å føle at jeg oppnår så gode studieresultater som jeg kan	☐	☐	☐	☐	☐
9. Jeg prøver å relatere tanker og ideer jeg får til andre emner så ofte jeg kan	☐	☐	☐	☐	☐
10. Det blir ofte til at jeg leser lite ut over det som er nødvendig for å bestå	☐	☐	☐	☐	☐
11. Jeg får ofte assosiasjoner til tanker og ideer fra forelesninger når jeg holder på med andre ting	☐	☐	☐	☐	☐
12. Jeg tror at jeg er ganske systematisk og organisert når jeg leser til eksamen eller skriver oppgaver	☐	☐	☐	☐	☐
13. Jeg ser nøye på veilederens kommentarer til mitt skriftlige arbeid for å finne ut hvordan jeg kan forbedre oppgaven	☐	☐	☐	☐	☐
14. Det er ikke mye av arbeidet her jeg finner interessant eller relevant	☐	☐	☐	☐	☐
15. Når jeg leser en artikkel eller en bok, prøver jeg selv å finne ut nøyaktig hva forfatteren mener	☐	☐	☐	☐	☐
16. Jeg er ganske god til å sette meg ned for å jobbe når jeg må	☐	☐	☐	☐	☐
17. Mye av det jeg leser gir liten mening, det er som usammenhengende biter av kunnskap	☐	☐	☐	☐	☐
18. Når jeg arbeider med et nytt tema, prøver jeg å se for meg hvordan alle ideene henger sammen	☐	☐	☐	☐	☐
19. Ofte setter jeg spørsmålstegn ved ting jeg hører på forelesninger eller leser i bøker	☐	☐	☐	☐	☐
20. Jeg føler at jeg klarer meg bra, og dette hjelper meg til å legge mer innsats i arbeidet	☐	☐	☐	☐	☐
21. Jeg konsentrerer meg om å lære akkurat det som er nødvendig for å bestå eksamen	☐	☐	☐	☐	☐
22. Jeg mener at det å studere akademiske emner til tider kan være ganske spennende	☐	☐	☐	☐	☐
23. Jeg er flink til å følge opp den videre lesningen som foreleser eller veileder foreslår	☐	☐	☐	☐	☐
24. Jeg tenker på hvem det er som skal vurdere en innleveringsoppgave og hva de sannsynligvis vil se etter	☐	☐	☐	☐	☐
25. Jeg er ikke så opptatt av å gjøre det godt på den teoretiske delen av PPU-studiet, det viktigste lærer jeg i praksis	☐	☐	☐	☐	☐
26. Når jeg leser, stopper jeg opp av og til for å tenke over hva jeg prøver å lære av det	☐	☐	☐	☐	☐
27. Jeg jobber heller jevnt gjennom hele semesteret fremfor å la alt vente til siste liten	☐	☐	☐	☐	☐
28. Jeg er ikke sikker på hva som er viktig på forelesningene, så jeg noterer ned alt jeg kan	☐	☐	☐	☐	☐
29. Ideer i bøker eller artikler på pensum setter meg ofte på sporet av egne tankerekker	☐	☐	☐	☐	☐
30. Når jeg leser, undersøker jeg detaljene nøye for å se hvordan de passer med det som blir sagt	☐	☐	☐	☐	☐
31. Jeg legger mye innsats i lesningen min fordi jeg har bestemt meg for å gjøre det bra	☐	☐	☐	☐	☐

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Husk: Bare ett kryss på hvert spørsmål.

	Helt enig 1	*Delvis Enig* 2	*Verken /eller* 3	*Delvis uenig* 4	*Helt uenig* 5
32. Jeg styrer lesningen min inn mot akkurat det som jeg tror kreves ved innleveringer og eksamener	☐	☐	☐	☐	☐
33. Noen av ideene jeg møter i studiet finner jeg fengslende	☐	☐	☐	☐	☐
34. Vanligvis planlegger jeg ukens arbeid på forhånd, enten på papiret eller i hodet	☐	☐	☐	☐	☐
35. Før jeg tar fatt på en oppgave, prøver jeg å finne ut noe om bakgrunnen for problemstillingen	☐	☐	☐	☐	☐
36. Generelt sett utnytter jeg godt den tiden jeg har til disposisjon i løpet av en dag	☐	☐	☐	☐	☐
37. Jeg har ofte vanskeligheter med å finne noe mening i det jeg må huske fra pensum	☐	☐	☐	☐	☐
38. Jeg prøver å relatere det jeg studerer til mine egne erfaringer	☐	☐	☐	☐	☐
39. Det er viktig for meg å være i stand til å forstå årsakssammenhenger i fagstoffet	☐	☐	☐	☐	☐
40. Jeg synes ikke det er vanskelig å motivere meg selv i det hele tatt	☐	☐	☐	☐	☐
41. Jeg liker å bli fortalt nøyaktig hva jeg skal gjøre i innleveringsoppgaver eller andre oppgaver	☐	☐	☐	☐	☐
42. Noen ganger «tenner» jeg på akademiske emner og føler at jeg ville like å fortsette med studier av disse	☐	☐	☐	☐	☐
43. Svarene på disse spørsmålene ville ha vært betydelig annerledes dersom de skulle besvares ut fra den disiplinfaglige delen av studiet	☐	☐	☐	☐	☐

2. Hvor typisk eller utypisk er følgende for deg når du arbeider med PPU-studiet?

	Slett ikke typisk 1	*Ikke særlig typisk* 2	*Noe typisk* 3	*Ganske typisk* 4	*Svært typisk* 5
1. Jeg søker etter relevant fagstoff på internett	☐	☐	☐	☐	☐
2. Jeg leser tilleggslitteratur utover pensum	☐	☐	☐	☐	☐
3. Jeg skriver oppsummeringer av bøker og artikler	☐	☐	☐	☐	☐
4. Jeg prøver alltid å finne noen å samarbeide med	☐	☐	☐	☐	☐
5. Jeg diskuterer ofte faglige problemstillinger med medstudenter utenfor undervisningssammenheng	☐	☐	☐	☐	☐
6. I praksisperioden diskuterer jeg ofte faglige problemstillinger med veilederen min i skolen	☐	☐	☐	☐	☐

D. DINE UNDERVISNINGSMETODISKE PREFERANSER

Tenk på undervisningen i PPU-studiet og dine preferanser generelt. I hvilken grad liker eller misliker du følgende?

	Liker godt 1	*Liker* 2	*Verken /eller* 3	*Mis-liker* 4	*Misliker sterkt* 5
1. Faglærere som trekker ut og understreker hovedpoengene i fagstoffet	☐	☐	☐	☐	☐
2. Faglærere som oppmuntrer oss til å tenke selvstendig heller enn å si hvordan de selv tenker	☐	☐	☐	☐	☐
3. Faglærere som viser oss hvordan de selv tenker og gir uttrykk for egne synspunkt	☐	☐	☐	☐	☐
4. Seminarer/gruppeundervisning hvor jeg får god mulighet til å diskutere mine erfaringer og tanker om det aktuelle tema med medstudenter	☐	☐	☐	☐	☐

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Husk: Bare ett kryss på hvert spørsmål.

		Liker godt 1	*Liker* 2	*Verken /eller* 3	*Mis-liker* 4	*Misliker sterkt* 5
5.	Studier hvor det går tydelig fram akkurat hvilke bøker vi skal lese	☐	☐	☐	☐	☐
6.	Studier der vi oppfordres til å gjøre utvalg fra litteraturen selv	☐	☐	☐	☐	☐
7.	Bøker som utfordrer meg og gir forklaringer som går dypere enn forelesningene	☐	☐	☐	☐	☐
8.	Bøker som gir klare fakta og informasjon som er lett å lære	☐	☐	☐	☐	☐

E. DINE ERFARINGER MED PPU-STUDIET

Hvor enig eller uenig du er i disse utsagnene om PPU-studiet?

		Helt enig 1	*Delvis Enig* 2	*Verken /eller* 3	*Delvis uenig* 4	*Helt uenig* 5
1.	Det er lett å finne ut hvilke krav som stilles til studiearbeidet mitt	☐	☐	☐	☐	☐
2.	Arbeidsbyrden på PPU-studiet er for stor	☐	☐	☐	☐	☐
3.	I PPU-studiet er det få muligheter til å fordype seg i temaområder ut fra egne interesser	☐	☐	☐	☐	☐
4.	Vanligvis har jeg en klar formening om hvordan jeg ligger an og hva som forventes av meg i PPU-studiet	☐	☐	☐	☐	☐
5.	I PPU-studiet står jeg fritt til å finne en læringsprosess som passer for meg	☐	☐	☐	☐	☐
6.	Som regel synes jeg vi får nok tid til å forstå de tingene vi skal lære oss	☐	☐	☐	☐	☐
7.	Det stilles høye krav og det er stort press på meg som student i PPU-studiet	☐	☐	☐	☐	☐
8.	Vi har ganske stor frihet i forhold til studiearbeid og oppgaver vi arbeider med	☐	☐	☐	☐	☐
9.	Lærerne her gjør det klart helt fra begynnelsen av, hva de forventer av oss studenter	☐	☐	☐	☐	☐
10.	Omfanget av det vi skal gjennom gjør at jeg ikke kan lære alt så grundig som jeg skulle ønske	☐	☐	☐	☐	☐
11.	Faglige seminar (utenom studiepoenggivende kurs) som arrangeres av linjeforeningene, fakultetene eller PLU er en viktig læringsarena	☐	☐	☐	☐	☐
12.	I det store og hele er jeg godt fornøyd med kvaliteten på PPU-studiet	☐	☐	☐	☐	☐

13. På en skala fra 1 til 10 hvor godt mener du at du gjør det i studiet? *Vennligst ranger deg selv på grunnlag av tilbakemeldingene du har fått (karakterer o.l.).* ⇨

Svært dårlig 1 2 3 4 5 6 7 8 9 10 *Svært bra*

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

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Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

F. OM TEORI I UTDANNINGEN

Ett av målene for lærerutdanningen er å knytte teori og praksis nærmere sammen.
Hva legger du i begrepet «teori»?

a. Beskriv med ord hva teori er for deg.
b. Hvilken nytte mener du at teori har for deg som lærerstudent og senere som lærer?

Vanlig håndskrift. Vennligst skriv tydelig.

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G. KOMMENTARER

Har du kommentarer til dette skjemaet, dine egne svar eller annet du synes det er viktig å få fram, kan du skrive her. *NB: Vennligst ikke skriv noe som kan identifisere enkeltpersoner, verken deg selv eller andre.*

Undersøkelsen gjennomføres med bistand fra SVT-IT, NTNU

Takk for at du ville svare på spørsmålene!