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The development of teacher identity through role and self-conception in pre-service teacher education

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Institute of Education, Faculty of Social Sciences, University of Tartu, Estonia

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The thesis is based on the following original publications, which are referenced in the text by their Roman numbers:

I Löfström, E., Anspal, T., Hannula, Markku, S., Poom-Valickis, K. (2010). Metaphors about the teacher: Gendered, Discipline-Specific and Persistant? In J. Mikk, M. Veisson, P. Luik (Eds), *Teacher's personality and professionalism: Estonian Studies in Education* (104–121). Frankfurt am Main: Peter Lang Verlag.

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III Anspal, T., Leijen, Ä., Löfström, E. (2018). Tensions and the teacher's role in the student teacher identity development in primary and subject teacher curricula" *Scandinavian Journal of Educational Research*, 1–17. https://doi.org/10.1080/00313831.2017.1420688

The author contributed to the publications as follows:

For Article I: participating in the development of the methodology, analysing and reporting the qualitative data, writing the article in cooperation with other authors.

For Article II: Formulating research questions, participating in the development of the design, methodology, data analysis, writing the article as a main author in cooperation with other authors.

For Article III: designing the study, formulating the research questions, collecting data, writing the article as a main author in cooperation with other authors.

1. INTRODUCTION

What matters the most in the educational system is getting and keeping good teachers (Barber & Mourshed, 2007). But how is it possible to recognize a good teacher and to educate good teachers? How can we encourage them to enter and stay in the profession? In Estonia, as in several other countries, teaching is considered a tough job with not very high salaries or prestige and many capable students choose other careers than teaching, leading to the aging of the teaching staff and shortages of good teachers in many areas (Riigikontrolli Aruanne 2004). There is also a shortage of high caliber teacher candidates, especially subject teachers, who study their subject areas the first three years and enter teacher education programs after that. Research carried out in Flanders shows that the integrated teacher education model fosters stronger commitment to teaching than the 3+2 model, and the graduates of the 3+2 model tend to feel less prepared for teaching (Rots, Aelterman, Vlerick, & Vermeulen, 2007). Data from the Estonian Ministry of Education and Research shows that while kindergarten and primary teachers are more willing to stay in the profession, newly graduated subject teachers tend to either not start working as teachers, or leave the profession soon after entering (Ots, Vaher, Selliov, & Laanoja, 2009).

Teacher identity is one of the variables that play a role in the commitment to teaching. Many scholars of teacher education (e.g. Alsup, 2006; Beijaard, 1995; Kelchtermans, 2009; Korthagen & Vasalos, 2005) have emphasized the importance of paying attention to professional identity development in teacher education. Bullough has argued that teacher professional identity "is of vital concern to teacher education; it is the basis of meaning making and decision making" (1997, p. 21). Student-teachers enter teacher education with strong beliefs and understandings about teaching and learning (e.g. Kagan, 1992; Löfström, Poom-Valickis, Hannula, & Mathews, 2010), and their professional identity continues to develop over the course of their studies and after they start working as teachers.

Teacher identity as a concept has been defined and explored differently in various studies (Beijaard, Meijer, & Verloop, 2004). In general terms, it can be understood as an understanding that a person has about him/herself in relation to the teaching profession. Developing teacher identity means finding a balance between the individual and the professional side of being a teacher (Lipka & Brinthaupt, 1999). Teacher identity is explored differently, with some studies focusing on the more personal (e.g. self-concept), and some on more professional aspects (e.g. roles and knowledge) of being a teacher (Beijaard, et al., 2004; Lamote & Engels, 2010). Recent literature on teacher identity has focused more and more on the process of reconciling the professional and personal sides of teaching and the tensions that arise during this process (Leijen, Kullasepp, & Anspal, 2014; Pillen, Beijaard, & Brok, 2013a, b, c). It has been argued that the learning process of student-teachers is meaningful only when embedded in the experience of learning to teach and reflecting on this experience (Korthagen,

Loughran & Russell, 2006). During teacher education, teaching practice especially offers opportunities to experience teaching, which in turn can challenge student-teachers' thinking and their professional identity (Cattley, 2007). Several studies have emphasized the importance of designing programs that allow student-teachers to learn and reflect on their teaching experiences early on in their studies in order to reduce the gap between theory and practice in teacher education programs (e.g. Brouwer & Korthagen, 2005; Grossman, Hammerness, & Mcdonald, 2009; Hammerness, 2013; Korthagen, Loughran, & Russell, 2006)

Teacher education programs are conducted and organized in a variety of ways (see e.g. Zeichner & Conklin, 2005, Flores, 2016). In the USA, several large-scale studies have been carried out to investigate the features of these programs that are necessary to develop effective teachers (Darling-Hammond, Chung, & Frelow, 2002; Feiman-Nemser & Sharon, 2001; Zeichner & Conklin, 2008). Studies on effective programs (e.g. Darling-Hammond, 2000, 2006; Grossman et al., 2009; Zeichner & Conklin, 2008) suggest that the features of good teacher education programs include a clear vision, an emphasis on teaching practice, the inter-relatedness of theory and practice and mentor support. Moreover, teacher education programs that allow for interchange between teaching practice and theoretical studies, as well as a gradual increase in the complexity of student teaching activities are positively related to teachers' competence when they start working (Brouwer & Korthagen, 2005). Researchers have suggested that during teacher education the focus should shift to developing teacher identity (e.g. Korthagen, 2004).

Rogers & Scott (2008) have pointed out that while the number of studies on teacher identity is growing, empirical studies that connect identity development and teacher education programs are rare. It is also considered to be largely unknown how student-teachers themselves perceive their development (Meijer, de Graaf, & Meirink, 2011). Although strong program features, including the focus on teaching practice, have been pointed out, along with the importance of supporting the development of student-teachers' identity development, there is not enough information about how differently organized teacher education programs address the factors relevant to teacher identity development, especially during the whole study period and, for that reason, this is the focus of the current dissertation.

In Estonia, as in many other countries, primary school teachers follow an integrated five-year curriculum resulting in a master's degree. Subject teacher programs follow a 3+2 system, where teacher education is offered at the master's level on top of a bachelor's degree in a subject. These teacher education programs differ from each other in terms of the level of integration of theory and practice, as well as the amount of teaching practice: features that are found to influence the preparedness of beginning teachers. Another differentiating factor is the length of the programs, which so far has not received enough attention in relation to teacher identity and its development. The tendencies pointed out earlier by Rots et al. (2007) may also hold true in the

Estonian context, and it is thus important to understand the identity development processes in different pre-service teacher education models and to determine whether these sufficiently prepare student-teachers for the teaching profession and sufficiently support student-teachers' identity development.

The aim of the study is to explore emerging teacher identity and its development in the context of pre-service teacher education programs focusing on changing nature and the multiplicity of teacher identity. Understanding how the features of teacher education programs and teacher identity relate can inform teacher educators' decisions about organizing these programs.

In Chapter 2, teacher identity is described in more detail to explain the literature and theoretical models that have driven this research. Research questions are presented at the end of Chapter 2.

2. LITERATURE REVIEW AND THEORETICAL MODELS

The main concept of this research is teacher identity. Teacher identity has been viewed as a variation of professional identity that can be explored via personal biographies and dispositions and via professional roles. In the process of reconciling professional and personal aspects, tensions can occur.

2.1 Teacher identity

"Teacher identity is hard to articulate, easily misunderstood and open to interpretation"
(Olsen, 2008, p. 4)

Teacher research for the last twenty years has been focused on teacher identity, abandoning the traditional focus on such "assets" as knowledge, competences and beliefs as the basis of professional development (Akkerman & Meijer, 2011). In general terms, teacher identity can be seen as the understanding that a person has about him/herself in relation to the teaching profession, although the definitions of teacher identity vary across research projects and depend on the perspective researchers have taken in exploring identity (Beijaard et al., 2004). In this dissertation, teacher identity is used as a synonym for teacher professional identity.

While there is still no clear definition, most scholars have agreed on the following essential features of teacher identity.

Firstly, teacher identity is discontinuous, malleable and shifting (Rogers & Scott, 2008), influenced by the interpretation and re-interpretation of experiences (Beijaard et al., 2004: Kerby, 1991) and it can be defined as an answer to the question "Who am I at this moment?" (Beijaard et al.,2004, p.108). Beauchamp & Thomas (2009) have pointed out that the language that researchers use to describe the changing nature of identity varies. For example, some authors refer to the development of identity (e.g Olsen, 2008), to the construction of identity (e.g Lave & Wenger, 1998), and to the shaping of identity (e.g Flores & Day, 2006), to name a few. In this research, mostly the *development* of teacher identity is used, although it is acknowledged that other descriptions describe the same phenomenon.

Secondly, teacher identity consists of sub-identities or dimensions that relate to different contexts and relationships (Alsup, 2006; Beauchamp & Thomas, 2009; Beijaard et al., 2004; Sutherland et al., 2010). These sub-identities can be applied as analytical lenses to distinguish different perspectives. For example, Beijaard et al. (2000) describe teacher identity as consisting of three sub-identities: the teacher as a subject expert, didactic expert and pedagogical expert. Examining experienced teachers, Day, Sammons, Stobart, Kington, & Gu (2007) distinguished between three dimensions of identity: professional, situational and personal, showing how one or more dimensions can dominate

over the others, and that a balance between the dimensions is connected to a high level of motivation and commitment.

Thirdly, teacher identity involves both the individual and the context, and has a social nature: it develops through social interactions in social contexts, including personal biography, previous experiences as a pupil, and teacher education (Flores & Day, 2006; Rogers & Scott, 2008). These prior beliefs and knowledge serve as filters through which student-teachers experience teacher education (Kagan, 1992; Pajares, 1992). This view can be traced back to William James and George Herbert Mead, who emphasized social interaction in the development of *self,* describing how the self is developed (only) during the social interaction (Hammack, 2015). Also, according to social identity theory, behavior is determined by a compromise between individual characteristics and interpersonal relationships of social groups (Tajfel & Turner, 1979).

Gee's (2000) identity framework includes all of the above-mentioned features. Gee defined identity as a "certain kind of person in a given context" (p 99)" and distinguished four ways to define identity. Firstly, there is nature identity (N-identity), i.e. "who I am" in terms of aspects that are beyond individual control or the state one is in, e.g. sex. Secondly, there is the institutional perspective (I-identity), set by authorities in an institution. It can involve individual choice (e.g. being a student-teacher). Institutional identity can also be imposed on a person, for example prisoners. Thirdly, the discursive perspective (D-identity) is an individual trait that is negotiated through social contacts and has to be recognized by others (e.g. being a good speaker). Gee argues that D-identities can be represented on a continuum, where a person can be a contributor or actively ascribe to the trait. Also, how actively one pursues the trait can depend on the group one is associated with at that time. Fourthly, there is the affinity perspective (A-identity), which requires voluntary shared interests and practices, e.g. belonging to a community of practice. This identity provides a sense of belonging and "focuses on distinctive social practices that relate and sustain group affiliators" (Gee, 2000, p.105). According to Gee, these four identities do not form separate categories, but are interrelated and should be seen as different aspects of identity, with one aspect prevailing in one context, but falling into the background in another context, thus making identity an ongoing process. Gee's framework has been used in several studies on teacher identity (Alsup, 2006; Leijen & Kullasepp, 2013 a, b).

A reoccurring discussion about teacher identity involves the connection between self and professional identity. Van Huizen and his collegues distinguished between competency-based teacher education and personal orientation to teaching and emphasized that teaching requires a fit between the teacher as a professional (functionary) and the teacher as a person (van Huizen, van Oers, & Wubbels, 2005). This interconnectedness has led to an interest in teacher development from different perspectives: through the teacher's biography and "self" (e.g Nias 1989) and, on the professional side, in teachers' roles and knowledge (Beijaard et al., 2000). The third perspective – combining these two perspectives – was raised later. This perspective focuses on reconciling the

professional and personal aspects of teacher identity and outlines potential tensions that can occur when student-teachers' professional and personal sides "conflict with what teachers personally desire and experience as good" (Beijaard et al., 2004, p.109). In a review focusing specifically on student-teachers' professional identity in relation to teacher education programs, Izadinia (2012) pointed out that instead of explicitly exploring the construct "teacher identity", researchers have reported changes in aspects that account for the personal side of teacher identity: cognitive knowledge, self-awareness, sense of agency, teacher voice and confidence. Therefore, while professional knowledge and competence are important in teacher education, in connection with teacher identity research focusing on the personal side of teacher identity seems to be more common.

The following chapters describe these different traditions in more detail, focusing on the theoretical frameworks used in the studies of this dissertation.

2.1.1 Role and knowledge as a core of identity

All professionals acquire the competences, as well as the values, of their professions via formal and informal types of learning. Teachers are no exception. The focus of teacher education and development has been on different forms of teacher knowledge (Ben-Peretz, 2011, Verloop, Van Driel, & Meijer, 2002) and while there was a time it was believed that it was enough to have good subject knowledge and some on-the-job training, the concept of teacher knowledge grew more complicated over time. Researchers introduced such concepts as teachers' general pedagogical knowledge, content knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners, contexts, educational ends and purposes, values and more.

For example, Tamir (1991) suggested separating teachers' professional and personal knowledge, with professional knowledge being the body of skills and knowledge that one needs to function successfully in the profession, and personal knowledge encompassing the idea of experience in order to describe teachers as knowing individuals. In line with this, Bromme (1991, as cited in Beijaard et al., 2000) stressed that the teacher's professional identity is also based on his/her professional knowledge. This includes knowledge of the subject and pedagogy, but also the interaction of theory and practice.

Inspired by Bromme's work, Beijaard and his colleagues started their work from the following statement: "teachers drive their professional identity from (mostly combinations of) the ways they see themselves as subject matter experts, pedagogical expert, and didactic experts" (Beijaard et al.,2000, p. 751). They defined professional identity on the basis of three categories: the subject one teaches, the relationship with students and the teacher's role or role conception. Teacher *expertise in a subject* area includes a thorough and deep level of understanding of the subject and shows an orientation towards the academic subject. Thus one of the main duties of a teacher is to support students'

development in the subject area based on subject matter knowledge and skills. According to the view that the teacher is primarily *a pedagogue*, relationships, values, and the moral and emotional aspects of pupils' development are considered to be at the core of the teacher's work. His/her profession is based on knowledge and skills that support students' social, emotional and moral development. The teacher as a *didactic expert* emphasizes the teaching of the subject matter using discipline-specific knowledge to facilitate the learning processes of pupils and to create a positive learning environment. The teacher's role is thus viewed more as a facilitator of learning, including planning, execution and evaluation of teaching and learning processes (Beijaard et al., 2000).

In their study, Beijaard and his colleagues asked experienced teachers how they perceived their teacher identity now as compared to at the beginning of their careers, also exploring the factors that might influence these perceptions and significant learning experiences. They developed a questionnaire, based on the three aspects of teachers' professional identity and compared the answers on the questionnaire with an analysis of the qualitative data. The participants were 80 teachers from different subject fields and with a range of experience. The results enabled the authors to distinguish three groups of teachers: teachers who scored higher on one aspect (subject, didactics or pedagogy), teachers who scored equally on all aspects, and teachers who scored higher or equally on two aspects. Most of the teachers belonged to the second group, especially emphasizing the subject and didactic aspects of teaching. Even teachers who scored higher on subject matter and pedagogical expertise did not refer to pedagogical aspects in their clarifications. More teachers from the balanced group than from the others mentioned the importance of being sensitive to the atmosphere in the classroom, and the reactions and well-being of the students. Although previous research had indicated several influencing factors in teacher identity, such as teaching context, experience and biography, no significant differences were found between the groups in this study. (Beijaard et al., 2000)

This "Beijaard model" was developed and used with experienced teachers first; several studies have used this model as a basis for studying student-teachers. The model in its adopted form has gained particular importance in Estonia in research on student-teacher identity (Löfström, Anspal, Hannula, & Poom-Valickis, 2010; Löfström, Poom &Valickis, Hannula & Mathews, 2010; Löfstöm & Poom-Valickis, 2013). In this dissertation, it is suggested that Beijaard's model can also be used to conceptualize the institutional identity (I-identity) in Gee's framework (Gee, 2000). This means distinguishing between subject knowledge, didactic knowledge and pedagogical knowledge.

2.1.2 Self-conception as the core of identity

In analyzing studies on how student teachers' knowledge of teaching developed during initial teacher education, Kagan (1992) argued that the primary concerns student-teachers had were connected with the self and only later in the studies did the attention shift to the classroom as well. Moreover, Connelly and Clandinin (1999) found in their studies that teachers tended to think more about "who they are" in contrast to "what they know" when they talked about themselves.

It has been argued that self is revealed through narratives or life stories (Kerby, 1991, Richardson, 1996; Volkmann & Anderson, 1998). Discourse is important in this process: through talking or writing about oneself, the "self" is shaped. Through the process of self-reflection, student-teachers can relate their experiences to their (prior) knowledge, beliefs and feelings (Korthagen 2004). Researchers following this tradition have tried to identify the components that constitute teachers' professional development. For example, although essentially similar to teacher professional identity, Kelchtermans (1993, 2009) avoids using the term professional identity "because of its static and essentialist connotations" (Kelchtermans, 2009, p. 262), instead they talk about professional self or the concept self-understanding, referring to understanding both oneself at a certain moment in time and the ongoing process of making sense of one's experiences, including the impact of those experiences on the self. This dynamic sense of identity is defined as teachers' self-understanding, which involves such questions as *who am I as a teacher at this moment?* and *who do I want to become?* (Kelchtermans, 2005).

Rogers and Scott (2008) separated self as *meaning maker* from identity as *the meaning made* (p739). They explained the difference through questions one can ask. The self is connected to the questions (and answers to the questions) Who am I? and Who do I want to be? However, Lauriala and Kukkonen (2005) suggested that identity and self-concept can be used as synonyms, although self-concept is more commonly connected to student-teachers. They also suggested (based on Strauman, 1996) that the "ought self" (the one recognized as the goal by society or other external group), the "ideal self" (the ideal that is set by the individual as a goal) and the "actual self" (the one that prevails at the moment) are three dimensions of self that are interconnected. The "actual" and "designated" identities were also mentioned by Sfard & Prusak (2005, p.14), indicating the interplay between ideals and reality in teacher identity, which several researchers have explored (Beauchamp & Thomas, 2010; De Ruyter & Conroy, 2002).

Kelchtermans (1993) identified five aspects through which teachers' professional identity or self-understanding can be grasped and which are all intertwined. Firstly, the vision of oneself as a teacher (*self-image)* reveals how one describes oneself as a teacher. Secondly, the vision of oneself is closely connected to evaluating oneself as a teacher, i.e. *self-esteem*. Questions to be asked are: "How good am I as a teacher?" and "How good am I compared to my

colleagues?" Self-esteem is often connected with and driven by comparisons with others and can thus be defined as the result of balancing self-image and the professional norms that other teachers follow. If the balance is negative, this may cause de-motivation. *Job motivation,* as the third factor, includes motives for entering and staying in teaching or teacher education. Fourthly, the understanding of one's tasks as a teacher *(task perception)* indicates how teachers define their job. The quality of the relationships with pupils and didactic abilities play a central role here but so do cooperation with other colleagues and the way the teacher sees himself performing in the classroom. Fifthly, the *future perspective* of the teachers' professional self contains teachers' expectations for the future development of their job situation and the evaluation of how they feel about this situation. Aspects of self have been at the forefront of several other studies on teacher identity, especially in connection with reflection (e.g. Hamman, Coward, Johnson, Lambert, Zhou, & Indiatsi, 2012).

2.1.3 Reconciling personal and professional aspects of identity, and tensions

"It seems unlikely that the core of the personal will not impact the core of the professional"
(Loughran 2006, p. 112).

Several recent studies on teacher identity development (e.g. Akkermann & Meijer, 2011; Leijen & Kullasepp, 2013 a, b; Leijen, Kullasepp & Ots, 2013) have argued for dialogical perspectives in seeking to understand how the personal and professional selves are negotiated in the course of becoming a professional. Teacher identity, then, consists of multiple aspects of the self (e.g. I as a subject matter expert, I as a pedagogue, and I as a mother), which according to the Dialogical Self Theory can be conceptualized as I-Positions (Hermans, 2001). Different I-Positions may conflict with each other in the process of forming a more or less coherent and consistent self through various acts of participation and self-investment in one's life (Akkermann & Meijer, 2011). Dialogical Self Theory acknowledges the aspects of teacher identity – multiplicity, social nature and discontinuity – but rather than focusing on the dichotomy of professional versus personal identity, the "dialogical self" provides a framework for conceptualizing teacher identity in a more holistic way (Akkermann & Meijer, 2011). Dialogues within the self and with others are useful to help organize meaningful experiences into one structured narrative, so that a coherent understanding of self can be established (Hermans & Hermans-Jansen, 1995 as cited in Leijen & Kullasepp, 2013b).

According to several authors, this process can be described as a struggle, because student teachers have to make sense of sometimes conflicting perspectives, expectations and roles (e.g Beijaard et al., 2004; Volkman & Anderson, 1998). When student-teachers perceive differences between their teaching and

established teaching standards, they develop "reality shock" and several problematic aspects that are common for beginning teachers occur, such as managing students' behavior, dealing with time overload and planning lessons (e.g Veenman, 1984). Tensions, conflicts, and gaps all contribute to the development of a teacher's identity and may emerge at the interfaces of perceived present and future selves, idealistic images of the teacher and school reality, and personal approaches and social constructions of the teacher's role (Schatz-Oppenheimer & Dvir, 2014).

Recently the term "identity tensions" has been introduced, referring to conflicts when reconciling the personal and professional sides of being a teacher. Several identity tensions have been identified in the literature (e.g. Alsup 2006; Leijen & Kullasepp, 2013a; Pillen et al., 2013a,b,c,). Alsup (2006) identified three types of tensions in her study: 1) tensions between being a student at a university and a teacher at a school when the students feel like students but are expected to feel like teachers, 2) tensions between personal convictions, skills and professional role expectations, and 3) tensions between what is taught at the university about teaching and learning and what is experienced at the practice school. Similarly to the Dialogical Self Theory, Alsup suggests the importance of creating borderline discourses: "It is discourse that allows pre-service teachers to bring personal subjectivities or ideologies into the classroom and connect them to their developing professional selves" (Alsup, 2006, p. 37). Alsup suggests that the decision to leave the teaching profession may be attributable to experiences of these tensions. Three out of six teachers in her study left the profession, and she showed how that was related to the tensions they experienced.

Recently, several authors have studied teaches' professional tensions, expanding previous research of Alsup (e.g. Leijen & Kullasepp, 2013a) or presenting new types of tensions (e.g. Pillen et al., 2013b). The most commonly reported professional identity tensions include: 1) "wanting to care for students *vs* being expected to be tough", 2) wanting to invest in private life vs feeling pressure to spend time and energy on work, and 3) experiencing conflicts between one's own and others' orientations regarding learning to teach (Pillen et al, 2013a). Building on Alsup's framework, Leijen and Kullasepp (2013a) also identified tensions related to the gap between the knowledge of teaching and learning and actual practices in student-teachers' practice schools and tensions between the professional role expectations and personal aspects of a student-teacher. The profiling of beginning teachers' professional identity tensions suggests that tensions change during the transition period from final-year student to first-year in-practice teacher (Pillen et al., 2013c).

Experiencing tensions or conflicts may be essential for the development of student-teachers' professional identity (Alsup, 2006; Meijer et al., 2011). However, while some of the tensions are helpful in terms of identity development, some might be too difficult to reconcile. These tensions can lead to dropping out of the profession (Leijen & Kullasepp, 2013a; Meijer, 2011; Smagorinsky et al., 2004;). Due to the fact that tensions can be very stressful for

beginning teachers, emotions, both positive and negative, have been found to be connected with teachers' professional identity development (Flores, 2004; Kelchtermans & Ballet, 2002; Poulou, 2007; Timoštsuk & Ugaste, 2010, 2012). Timoštšuk & Ugaste (2012) highlight the fact that focusing on positive emotions should be strengthened in teacher education in order to support student-teachers' identity development.

In this dissertation, tensions are considered broadly, including competence gaps, worries, contradictions, and conflicts experienced by student-teachers during their studies.

2.2 Factors influencing teacher identity

The process of identity and its development is complex and is influenced by different factors. A review study focusing especially on pre-service teacher education revealed that researchers have explored the broad range of variables that influence teacher identity with the following main focuses: prior experience, the impact of learning communities student-teachers are involved in, context, and reflective activities student-teachers undertake (Izadinia, 2012).

Prior experiences, beliefs and motivation

According to Richardson (1996), beliefs about learning and knowledge are influenced by personal aspects, schooling and formal knowledge. Student-teachers who enter teacher education differ from one another in terms of their personal attributes, motivation to become teachers, their prior knowledge and understandings of teaching, learning and knowledge. They have already spent thousands of hours in the classroom as pupils observing their teachers' work. In the process, they most likely develop beliefs about good teaching and teachers, and ideas about what kind of teachers they themselves want to be. These prior beliefs and knowledge then serve as filters through which student-teachers experience teacher education (Bullough, 1997; Calderhead, 1996; Kagan, 1992; Pajares, 1992). Cook (2009), for example, found that prior experiences at schools and with former teachers act as learning opportunities for student-teachers. Both positive and negative experiences with teachers during schooling are found to inform student-teachers' identities (Lortie 1975). Beliefs are difficult to change and students can complete teacher education without changing their previous beliefs (Joram & Gabriele, 1998, Pajares, 1992). It is suggested that, teacher education should start with investigating student-teachers' prior beliefs (Joram & Gabriele, 1998, Walkington, 2005). Experiencing teaching and reflecting on one's beliefs may lead to changes in the beliefs, especially when they are repeatedly challenged through creating cognitive dissonance (Alsup, 2006). As a result, these critical experiences and reflecting on these experiences (essentially lived through as crises by student teachers) lead to identity development (Meijer et al., 2011).

Moreover, Olsen (2008) further argues that teacher educators should study student teachers' motivations for entering teacher education because these motivations connect prior events and experiences with the kind of teacher one wants to become. This, in turn, enables student-teachers to learn from the past and adjust what and how they learn from it. The motivation to enter and stay in teacher education has been tied to teacher identity in several studies (e.g Hong, 2012; Fokkens-Bruinsma & Canrinus, 2014, Löfström & Poom-Valickis, 2010) and it is generally acknowledged that altruistic and intrinsic motives (e.g. interest in the subject, feelings of responsibility and love for children) are related to stronger teaching commitment (Kyriacou & Coulthard, 2000; Richardson & Watt, 2005; Thomson, Turner & Nietfeld, 2012).

Context and learning communities

Given the social and contextual nature of identity, the role of context, learning communities and discourse in developing teacher identity is important in the context of pre-service teacher education.

According to Sutherland et al (2010), pre-service teachers need to create and re-create their images of themselves as members of a professional community in order to make the transition from student to teacher. This is in line with Wenger (1998), who argued that individuals develop their identities when they become members of a community of practice where learning happens through joint activities and in collaboration with others. Gee's conception of the A-identity shares similar ideas and conceptualizes identity through discourse and community. Several researchers have investigated changes in student-teachers' professional identity as a result of contextual factors and have pointed out the significant importance of creating an atmosphere that encourages collaboration and reflection in learning communities (Farnsworth, 2010, Timoštšuk & Ugaste, 2010, Trent, 2010). Trusting relationships with peers and mentors have been argued to be essential in leading to identity development in these communities (Geijsel & Meijers, 2005)

Teacher education programs are considered crucial in providing a wide range of situations in which student-teachers can interact with others, and develop and become aware of possible identities (Beauchamp & Thomas, 2009; Coldron & Smith, 1999). Researchers have attempted to define principles for developing teacher education that support teacher development in an effective way. As mentioned in the introduction, researchers have argued for effective teacher education programs. One feature of effective teacher education program is that it emphasizes learner-centered pedagogy, i.e. it offers a balance between the different types of course work (pedagogical knowledge, content/didactics knowledge and subject knowledge) and practice experiences from early on in the program, and it offers student teachers opportunities to practice teaching at schools that have strong leadership and collegial relationships, and integrate theory and practice through the use of different instructional practices: portfolios, teacher research etc. (Zeichner & Conklin, 2008). Korthagen, Loughran,

Russell analyzed effective features of existing teacher education programs and suggested that the most important principles involve views of knowledge and learning, program structures and practices, and the quality of staff, with all of these principles being equally important (Korthagen et al., 2006). Within the European Union, there is a lot of variation between countries regarding how the key elements in teacher curricula are combined and how theory and practice are integrated (Piesanen & Valijavi, 2010). In general, studies in education, subject matter, didactics (pedagogical content knowledge) and teaching practice are included in teacher education programs (Flores, 2016). The question is: how much emphasis is placed on each component (Flores, 2016; Zeichner & Conklin, 2008) as they are combined in different ways in different countries (Flores, 2016)?

Empirical studies that connect context and teacher identity are not that common (Avraamidou, 2014). Izadinia's (2012) review of empirical studies shows the importance of accumulating experiences that create tensions or critical incidents that force student-teachers to reflect on the teacher-self. Smagorinsky et al. (2004) examined a conflict that arose in a constructivist teacher education program and traditional teaching site that did not make it possible to teach the way the student-teacher was educated. In one of the few longitudinal studies, Avraamidou (2014) followed one student teacher through five study years and showed the importance of such critical experiences as specific lessons, collaboration with an expert, micro-teaching experience etc. that influenced her identity as a teacher. The role of the schools that student-teachers have their teaching practice in has been examined in other studies as well (e.g Flores & Day, 2006).

The missing link between theory and practice is found to be one of the most critical elements in initial teacher education (Elstad, 2010). Teaching practice has increasingly been recognized as playing a determinant role in teachers' initial education and their early development (Bullough & Stokes 1994; Caires & Almeida 2005; Evelein, Korthagen, & Brekelmans 2008). Student-teachers' own experiences in teaching are argued to challenge their current thinking and thus can be useful for their professional identity development (Cattley, 2007). This is in line with Kerby (1991), who defined teacher identity as an ongoing process of interpretation and re-interpretation of experiences. Several theoretical and empirical studies have argued for the importance of teaching practice in developing teacher identity (Allen & Wright, 2014; Atkinson, 2004; Leijen et al., 2014). Particular importance has also been placed on critical incidents (Meijer et al., 2011; Sisson, 2016). The role of mentor teachers has changed from role models to facilitators of student-teacher identity development (Izadinia, 2015; Korthagen et al., 2006; Stokking, Leenders, De Jong, & Van Tartwijk, 2003).

Reflection and reflective activities

While practice teaching is important to bridge the gap between theory and practice, reflection should be included too, because reflection is considered extremely important in learning from experiences (Korthagen, 2004; Korthagen & Vasalos, 2005; Loughran, 2002). Through reflection, the teacher comes to understand his/her professional activities better (Marcos, Migueal & Tillema, 2009; Allas, Leijen & Toom, 2017). However, reflection itself does not create new knowledge or understanding (Schulman & Schulman, 2004). Reflection is considered effective when "it leads the teacher to make meaning from the situation in ways that enhance understanding so that she or he comes to see and understand the practice setting from a variety of viewpoints" (Loughran, 2002, p.36).

Several authors state that reflection is critical in developing teacher identity and argue for the usefulness of reflection assignments in teacher education programs (Korthagen, 2004; Korthagen & Vasalos, 2005; Lamote & Engels, 2010; Sutherland, Howard, & Markauskaite, 2010). Empirical studies offer support for this, suggesting that reflecting on beliefs, values, feelings and teaching experiences helps to develop student-teachers' teacher identity. For example, reflective cycles and forums were pointed out as useful reflective tools (Maclean and White, 2007; Sutherland et al., 2010; Webb, 2005). Sutherland et al. (2010), for example, used an online discussion forum and studied the development of students' self-image as teachers through the construct "teacher's voice". Their study showed that during the 12-week course and reflective discussions, the majority of pre-service teachers moved towards more professional stances in their texts. Also, reflective writings/journals or portfolios have been studied to understand the impact of reflective practices on teacher identity development. Walkington (2005) demonstrated how student teachers reflecting on their beliefs and perceptions informed their identity,and argued that challenging personal philosophies and existing practices is vital. Cattley (2007) used reflective writing logs and emphasized the need to support the development of reflective writing skills and asking questions that invite analytical and evaluative reflection. Körkkö, Kyrö-Ämmälä & Turunen (2016) followed thirteen primary student-teachers to understand how their teacher identities, in terms of their practical beliefs, developed during a teacher education program. They found that students' reflections gradually broadened and deepened, but some student-teachers' reflections still remained mainly descriptive. Also, Leijen & Sööt (2016) compared three methods that can be used for reflecting and found that these produced different types of outcomes. Guided reflection was found to be more effective than unguided reflection, although it requires more effort and time.

Reflection can be retrospective (looking back on experiences) or prospective (looking ahead). Schön (1983) distinguishes three forms of reflection: reflection-on-action (takes place after an action/teaching experience), reflection-in-action (takes place during an action/teaching experience) and reflection-for-

action (takes place before an action and includes planning). Reflection-on-action is the most common type of reflection in teacher education programs, as reflection-in-action is connected with experience (Schön, 1983). Beauchamp and Thomas (2010) have argued that reflection should be more prospective, e.g. focused on reflecting on ideals. Looking into the future can be especially helpful for student-teachers' identity development, and therefore, referring to Jenlin (2006), they argue for promoting the pedagogy of identity, which leaves room in the curriculum to link reflection with an ideal teacher self. This is similar to the findings of Korthagen & Vasalos (2005), who argued that asking such questions as "who am I as a teacher?" and "who do I want to become?", in other words reflecting on ideals and experiences, are important in the process of developing as a teacher. They further argue for a core reflection that takes into consideration not only "outer" levels, such as environment, behavior and competences, but also extends to the "core": the identity and mission of the teacher.

However, Hermans & Hermans-Jansen argue that most people do not feel motivated to reflect, as the process involves feelings of uncertainty (as cited in Geijsel & Meijers, 2005). Student-teachers' experiences with teaching can produce both positive and negative emotions (Poulou, 2007; Timostsuk & Ugaste, 2012), feelings of inadequacy (Volkmann & Anderson, 1998) and tensions between expectations and what one feels that she or he can achieve (Samuel & Stephens, 2000). Several studies have demonstrated that higher levels of reflection, e.g. systematic and critical reflection, are difficult to achieve (Gale & Jackson, 1997; Korthagen & Vasalos, 2005; Pihlaja & Holst, 2013, Leijen & Sööt, 2016). There are other examples, e.g a study carried out in Finland showed that almost a third of reflection categories touched the "core" of a teacher: mission and identity (Maaranen & Stenberg, 2017). Furthermore, teachers seem to pay more attention to the outcomes of reflection than to the process (Marcos et al., 2009). It is considered necessary to teach and practice reflection skills (Williams & Grudnoff, 2011). Several researchers have suggested or developed models for reflective practice (Leijen, Kullasepp, & Ots, 2013, Sööt & Leijen, 2012) that can have positive influences on student-teachers' identity development.

Although reflection and reflective activities are considered beneficial, there has also been criticism of reflection. Researchers have voiced doubts about whether reflection actually includes the self and emotions, or if it remains at the surface level and is thus merely a fiction; critics also doubt that the university creates a comfortable and trusting context where reflection can take place. In an extensive review study on reflection, Beauchamp (2015) referred to and discussed these concerns. She concluded that student-teachers should be given more control over reflection so that they can develop more confidence in their own judgments. In turn, mentors and teachers need to learn how to facilitate and support reflection.

To sum up, teacher identity as an analytical lens can be applied from different angles, from the perspective of developing the self, role perception and a combination of these. Teacher education programs as sites for teacher (identity)

development are important, as during their studies, student-teachers need support in the process of developing their teacher selves. Teacher education programs vary in terms of the number, emphasis and integration of different components. Currently, there is not enough information on how the different programs support teacher identity development.

2.3 Focus, aim and research questions

The aim of the study is to explore the emerging teacher identity and its development in the context of pre-service teacher education programs, focusing on changing nature and the multiplicity of teacher identity.

The main research question is defined as following: **how do student teachers develop their professional identity as seen through role and conception of self in pre-service teacher education curricula?**

As teacher identity can be explored from different angles, this overarching question is studied from three different perspectives. The following sub-questions were posed:

> RQ 1: How are beliefs about the teacher's role manifested in the student teachers' professional identity development in different types of curricula?
>
> RQ 2: How do student teachers construct the conception of self as a teacher in different types of curricula?
>
> RQ 3: What kinds of tensions do student teachers experience in their professional identity development process in different types of teacher education curricula, and how do these tensions change during the master's level of teacher education?

To answer the research questions, three studies were conducted. The first research question is addressed in Studies I, II and III, the second research question is addressed in Studies I and II, and the third research question is addressed in Study III. Therefore, the three research questions posed in this dissertation are answered based on the studies reported in different articles (I, II and III).

In Study I (Article 1), the focus is on student teachers beliefs about the role of the teacher which are revealed through metaphors and a survey, In Study II (Article II), the focus is on student teachers' narratives of themselves as teachers to reveal how they construct their conceptions of self as teacher. In Study III (Article III), the focus is on the developmental aspect of identity and tensions that student teachers experience during their studies and how these tensions are connected to their understanding of teacher' role perceptions.

3. METHODOLOGY

The methodology of this research is underpinned by pragmatist worldview. This resulted in studies that utilized both survey and narrative data, including interviews. The underpinnings and the resulting designs of the three sub-studies are explained in this chapter. The participants were student teachers in different pre-service teacher education programs.

3.1 Philosophical underpinnings

Research is always guided by the researcher's views and understanding of the world. Recognizing how these views influence the choices made in research is important, and helps readers position the study in the broader context of research in the field.

This study has been influenced by a pragmatist worldview. Pragmatism is most often associated with mixed methods research, focusing on the research question and emphasizing the importance of practical implications of the research (Creswell, 2007; Creswell & Plano Clark, 2011). However, pragmatism as a philosophy goes beyond mixed methods research and practical implications and offers an alternative epistemological paradigm (Hall, 2013). Pragmatism disregards the traditional divide between qualitative and quantitative research that, through specific ontology, epistemology and methodology, pre-defines the kind of knowledge a researcher can acquire from a study (Johnson & Onwuegbuzie, 2004, Morgan, 2007).

The human experience is placed at the center of inquiry, and ontological arguments about the nature of the world cannot be treated as one *or* another (positivist versus constructivist). Instead, they are two sides of the same coin (Morgan, 2007, 2014). This means that the researcher acknowledges that different traditions reveal different sides of the world and the research area. This aspect is especially important in this dissertation, as identity is regarded as a fluid concept that keeps changing and is difficult to grasp. It is thus important to explore and understand if, how, and what kind of knowledge different research methods produce. Using different methods in Studies I, II and III makes it possible to explore what tools researchers have at their disposal that can be used to extract knowledge about teacher identity, and to evaluate strengths and weaknesses.

According to John Dewey (as cited in Morgan, 2014), knowledge is considered to be an active process of inquiry, moving back and forth between beliefs and actions. This process of inquiry and the process of understanding and acting in the world are context-specific and social. When human experience is at the center of the inquiry – as it has been in all of the studies in this dissertation – beliefs are deeply rooted in the respondents' actions, making their responses influenced by their past and current experiences. This in turn leads to

the argument central to the methodology of this dissertation: it is not a matter of identifying what is right or what is true, but of respecting participants' subjective experiences as the basis for knowledge creation .

In this dissertation, teacher identity is explored from different angles and with different methods to reach a more comprehensive understanding of it, as opposed to conducting qualitative and quantitative *studies* to study teacher identity. The experiences of student teachers in the process of developing teacher identity were at the center of the inquiry throughout all of the studies.

3.2 Design of the study and methods

The studies were designed so that different findings gained through Studies I, II and III would complement and support each other. Thus, all methods were geared towards acquiring data on teacher identity. The studies mostly utilized a qualitative approach (Studies II and III), but also a mixed methods approach (Study I). The qualitative approach encompassed narrative writing tasks, interviews and metaphors, thus exploring three ways of accessing data on teacher identity (Table 1).

Study I was designed as a mixed-methods study in which both qualitative and quantitative methods were implemented in parallel. In mixed-method designs, qualitative and quantitative data are mixed or integrated at some point (Johnson & Onwuegbuzie, 2004). In Study I, this was done during the data analysis, where qualitative data was quantified and used for quantitative analysis. Through the way in which mixed methods were applied, this methodological approach allowed for a kind of validity check regarding the interpretation of metaphors and the applying of the Beijaard model.

Study II was planned as a cross-sectional study in which the majority of the student teachers from primary teacher curriculum (referred to in Article II as class teachers) across five study years formed the sample. A narrative approach was used to elicit data on student teachers' self-conceptions, placing this study methodologically within a narrative analysis tradition (cf. Polkinghorne, 1995). The methodological approach in Study II can be described as hybrid, containing elements from different ways of working with textual narratives, i.e. the analysis of narratives and narrative analysis.

Study III was designed as longitudinal, with data collected at two points in time. As pointed out by Saldana (2003), this type of qualitative research design is well suited when researchers are interested in the development of the participants within a specific context that is expected to influence them. Since this study was guided by the aim of investigating the developmental aspect of teacher identity, a semi-structured interview with a longitudinal design was deemed appropriate.

An overview of the three studies in terms of sample, data collection methods and analysis is provided in Table 1. More detailed explanations of the respective methodology and methods used are provided in subsequent sub-chapters that deal with data collection and analysis.

Table 1. A brief overview of the sample, data collection and analysis of the three studies

	Time of data collection	**Sample description**	**Data collection**	**Data analysis**
Study 1	2007–2008	183 students in total; 141 of them provided metaphors Students from different study fields; BA and MA students	Survey study 1) Students' metaphors and their explanations: "A teacher is like....because...." 2) Beijaard et al.'s (2000) Teacher's Professional Identity Measure	Deductive content analysis for metaphors Quantitative methods combined with quantitative methods
Study II	2009	38 student teachers from primary teacher curricula (from one to five years of study)	Written stories/essays: "Myself as a teacher today"	a) Inductive content analysis b) In-depth thematic analysis of one case
Study III	2011 and 2013	1) 20 student teachers in the first year of master's-level studies 2) 16 of them in the follow-up study in their last year of the study Student teachers from primary, subject and multiple subject teacher curricula	Semi-structured interviews	Inductive thematic analysis

3.3 Context of the studies

The studies were conducted in the context of Estonian teacher education. Teacher education in Estonia is provided by universities; all teachers (except kindergarten teachers and vocational teachers) have to complete university-based teacher education at the master's level. There are three paths of teacher education leading to primary and subject teacher qualification.

Primary teachers follow an integrated teacher education curriculum[1] (300 ECTS) in which professional and subject studies take place concurrently. The graduates can teach in the first and second stages of basic school[2].

Subject teacher education has two paths.

First, *subject teachers* follow the 3+2 curricula, in which the first three years (BA studies) are dedicated solely to subject studies (in one subject area), after which students can choose to enter either their subject area or teacher education focused on pedagogical studies, including teaching practice. Subject teachers are prepared to teach one subject both in basic schools (second and third stages) and at the upper-secondary level.

The *multiple subject teachers*' path is less typical. It also follows the 3+2 curricula, but the studies are more integrated in the BA and MA levels, with some pedagogical studies during the BA level and subject studies in at least two (typically three) subjects continuing during the MA studies. They can choose between a specific MA program designed for multiple subject teacher students or the more common teacher education program designed for subject teachers. Teaching practice takes place during the MA level studies. Multiple subject teachers can teach two or more subjects in basic schools (Stages 2 and 3).

Estonian universities establish their curricula independently, guided by the Standard of Higher Education and Teacher Training Framework requirements. Therefore, teacher education can vary not only between different universities, but also between universities' regional colleges. Participants in the study had followed one of the three paths of teacher education described above. Although the general structure of the three curricula is somewhat similar, there are considerable differences between the three tracks of teacher education (explained in more detail in the following section).

The studies were carried out during 2009–2013. During the years 2010–2014, changes were made in the teacher education programs, including changes in the amount and structure of the practice periods during the two-year subject

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1 *Curriculum* and *program* are used interchangeably in this dissertation

2 General education in Estonia is divided into pre-school, basic school and upper-secondary education. After pre-school, children enter the school system at the age of 7. Basic school is divided into three stages: the first stage (grades 1–3), second stage (grades 4–5) and third stage (grades 7–9). After graduation from basic school there is a possibility of continuing studies at an academically-oriented upper-secondary school, in occupation-oriented vocational secondary education at a vocational education institution or starting to work.

teacher program. Therefore, the description of the context applies to the time of the data collection. During the time of the data collection, the teacher education programs evolved, and each data collection point thus captures a specific point of development in the programs. The changes in the program, however, do not interfere with the study design and reliability in the sense that the interest and focus is on the individual students' experiences and development. The changes in programs are likely to be reflected in the student teachers' experiences, providing information about their identity development in context. However, evaluating the programs in terms of pre- and post-changes was not the intention of these studies, as such a program evaluation would have required a different design.

Primary teacher education curricula (Study II and Study III)

The focus in the integrated program is on pedagogical studies and their practical implementation. The primary teacher curricula in Study II and Study III are slightly different.

Teaching practice (25 ECTS in Study II and 28 ECTS in Study III) takes place throughout the studies. It starts with observation practice in the second (Study II) or third (Study III) year and continues through the fourth and fifth years, ending with teaching practice in a minor subject. During observation practice in the fall semester of the second or third year, student teachers become familiar with the school as a developmental and developing environment and with educational policy documents that inform and regulate schools. Students also conduct parts of lessons. Teaching practice in grades 1–3 takes place during the third year. In the fall semester of the fourth year, student teachers practice in grades 4–6 in order to get experience conducting lessons, supporting the development of the pupils of that age group and cooperating with parents. The teaching practice in the minor subject consists of teaching basic school grades 7–9. This tightly enmeshed framework of alternating theoretical and practical studies is possible in an integrated master's curriculum where the completion of teaching practice in different stages ensures the application of theoretical knowledge in practice at the same time. The curriculum is offered by the university college (Study II) or the institute of educational science (Study III), which is also responsible for its development.

Subject teacher education curricula (Study I and Study III)

Subject teacher education curricula at the master's level include pedagogical and didactic studies and teaching practice (15 ECTS credits). The practice period is divided into one week of observation practice in the first year of master's studies and 10–12 weeks of main practice during the final year, when student teachers gradually take full responsibility in the classroom. The subject teachers' curriculum is offered by institutes that are also responsible for subject studies and it is generally believed that a solid subject knowledge is the key to being a good teacher. Student teachers have to pass all didactics and pedagogy

courses before they start teaching. Thus, even during the master's level studies, subject studies continue, and the main teaching practice starts in the last winter at the end of the last year of their studies. During the teaching practice, student teachers are mentored by their teachers at schools, and their personalities and preparedness for the role become crucial in guiding student teachers' development. While at official practice schools mentors are usually prepared for the role, at some schools they are not. The role of university teachers is less important during teaching practice, although the university teacher is officially responsible for the teaching practice.

Multiple subject teacher curriculum (Study III)

Multiple subject teachers' curriculum is developed based on the idea of an integrated teacher education program, but still follows the 3+2 model. It is offered by institutes of education. However, the subject studies that form the bulk of the curriculum are offered by other institutes. The BA level curriculum (180 ECTS in total) consists of basic courses of pedagogy and psychology, with the main focus on subject studies. Students have to choose two subject areas, e.g. math and computer science, both requiring 48 ECTS. These fields can also differ greatly, e.g. history and human science. No teaching practice or didactics courses are offered at the BA level. At the master's level, student teachers have to choose a third subject field; in addition, they are offered the same pedagogical and didactics courses that subject teachers take. Also, their teaching practice is arranged and starts at about the same time as for subject teachers. The main difference between multiple subject teachers and subject teachers is that the former need to be prepared to teach two or three subject fields, while the latter concentrate only on one (or two, if they decide to choose a minor subject).

3.4 Participants

The participants in Studies I, II and III were students from the three different paths described above. Table 2 provides an overview of the participants. In addition, Study I included students from BA levels (first and third year) who formed the pool of students choosing teacher education after graduating from their BA level programs. Throughout this dissertation, student teachers from different programs are referred to as *primary teachers*, *subject teachers* and *multiple subject teachers*.

The participants in Study I were 183 first-, third- and fifth-year students, representing different academic fields which have corresponding school subjects. Mathematics represents hard sciences, history soft sciences (cf. Becher, 1989) and physical education and sport the skills-based field. Students from BA programs (first and third years) had not had any teaching practice. Student teachers from teacher education had either started their teaching practice (third-year primary teachers) or almost finished their teaching practice (fifth-year student teachers).

Table 2. Participants in Studies I, II and III

	Primary teachers	**Subject teachers**	
		Subject teachers	Multiple subject teachers
Study I	First year: 22 Third year: 7 Fifth year: 10	First year (BA): 69 Third year (BA): 44 Fifth year (MA): 31	–
Study II	First year: 9 Second year: 6 Third year: 7 Fourth year: 9 Fifth year: 6	–	–
Study III	First data collection (4th year): 5	First data collection (4th year of university, first year MA): 11	First data collection (4th year of university, first year MA): 4
	Second data collection (5th year): 5	Second data collection (5th year of university, second year MA): 8	Second data collection (5th year of university, second year MA): 3

In **Study II,** the sample consisted of first- through fifth-year student teachers from a primary teacher curriculum. Thirty-eight student teachers of a total of 48 students in the program participated, meaning that 79.1% of the student teachers of this curriculum were involved in the study. There were students from all study years: 1 through 5. The exact ages of the student teachers were not asked; however, students in this curriculum were typically women aged 19–25. Third- and fifth-year student teachers from second year on had started their teaching practice.

In **Study III,** in the first data collection, the participants were 20 student teachers. Of these, five students were studying in a primary teacher curriculum (integrated curriculum, fourth year), 11 in a subject teacher curriculum (six humanities and five science fields, master studies, first year) and four student teachers were from the multiple subject teacher curriculum. The participants were in their 4th year of university studies. The primary student teachers had finished their first period of the main teaching practice. The subject teachers, including multiple subject teachers, had started their observation practice. The interviewees were women, aged 23–27. In the second data collection, 16 student teachers agreed to follow-up interviews. Five primary teachers, eight subject teachers and three multiple subject teachers participated in the follow-up interviews. All student teachers were at the end of their studies and had completed teaching practice. Some student teachers were working as teachers (mostly part-time or individual tutoring) during the first and second data collection.

3.5 Data collection

Study I

Data were collected using a questionnaire that was administrated as a paper-and-pencil instrument in regular class sessions. The questionnaire, developed by Katrin Poom-Valickis and Erika Löfström, included both an adapted version of the Beijaard et al. (2000) Teacher Identity Measure (Appendix 1) and an open-ended question regarding teacher metaphors and their explanations.

The *Teacher Identity Measure* (Beijaard et al., 2000) was used to measure beliefs about teacher expertise. The original instrument, in Dutch, was translated into Estonian and compared with the original version to make sure that the translated items measured the same domains as the original. In some cases, items had to be adjusted to the national context. The most important difference between the original measure and the adapted one was that the respondents were not practicing teachers. As the students from BA programs might not be interested in becoming teachers, it was not possible to ask them about the kind of teacher they wanted to be, although this would have been the closest translation to the original instrument. Instead, student teachers were asked to *describe their views and beliefs* about the teacher's role.

The measure consisted of 18 items pertaining to beliefs about teacher knowledge base. Students were asked to rank the seven most important statements among the 18 items and rank order them. It turned out that this type of ranking was difficult and it resulted in a number of incorrectly completed questionnaires. Some respondents did not rank the alternatives, while some provided fewer than seven choices. To make the data usable and comparable, the categories were scaled so that the sum of the three variables for each individual equaled 1. The weighting then depended on how many times the respondents checked the items that described each of the three aspects of the measure.

Teacher metaphors and their explanations represent an indirect way to operationalize and access students' beliefs about teachers and the teacher role. Much of our thinking takes place through conceptual metaphors, as Lakoff and Johnson (1980) suggest. Metaphors frame and define our experience as a way of making meaning and thus contain abstract ideas that reflect experiences and beliefs. Several researchers have used metaphors as a way to reflect personal beliefs (Alger, 2009; Martinez, Sauleda, & Huber, 2001; Saban, 2004, 2010) and some have examined how life experiences are encoded in images or metaphors (Korthagen, 2004; Sugrue, 1997). According to Bullough (1991), metaphors can reflect teachers' beliefs about teaching and the teacher's role, i.e. they illustrate teachers' professional identities.

The students were asked to complete the sentence: "A teacher is like…" and provide an explanation of why they chose this metaphor. The explanation proved to be crucial for the interpretation of the metaphors (Löfstöm & Poom-Valickis, 2013).

Study II

The narrative approach was used in the second study, as narratives may reveal students' understandings of their identities (Connelly & Clandinin, 1999). An essay was chosen as the source of the narrative, as this rather open approach to data collection in terms of themes gave students the opportunity to choose what to write about and what to exclude (cf. Kyratzis & Green, 1997), and encouraged students to engage in reflective writing as a means of deeper understanding of self rather than just telling their stories to someone. The student teachers were asked to write a story about themselves as teachers. All of the students present at the times of data collection participated. The topic "Myself as a Teacher Today" was given, but no further specifications or guidelines were provided, in order to encourage students to write from their own perspectives, in their own words, on their own premises. Also, by adding "today" to the writing assignment, students were guided to position themselves on a journey, comparing and contrasting the sense of who they were with their previous understandings of themselves and their experiences. The essays were 0.5–1.5 pages long. In addition, one rich narrative was chosen for closer scrutiny to provide depth and intense information about the identity development of one student teacher. At the same time, it also allowed exploration of what one can conclude regarding identity based on this type of very open-ended narrative.

Study III

The semi-structured interview was chosen with the aim of generating student teachers' accounts of their own experiences, perspectives and interpretations of becoming teachers. It was chosen because interviews allow for the collection of rich and detailed descriptions and for the researcher to address and also discuss topics as they emerge during the interviews (Kvale, 1996). To ensure that all student teachers had a chance to address the themes that were identified as relevant to the research, interview guides were used.

The interview guide (Appendix 2) had been developed based on the results of Study I and Study II, as well as previous studies on the development of teachers' professional identity (Akkerman & Meijer, 2011; Alsup, 2006; Beijaard, et al. 2000; Leijen & Kullasepp, 2013a; Sutherland et al., 2010; Walkington, 2005). Two pilot interviews were conducted to test the interview guide, after which some questions were tailored specifically for subject teachers and primary teachers.

The data were collected during 2011-2013, first at the beginning of the students' master's-level studies (fourth year) and then at the end of the studies.

In order to recruit subject teachers and multiple subject teachers, courses that the student teachers attended at the time were visited, resulting in the identification of 15 student teachers willing to participate in the study. Five primary teachers were recruited through mailing lists. The aims of the research were explained to all prospective participants. The length of the interviews ranged

from 45 minutes to 2 hours and 15 minutes. The interviews lasted between half an hour and two hours, with an average of one hour. The interviewees were informed of the intent to ask them to participate again in a follow-up study, but also about the possibility of withdrawing from the study at any time. Interviews were audio-taped with interviewees' permission and transcribed verbatim. The interviews were carried out in a quiet place at the university. Students were not explicitly asked about tensions in order not to provoke isolated problem descriptions. Instead, by asking questions about the students' experiences as prospective teachers, the authors sought to understand how tensions were embedded in conceptions of self and as a teacher. Towards the end of the interview, however, students were asked about their experienced challenges and development needs as a means of checking if they mentioned the same themes that had been prevalent during the whole interview.

The second data collection addressed the same themes, with a focus on possible changes in student teachers' views and specific questions following from the interviewee's responses in the previous interview. The question, "How would you describe yourself as a teacher today?" was posed to all participants, and they were also asked to elaborate on the changes they had perceived during the past year and a half. The follow-up interviews lasted between half an hour and one hour, with an average of 45 minutes.

3.6 Data analysis

Content analysis (both inductive and deductive) was used in Studies I and II. Studies II and III used thematic analysis as one (II) or the main (III) data analysis method. Thematic and content analysis are the most common methods of analyzing qualitative data and, in contrast to e.g. grounded theory, they employ a low level of interpretation of the data (Vaismorandi, Turunen, & Bondas, 2013). Thematic analysis is described as a method of identifying, analyzing and reporting patterns (themes) within data but also provides the opportunity to give a detailed account of themes in the data (Braun & Clarke, 2006, 79). Content analysis is defined as "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (Krippendorff, 2004, 18). Content analysis is found to be especially valuable when dealing with a phenomenon that is insufficiently addressed in previous studies or where the knowledge is fragmented (Elo & Kyngäs, 2008). Both methods share a similar goal: to examine narrative material analytically by breaking the text into small units and submitting them to a descriptive treatment (Sparkes, 2005, as cited in Vaismorandi, 2013). When analyzing the similarities and differences between thematic and content analysis Vaismorandi et al. (2013) point out that there are many similarities in terms of the process of data analysis: the vocabulary used and the stages in the process of data analysis. The main difference lies in understanding what the theme is. In content analysis, the theme is based on the frequency of the occurrence in the

text. In thematic analysis, the importance of the theme is detached from quantifiable measures. Instead, it is judged by the importance for the research question (see also Braun & Clarke (2006)).

In **Study I**, the mixed methods research design required combining qualitative and quantitative data, so qualitative data was quantified and used in quantitative analysis.

First, qualitative and quantitative data were analyzed separately. An analytical deductive content procedure was applied to analyze the metaphors and explanations student teachers had provided for the metaphors. Content analysis was suitable, based on the Beijaard model, to describe the phenomenon of beliefs about "the teacher" in a condensed and generalized form (Weber, 1985; Marshall & Rossman, 1995). Three core categories were derived on the basis of the model: subject specialist, pedagogue, and didactics expert. In addition, three combinations of the three categories were established: subject specialist and pedagogue, pedagogue and didactics expert, and subject specialist and didactics expert. Some metaphors also included elements of all three dimensions. Because of the small number of metaphors in each of these categories, they were combined into one category entitled "Hybrid". Furthermore, there were a number of metaphors that resisted categorization according to the Beijaard model. This category was entitled "Unidentified". Two of the authors created the categories independently. Where there was disagreement, the categorization was discussed until consensus was reached.

The final step, matching the scores obtained through the Beijaard measure and metaphor classifications, involved using general linear models and a one-way analysis of variance, using post-hoc tests (Scheffe). A Chi-square test was applied using Yate's correction due to the expected low frequency in some cells.

In **Study II** students' essays (narratives) were analyzed using inductive content analysis, which is an appropriate method when analyzing texts (cf. Weber 1985; Marshall & Rossman 1995).

This process followed three phases (cf. Elo & Kyngäs, 2008):

Phase one: preparation. In this phase, essays were read and expressions that pertained to the experience of being a teacher or to personal development during teacher education were identified. The unit of meaning was established as consisting of more than one word or sentence to decrease fragmentation. The expressions were then abbreviated into condensed descriptions, for instance, "concerns about transferring teaching skills to practice".

Phase two: Organizing. Next, the descriptions were grouped according to thematic un-predefined categories. The categories were: "Worries and fears related to one's performance as a teacher", "Myself as a teacher", "Motivation to become a teacher", and "Change experienced during teaching." Students were grouped together by each year of study in order to identify common themes or patterns that distinguished identity development processes in different study years. Quotes were picked and organized that illustrated the content of the

established categories. Two researchers analyzed the stories independently and then discussed and agreed on the central categories.

Phase three: Reporting. This phase resulted in presenting the data along with providing numerous data excerpts.

In addition to content analysis, one narrative was chosen for in-depth thematic analysis of the professional self. This particular narrative was chosen as it was one of the most elaborate and coherent narratives that reflected the developmental story of a student teacher from the beginning to the end of teacher education. The themes through which the narrative was constructed were: the vision of oneself as a teacher, evaluating one's performance as a teacher, the motives for choosing the teaching profession, and thoughts about what it means to be a teacher (cf. Kelchtermans, 1993). The vision of oneself as a teacher was revealed through self-descriptive statements about what kind of teacher she saw herself as, including the future perspective, as she had not started working yet. Self-esteem was revealed through the student teacher evaluating herself as a teacher, with strengths and weaknesses. It was directly linked with job motivation in the story and they were thus discussed together. Thoughts about what it means to be a teacher are referred to by Kelchermans as a norm to evaluate one's own professional behavior. In this case, it was learner-centeredness that was related to the understanding of the norm. As the student teacher explicitly reflected on the three developmental stages in connection to the teacher education program, this became an additional theme in the story.

In Study III, the data were analyzed using thematic analysis. The inductive method was chosen, as the aim was to focus on the data itself in order to discover the themes. The data analysis followed the six phases proposed by Braun and Clarke (2006).

First phase: getting familiar with the data: all of the audio-taped interviews were transcribed and the transcripts were read for initial inductive categorization. The unit of analysis was a whole thought consisting of one or several sentences. In this phase, research questions focusing specifically on tensions were specified as they emerged in all interviews.

Second: generating initial codes. In this phase, meaningful units relevant to the research questions were identified and categorized. Previously identified tensions (Alsup 2006; Leijen, & Kullasepp 2013a) were used as initial sensitizing concepts to provide an indication of the kinds of tensions that might emerge between different identity perspectives as proposed by Gee (2000). Beijaard et al.'s (2000) teacher identity model was used as a framework to identify aspects of Gee's institutional identity perspective. Coded items of roles that did not fit into these categories were analyzed inductively, resulting in the category "personal characteristics". As some role perceptions could be interpreted to fit under different categories, the entire interviews were reread to determine the dominant categories.

Third: Search for mutual themes. The initial categories were sorted into potential themes and some sub-themes were also identified. Roles and tensions were analyzed in parallel from this stage on.

Fourth: reviewing found themes and related sub-themes. The themes were reviewed again to ensure their coherence and the labels of all three main themes were established, including the third theme, "multiple professional role expectations". In several cases, it was difficult to differentiate between some themes. In these cases, the quotes were carefully considered and the whole transcript was read again in order to get an understanding of the reasons behind the dissatisfaction that characterized the theme.

Fifth: Defining and naming the themes. All transcripts were read again. The established themes were viewed in comparison with each other in order to establish the uniqueness of the theme and to form a holistic overview of the content that each theme covered compared to other themes.

Sixth: producing the results: The final phase ended with writing up the three themes pertaining to tensions in teacher identity.

The follow-up data were first analyzed separately using the same procedure described above and then compared and analyzed together with the data from the first interview, with the focus on possible changes.

Data analysis was carried out using NVivo 10 software. The interpretations were validated in continuous discussions with other researchers. During the whole process, it was necessary to move back and forth in the data. When the types of curricula student teachers followed were considered, the main distinguishing characteristics of the curricula were the length and level of integration of teacher education components and teaching practice in the programs. Another distinguishing element was the number of subjects that the students should be able to teach.

Transcripts were revisited several times during the data analysis. As a result, the analysis was carried out in an iterative process in which the categories became more distinct with each round of readings. In addition, a case record was also written for each respondent, which included the interview themes that helped to maintain a holistic view of each respondent.

3.7 Validity and reliability

In this chapter, the trustworthiness of the study is discussed and validation strategies are provided. Because of the importance of the inquiry process in pragmatism, the "validation" approach was considered appropriate because it also emphasizes the process over e.g. verification or trustworthiness (Creswell, 2007, p 207).

It has been argued that because of entirely different epistemology and ontology, validity criteria from quantitative studies are not suitable in qualitative studies (Hammersly, 1992 as cited in Whittemore, Chase & Mandle, 2001). Long and Johnson (2000), on the other hand, suggest that by using other labels

and research traditions, it is still essentially validity and reliability that are explored and reported. Furthermore, Whittemore et al. (2001) argue that dofferent, contextual variations etc. may call for different emphases when ensuring validity in qualitative research. Thus, what are most important in determining the validity criteria of each particular study are the choice of optimal methodological techniques and a critical presentation of the research process. It was argued above that pragmatism does not mean the abandonment of "traditional" research methods and that both qualitative and quantitative methods are used in the studies. Thus, both aspects should be considered important when making claims about validity and reliability. The solution is offered by Greene (2008), who suggests that in studies in which paradigms and methodological traditions are mixed, one should consider the quality of the method and data obtained. In doing so, the quality criteria and procedures of the tradition in which the method is implemented should be adhered to (Greene, 2008, p 166).

Various validation strategies were applied in the three studies at different phases of the research (Creswell (2007, p207; Whittemore et al., 2001). These are described below, following the order of different research phases: preparation, organization, and reporting.

In the preparation phase, when it was decided to use teacher metaphors in Study I, in addition to metaphors the explanation of the metaphors was also included in the questionnaire to increase the credibility of interpreting the results. The original instrument (Beijaard et al., 2000), in Dutch, was translated into Estonian and compared with the original version to make sure that the translated items still measured the same domain as the original and that the validity of the measure was maintained. Where necessary, the items were adjusted to the national context and target group.

For Study III, an interview guide was developed. Elo et al. (2014) have argued for the importance of pre-interviews (pilot interviews). Several discussions between the authors were held when designing the interview guide, followed by initial amendments and pilot interviews in spring 2011. A few changes were then made to the final interview guide based on the pilot interviews. Firstly, the pilots indicated the need to change the order of the questions in the interview so that the questions would appear in a more logical order to the students. For example, interviewees started to talk about the teacher's role earlier in connection with the first question (how they became students of teacher education). Secondly, the questions were tested in pilot interviews and the main narrative questions of each theme were established for the interview guide, resulting in a more focused interview guide. Thirdly, slightly different wordings of the questions were needed for primary and secondary student teachers, e.g. when referring to their previous studies (BA studies versus previous years).

Saturation of the data in Study III was aimed at by choosing a sufficient number of interviewees for the study. Including participants with varying experience, age etc. in all studies increased the possibility of shedding light on the research question from different viewpoints.

In the organizational phase (data collection and analysis), steps were also taken to increase the trustworthiness of the study. To minimize inconsistency, an interview guide was developed in Study III and the main questions in the interview guide were presented in the same order to the interviewees. Also in Studies I and II, the same questions were presented to each participant.

Data analysis was carried out in cooperation with other authors, holding constant discussions during the data analysis phase in order to increase the dependability of the research. In Studies I and II, an inter-coder agreement was calculated (Miles & Huberman, 1994). Two of the authors created the categories independently. When there was disagreement, the categorization was discussed until consensus was reached. A third author then compared the metaphors and the categories. Again, after the inter-rated agreement was calculated, the categories were discussed until consensus was reached.

In Study III, the data analysis was carried out by the first author, but the interpretations were validated through continuous discussions between the authors. The transcripts were revisited several times during the data analysis. Also, a reflective research diary was kept throughout Studies I to III to document issues raised during data collection and analysis. In all studies, joint discussions among the authors were held to ensure the consistency of the themes/categories identified.

With quantitative data, where the sample size was quite small, the focus was on choosing the appropriate data analysis methods (e.g. using the Yate correction with Chi-square analysis).

In the reporting phase, detailed descriptions of the context of the study and direct quotations were used as much as possible when reporting the studies to increase transferability. Detailed descriptions allowed the readers to decide whether findings could be transferred to other settings or groups (Elo et al., 2014, Lincoln & Guba, 1985). Direct quotations were used as much as possible, as these helped the readers to evaluate if the results reflected what was said by the participants instead of the researcher's own perspectives or biases. In Articles I and III numbers were provided for the sake of the transparency of the categorization, as well for reporting the results using words that referred to counting ("few", "most", "some"etc).

Finally, what one chooses to study reflects the researcher's personal and professional values (Mehra, 2002). The focus of this research (possible program differences) reflects this. Researchers always bring their own values, biases, and preferences with them and these should be made clear (Miles & Huberman, 1994). According to Cresswell (2007), as a researcher, it is important to disregard any pre-existing notions about the phenomena being studied to obtain objectivity when viewing and interpreting the results. This research has been carried out with this in mind.

3.8 Ethical considerations

The research adhered to the ethical principles of the Estonian Code of Conduct for Research Integrity (2017) and The European Code of Conduct for Research Integrity (ALLEA, 2017).

The following procedures were used through the planning, conducting and reporting of the studies to protect the participants in this research.

Protecting participants and respecting their right to make decisions regarding their participation were the core ethical principles guiding the treatment of the participants in the study. Before each study, the participants were informed of the purpose of the study and how the information they would give would be used (e.g. through anonymous quotes). Participation was voluntary in all three studies, and no incentives for participation were used. Furthermore, participants were informed of their right to withdraw at any time without consequences. In the longitudinal study (Study III), this meant that although at the end of the first interview all of the participants agreed to meet again for the next interview, when four of them did not respond to the third attempt to reach them via e-mail or phone, it was considered a sign of withdrawal and they were not contacted again.

No sensitive questions were asked. An ethics review is not required for this type of study in Estonia. In order to protect the privacy of the participants, pseudonyms were used when reporting the data. Due to the small size of the groups, it may be possible that some of the student teachers in Study II or III might be recognizable by their peers; however, utmost care has been taken to make details anonymous. **In Study I,** students were asked to provide an identifier (name or student number) to allow for future follow-up studies. However, identifiers were removed from the data set that was analyzed.

In **Study II,** data was also collected during regular classes in a handwritten form, except for the fifth-year students, who were asked to respond via e-mail or add their narratives to their practicum reports. For their benefit, the data collection was arranged in this way, as the fifth-year students did not have coursework left at the university. Thus, their narratives were not anonymous, which placed the fifth-year students in a different position than the others, who were specifically asked to hand in their stories anonymously. The researchers made the decision to collect anonymous data as they felt that this was the best option in a context where students and teachers knew each other and teachers still had grading and other obligations towards the students. As with the other students, fifth-year students had the option to not participate, but with the small number of students in the fifth year it may have been possible to identify the individuals who did not participate. This in turn may have made the students feel more obliged to respond. Acknowledging this, it seemed reasonable to teacher educators involved in the study that these student teachers also get credit (as part of their practice report) for their stories. The number of students in each year was small. So even if the students wrote their stories anonymously, due to the small number of students in each class it may have been possible for

the teacher who collected the stories to identify certain individuals. Researchers collecting data in Study I and Study II were familiar with the students, which may have influenced their decisions to participate. Therefore, it was emphasized to the participants before the study that their decisions to participate would not affect their status as students, including grades.

In **Study III,** the researcher had no previous relationship with the participants. This was considered important in order to maintain objectivity and to create an atmosphere in which student teachers would not be afraid to share their experiences and to express viewpoints that might be critical of their study experiences. In this sense, there was no conflict of interest (e.g. to get as positive accounts from the students as possible in order to inflate positive evaluation of my own teaching).

4. FINDINGS

The next section provides an overview of the main findings of the studies in terms of answers to the research questions.

4.1 How are beliefs about the teacher's role manifested in student teachers' professional identity development in different types of curricula?

Metaphors (Study I) about the teacher, accompanied by data from interviews (Study III), were used to analyze how beliefs about the teacher's role are manifested in student teachers' professional identity development. Both studies used the teacher identity framework of Beijaard et al.(2000) as an analytical basis. This framework captures teacher identity through beliefs about the teacher's knowledge base, distinguishing three categories: the teacher as a pedagogue, the teacher as a subject specialist and the teacher as a didactics specialist.

Study I

The study showed the prevalence of the caring, supporting and nurturing roles of the teacher that characterize the pedagogical role of the teacher according to the Beijaard model. The most common metaphors were "second mother" or "parent". The pedagogical role of the teacher was emphasized the most. The teacher as a subject specialist role was emphasized less, especially among primary teacher education students. The metaphors portrayed the teacher's role as being the smartest and most knowledgeable person who can answer questions, but whose role is limited to transmitting information to pupils. Typical metaphors in the category "teacher as subject specialist" indicated the teacher's role as a source of knowledge: a book, an encyclopedia, a computer. Didactic metaphors were not similar to those in the other categories. Examples include "mirror" and "an artist who paints the world in different colors". The meaning of the metaphors was derived from the explanations students provided for the metaphors.

Metaphors in the hybrid category included elements from two or three different categories, e.g. pedagogue and subject specialist. Here again, explanations of the metaphors were important, as a metaphor could be common to the pure category (e.g. "second parent"), but the explanations present the teacher in a more complex way.

There were also metaphors that could not be interpreted through the Beijaard model and were thus categorized as "unidentified". These metaphors did not refer to activities centered around students, teaching, or classroom instruction. These emphasized the personal characteristics and work conditions of the teachers that could not be interpreted through the Beijaard model.

Comparing the results of the metaphor analysis with the analysis of the teacher identity measure (Beijaard et al 2000) indicated that the Beijaard model was suitable for analyzing the teacher's roles when examining metaphors. The results of matching the metaphor classifications with the scores of the quantitative teacher identity measure showed that users of the five metaphor types mentioned above had statistically significantly different results in the quantitative scales for pedagogue and subject expert, but did not differ in terms of how they emphasized the didactics expert role. The students who emphasized the subject specialist role appeared to have a unique profile compared to the others, as the metaphors they provided were mostly subject-oriented.

Overall, pedagogue metaphors were most frequent and students from all fields used them. Compared to students from BA-level subject programs, teacher education students used substantially fewer subject specialist metaphors. Also, their metaphors more frequently belonged to the "unidentified" category. Primary teacher education students' metaphors fell especially frequently into the pedagogue category. Mathematics students produced mostly subject specialist metaphors and didactic metaphors were frequently produced among students of mathematics education. The study also indicated gender differences in the choice of metaphors, with male students producing more subject and didactic metaphors. However, it was unclear if the differences between male students and female students were related to disciplinary differences, as mathematics students used more subject specialist metaphors but there were more men than women studying in that program. Almost all of the metaphors produced by male students fit the Beijaard model, whereas most hybrid and almost all "unidentified" metaphors were produced by female students.

The fairly consistent results of the two different analyses allow to suggest that the role categories described have good reliability, and thus the Beijaard model is a good fit in the analyses of teacher metaphors.

Study III

The results of Study III suggest that student teachers in different types of teacher education programs may emphasize slightly different aspects of the teacher's role. Primary teachers placed great importance on the teacher's role as a supportive and caring person, emphasizing the role of the teacher as a pedagogue. Good subject knowledge of pupils was not mentioned as being the aim of teaching during the interviews. Although in Study I the role of the didactics expert was rarely apparent in primary teachers' metaphors, Study III showed that the role of a teacher as a didactics expert was actually considered important, but it was in terms of creating a good learning environment for the pupils where their personal development was supported in a proper, i.e. supportive and caring, way. Subject teachers tended to value the role of the teacher as a subject specialist. In addition, the teacher's role as a didactics expert was considered important, but in this case it was mainly mentioned with the aim of making the subject interesting to pupils so they would be able to learn better. So while the

didactics role of the teacher was emphasized by both groups during the interviews, it was done with different aims in mind by subject teachers and primary teachers. However, among subject teacher students, there were also students who emphasized the role of the pedagogue most, making it clear that it was important to take into account individual differences.

Study III also provided a peek at changes in the conceptions of the teacher's role over time from the first to the last study year, indicating that during their studies and teaching practice, student teachers develop more complex understandings of the teacher's role.

4.2 How do student teachers construct the conception of self as teacher in different types of curricula?

Study II identified three phases or developmental tasks in the teacher identity development of primary teachers that are connected with the emerging self-concept of the teacher. These were: initial idealism and enthusiasm, followed by experiences of increasing worries and fears as entrance into the profession draws closer, and finally a consolidation phase in the final year of studies.

Phase 1: At the start of teacher education, the first-year students in Study II tried to understand themselves in terms of their motivations to become teachers and teaching as a career choice, as well as reflecting on their images of the ideal teacher. Their enthusiastic, sometimes naïve, image of teachers and teachers' roles were connected to their own prior school experiences and to the various roles and competences attached to the teaching profession. First-year students described themselves as beginners who had to and were willing to learn to become "good teachers". This concept was not very elaborated upon in Study II, indicating that they considered this concept to be common knowledge that did not need further clarification. However, in Study III, the primary teachers elaborated on this more and "the good teacher" was described mainly as a caring, nurturing person guiding pupils in their personal development. Reflecting on the ideal teacher and comparing themselves with this image was also evident in subject teachers' descriptions of the teacher's roles (Study III). However, their understanding of the teacher's roles was more oriented toward the didactics and subject specialist role of the teacher.

The wish to function as a change agent was mentioned as an important motive for becoming a teacher. The teacher education program was referred to in relation to expectations regarding teaching practice as an opportunity to test whether the choice to enter teacher education had been the right one. Interviews with subject teacher and multiple subject teacher students in Study III elicited similar descriptions about the self-concept at the beginning of their studies, indicating that this stage might be similar to that of student teachers from different programs.

Phase 2: The main focus in this phase of the studies was on acquiring knowledge about teachers, teaching and learning. The second-year students in Study II explored themselves through the conceptualization of the teacher's role, as did student teachers in Study III. But before student teachers started teaching, they wrote and talked about themselves as teachers in an imaginative, theoretical way, indicating that the personal and professional sides of the teacher had not met yet (Studies II and III). Student teachers in Study II expressed optimism about becoming good teachers and, although motivation was not especially explicitly referred to at this point, it appeared in connection with the wish to constantly develop as a teacher. Their theoretical studies were highly valued and the student teachers began to wonder how this knowledge could be applied in real teaching situations (Studies II and III). In the third study year, the student teachers started their main teaching practice and actual teaching. This directed their reflecting and thinking more toward the real joys and challenges of the teacher's work, which also made them understand how much there was still to learn as teachers. When reflecting on their practice experiences, most of the student teachers realized how practicing teaching had significant motivational value for them. Student teachers already regarded themselves as teachers and reflected on their experiences, strengths and weaknesses. Along with that, worries and fears were also mentioned in connection with possible disciplinary problems and the workload of teachers. Study III adds that, especially when student teachers started their main teaching practice (but also when they started working as teachers outside the university program), self-concept was explored in connection with professional demands as they themselves experienced them.

Phase 3 in Study II was about experiencing the change that leads to understanding if one is ready and suitable for the teaching profession or not and the change aspect was especially evident in the writings. Fourth-year and fifth-year students' profiles in Study III were similar in terms of identity development. *Self* emerged through descriptions of change in their understandings and views especially strongly in the fourth year. Teaching practice and support from mentors were frequently mentioned in the light of the changes that the student teachers had experienced. Student teachers also expressed more worries related to challenges, especially class management issues, including disciplinary problems and how to find time to prepare well for each class. Compared to primary teachers in Studies II and III, several subject teachers in Study III still expressed worries and fears (tensions) in their final study year. Their teaching practice during the final year raised doubts about whether they had the characteristics, abilities or competencies that they associated with being a teacher.

While Study II proposed three stages of identity development, the results of Study III suggest that these stages can be treated as separate developmental tasks that student teachers had to complete during the teacher education program and that were important regardless of the teacher education program. Also, a fourth developmental task, "Experiencing real life", should be distinguished

(between the original Stage 2 and Stage 3, which student teachers entered when they started actually teaching).

4.3 What kinds of tensions do student teachers experience in their professional identity development process in different types of teacher education curricula, and how do these tensions change during the master's level of teacher education?

To answer this research question, Study III was conducted. Student teachers in this study described themselves as teachers and their experiences in terms of the tensions they had experienced. Tensions were connected to the role conceptions of the interviewees and some differences in experiencing tensions were explored between primary teachers and subject teachers (Table 3). In addition, Study II offered some insights into primary teachers' tensions.

Types of tensions

Study III identified three main types of tensions that emerged as themes from the analysis and showed the conflicts between different views and aspects of teacher identity. These were:

a) Tensions between one's personal characteristics, conceptions and professional role expectations, b) role expectations versus university training (tensions between the I-identity and the A-identity, according to Gee (2000)) and c) multiple professional role expectations (tensions within the I-identity according to Gee (2000) and Beijaard (2000)).

Tensions in the first theme, *conceptions of self versus professional role,* included conflicts between how the student teachers perceived their own personal characteristics and conceptions and how they either thought of the teacher's professional role or how they experienced it while practicing teaching. Tensions were thus strongly connected to the role perceptions of STs. Two different sub-themes were distinguished within this theme that showed the difference between student teachers with teaching experience and those without teaching experience. The longitudinal design of Study III made it possible to show that it was teaching practice in particular that changed the way student teachers expressed their concerns within this theme. Without teaching experience, the concerns were theoretical, based on prior beliefs about the teacher's role. When they started teaching, these concerns were related to the actual experience of the teacher's role.

Role expectations versus university training. Tensions within this theme were related to the mismatch between the gained understanding of the teacher's role during studies (the I-identity) and the practices expected or required to be carried out in teaching practice at schools (the A-identity). While before starting

teaching STs felt prepared to fulfill their roles, after starting teaching they realized their competency gaps and that created tensions for them. There seemed to be a difference between subject teachers' and primary teachers' tensions in this theme. Almost all primary teachers were concerned about their lack of subject knowledge as they realized during teaching practice that they needed more subject knowledge to be able to fulfill the role of primary teacher. According to some student teachers, the help of their mentor teachers and gaining more experience helped them to overcome this tension. In turn, subject teachers even during their second interview were more concerned about their preparedness in the didactic expert role as well as the role of a pedagogue both during the first and especially during the second interviews. They also acknowledged that they had had little teaching practice and thus, felt insecure.

One multiple subject teacher who worked as a teacher outside the school during the two years of her studies also mentioned problems with subject knowledge. She also struggled with pupils' behavior in the classroom.

Multiple professional role expectations

The third theme includes tensions that arose when student teachers gained experience in teaching and understood the need to master all three roles and integrate all three aspects of the I-identity: subject specialist, didactics expert and pedagogue. Mostly primary teachers mentioned this type of tension and all of them seemed to be strongly affected by it, as they referred to this tension several times during the interview. Also, this tension was more connected to stress and negative feelings than the tensions in the previously mentioned theme. Lack of time, including in one's private life, was another recurring issue in this theme. In that sense, the findings are similar to Study II where the time-management issues were also mentioned in the final phase. The perceived pressure to take a substantial amount of time to prepare lessons seemed to be connected to the perceived wish to meet the ideals of being a "good teacher", for example by making the lessons interesting and creative. Preparing for classes by making practice logs and detailed lesson plans during teaching practice was also mentioned as a contributor to stress. These student teachers already felt comfortable in the classroom, even to the point that they did not prepare lessons in as much detail as the university's guidelines required. However, some students mentioned these tools also as a helpful way to be prepared and feel more confident in the classroom. Self-reported time pressures may not always correspond with the actual workload, but can be a way of rationalizing self-perceived insufficiencies. But perceived time pressure and dealing with multiple role expectations as a teacher in connection with other challenges seemed to create discouraging tensions that were not resolved by the end of the studies.

Changes in tensions

Study III looked into changes in tensions in terms of general number of tensions for one individual, and for programs.

At the beginning of their master's studies, subject teachers seemed to experience fewer tensions than primary student teachers in all themes, except the worries that their perceived role as a teacher might be different from their personal characteristics and conceptions of teaching. These worries were based not on their own experiences, but on perceptions of the teacher's role. Most subject teachers expressed no tensions in other themes during the first interview. At the end of their studies, the frequency and types of tensions that the student teachers experienced seemed to have changed. At this point, subject teachers experienced an increase in tensions, especially regarding *role expectations versus university training.* Tensions in the first theme, *conceptions of self versus professional role,* also occurred, but this time based on their own experiences of the teacher's role. The relatively low frequency of tensions during the first data collection seemed to be connected with the lack of teaching experience, as student teachers who worked as teachers outside the program showed different pattern. After teaching practice, student teachers' initial worries that their personalities and role expectations might differ were either alleviated or amplified.

Primary teachers, in turn, overall expressed fewer tensions during the second interview than during the first interview. Tensions seemed to have diminished, except for tensions related to multiple professional role expectations. Almost all primary teachers expressed some tensions in this theme during the first and second interviews. Discussing their tensions during the interview exposed how student teachers differed in terms of their ability to recognize the resources that were available (e.g. support from friends, peers and family) and the ability to make use of these resources to ease tensions. The teacher education program did not matter in this regard.

Across the different study programs, students expressing the wish to not start working as teachers or about being unsure of entering the teaching profession revealed more tensions and in a greater variety of themes compared to their peers who wished to remain in the profession.

One striking observation was that several subject teachers expressed few or no tensions in general during the first and also the second interviews. These student teachers typically had their practice periods in selective schools or talked about their practice schools as having supportive school cultures. These student teachers tended to express satisfaction with their teaching practice and the support they had received. Subject teachers, especially, said that they were able to concentrate on teaching their subjects.

Table 3. The main differences between the tensions of subject teachers and primary teachers among student teachers who experienced tensions.

Type of tensions	Focus of the tensions: primary teacher	Focus of the tensions: subject teacher
I as a person vs professional role perception	Cannot fulfill the role of the pedagogue	Cannot fulfill the role of the subject expert
Role expectations vs university training	Lack of subject knowledge	Lack of didactic/pedagogical knowledge.
Multiple professional role expectations	All three roles are important and I don't have enough knowledge and skills (especially subject knowledge). High perceived workload when preparing lessons I cannot be the teacher I want to be Not enough time for family and friends	All three roles are important and I don't have enough knowledge and skills, difficulties in connecting subject, didactic and pedagogical knowledge (theory and practice) to deal with different age-groups. High perceived workload in terms of preparing lessons, negative experiences during classes (may lead to low self-efficacy). I cannot be the teacher I want to be Not enough time for family and friends

4.4 Summary of the main findings

Student teachers enter teacher education with prior understanding of teacher's role that tends to be narrow and idealistic, but it broadens during teacher education. Student teachers differ in terms of how they perceive the teacher's role. Primary teachers tend to emphasise more the creation of a good atmosphere and subject knowledge as important *means for pupils' development*. Subject teachers emphasised *good subject knowledge and making the subject interesting*. The tensions student teachers experienced reflected their emphasis on the teacher's role, so student teachers from primary and subject teacher curriculum experience slightly different types of tensions. The tensions the primary teachers experienced were mostly related to the aspect of identity they had not paid enough attention to – their perceived lack of subject knowledge. Subject teachers' tensions appeared to be related to the challenges of adapting their teaching methods for the different age groups and pupils, which was found to be difficult. When student teachers start teaching themselves, (identity) tensions arise as oneself as a teacher is reflected upon based on their teaching experience.

The self-concept did not emerge in discussions of teacher's role before teaching experiences. Tensions tended to accumulate to some extent and not all student teachers report tensions. While some student teachers seem to express fewer tensions and feel prepared for the teacher's role, some student teachers experience more tensions by the end of their studies.

5. DISCUSSION OF THE MAIN FINDINGS

5.1 Role and knowledge as the core of identity

The study shows that there are differences in conceptions of the teacher's role among student teachers studying for different teaching qualifications. More precisely, the results of this study show the prevalence of the conceptions of the pedagogical expert role compared to the role of didactics expert and subject expert, especially among primary teachers. Similar tendencies have also been reported previously in other longitudinal studies carried out in Estonia (Poom-Valickis & Löfstöm, 2014) and in the Netherlands (Jansen & Bruinsma, 2005, cited in Fokkens-Bruinsma & Canrinus, 2014). While subject student teachers emphasized the aim of making the subject interesting so that pupils learn the subject better, primary teachers aimed to create a learning environment that supported pupil development in a supportive and caring way. Poom-Valickis & Löfström (2014) have placed similar emphasis on the role of the didactics expert in different types of programs. These are important findings for several reasons.

Firstly, all three studies showed that student teachers enter teacher education with narrow, even naïve images of the teacher's role and that this understanding broadens during teacher education. Similar findings have been reported elsewhere, e.g. in Israel (Ezer, Gilat, & Sagee, 2010) and in Estonia (Löfstöm & Poom-Valickis, 2013; Poom-Valickis & Löfström, 2018). This shows how the different sub-identities combine and build on previously held conceptions. Previously, researchers have argued that it is important that teacher education offer opportunities for understanding the complexity of the teacher role from early on in teacher studies (Grossman, Hammerness, & Mcdonald, 2009). The results of this study support this position, as combining different aspects of the teacher's role seems to be difficult, causing tension (see Study III). For primary teachers, combining the previously held conceptions of the teacher as a pedagogue with the didactics expert role seems to be easier than adding the role of the subject specialist. A focus on learner-centered pedagogies seems to be the core of the primary teacher curriculum. Before students enroll in a teacher education program, subject teachers tend to consider the teacher's role often to be that of a subject specialist (see Study I). For them, subject and subject didactics fit together logically, and the role of a teacher as a pedagogue thus stays in the background. Recognizing these differences can help teacher educators to further communicate, as well as helping student teachers from different programs to understand themselves in connection with the complexity of teachers' roles.

Secondly, there were an especially high number of primary teachers who conceptualized the teacher's role mainly as that of a pedagogue. Previous research carried out in Estonia indicated that beliefs about teacher expertise as being pedagogical were positively related to pedagogical reasons for entering

teacher education (Löfström et al., 2010). Although it is important that primary teachers value the role of the pedagogue highly, this finding also raises some concerns. Jõgi (2016) found that Estonian pupils' motivation to study mathematics is related to how well they understand mathematics. If primary teachers themselves do not have enough subject knowledge and do not pay enough attention to the role of the subject specialist, this can jeopardize pupils' subject-related knowledge. However, the same study also indicates that supporting the development of pupils' self-regulation and cognitive abilities can foster pupils' mastering of complex domain specific skills that require good subject knowledge. Primary teachers' learner-centeredness and the willingness to create good learning environments has already created a good foundation for supporting pupils learning, more attention should then be paid how to support novice primary teachers to acquire sufficient subject-specific knowledge. Study III showed that primary student teachers struggled with subject knowledge and that it created tensions for them. Similarly, subject student teachers struggled with integrating the role concepts of didactics expert and pedagogue into their perceptions that the teacher's role is mainly that of the subject specialist. Thus, the understanding that all three roles are equally important in teachers' work should be acknowledged as early as possible in studies, as the understanding of oneself as a person has a profound influence on what one will learn in teacher education (Bullough & Gitlin, 2001, 45)

Thirdly, from a methodological point of view, the studies show how different data collection methods (metaphors, questionnaires and interviews) reveal different aspects of student teachers' conceptions of the teacher's roles. Metaphor analysis also showed the value of the explanations that the students provided in connection with the metaphors they provided. Analyses showed that without the explanations metaphor categorization was difficult. Metaphors seem to be a vulnerable data collection method, especially without explanation. A similar conclusion was reached by Löfström and Poom-Valickis (2013), who showed that the measurement instrument (Beijaard et al., 2000) was more resistant to change than the metaphors, and that different nuances may surface with different data collection methods.

For example, an analysis of metaphors did not reveal differences in student teachers' conceptions of the teacher's role as a didactics expert compared to an analysis of the interview data. Compared to Study I, Study III revealed a more subject-oriented understanding of the teacher's role, especially among subject teachers. The reason for that might be that in the interviews it was possible to take into account the wider context, i.e. the whole interview. This wider context most likely revealed more previous conceptions of the teacher's role. What was taught during the time of the teacher education program seemed to have less effect on the respondents' answers than their previously held conceptions. This is especially observable at the beginning of teacher education.

Previous studies have shown that prior beliefs (understandings of the teacher's role) are difficult to change and many students who complete teacher education hold the same beliefs as when they started (Joram & Gabriele, 1998;

Kagan, 1992). Also, tensions can occur between approaches to teaching learned at the university and in practice schools (Smagorinsky, Cook, Moore, Jackson, & Fry, 2004). While ten or twenty years ago it was important that teacher education change the previous "traditional" understanding of teaching and learning, this seems no longer to be the case in Estonia, at least in general, as also illustrated by Leijen & Pedaste (2018). While not the main focus of this study, an interesting observation was that schools and universities seem to share more similar values in the Estonian society, as learner-centered teaching has become more appreciated in both society and education. This, in turn, seems to indicate that student teachers already have some learner-centered understanding of teaching when they enter teacher education after graduating gymnasium. It is important that teacher education programs further support the development of learner-centered thinking and teaching skills as traditional approaches are not valued by student teachers.

5.2 Self-conception as the core of identity

Studies II and III indicated phases or developmental tasks of teacher identity development that are connected with the emerging self-concepts of the teachers. These phases involve high motivation at the beginning of studies, the knowledge acquisition period, experiencing teaching and making sense of the experiences, and finally the consolidation phase, when student teachers should have developed the teacher identity to the level where they can feel ready to start working as teachers. Other authors have reported similar findings regarding motivation (e.g. Gilat, Kupferberg & Sagee, 2006, as cited in Ezer, et al., 2010). Where teaching practice occurs in the program seems to play an important role in student teachers' development. The results of Studies II and III demonstrate that until teaching experience begins, self-referential components do not surface in student teachers' comments on themselves as teachers, and after they surface student teachers also realize how much they still have to learn. While developing teacher identity means finding a balance between the personal and professional sides of being a teacher (Beijaard et al., 2004; Lipka & Brinthaupt, 1999), self-conception in relation to the profession also plays an important role. In teacher education programs where teaching practice is placed at the end of the program, there may not be enough time to develop teacher identity until the program ends. Therefore, opportunities for practicing teaching should be offered early in teacher education programs.

Before having teaching experience, student teachers talk about the teacher's role in terms of their images of ideal teachers. They are highly motivated to become "good teachers" and are worried about whether they have what it takes to be(come) that kind of a teacher. Lauriala and Kukkonen (2005) point to the interaction between the ideal identity and actual identity of teachers and students, suggesting that it is important to align ideal identity with actual identity. Tensions arose when these did not align and practicing teaching in a

context that allowed for alignment was considered an empowering experience. Although the two studies these authors base their article on were carried out with in-service teachers, the discussion concerning ideals and reality and how the mismatch can create tensions are similar to what was observed among the student teachers in this study. Ideals and reflecting on ideals are considered important for the development of teacher identity (Korthagen & Vasalos, 2005). The image of the ideal teacher can provide student teachers with criteria to "aspire to, aim for and act in accordance with" (Arnon & Reichel, 2007, p.461). It is also suggested that reflection in teacher education should be more prospective, focused on ideals (Beauchamp & Thomas, 2010). However, ideals can also become barriers when student teachers encounter contradictions between their ideals, norms and reality, as Studies II and III showed. Without proper support, not being able to teach the way one wants can discourage student teachers, leading to feelings of failure or feelings of not being suited for the teaching profession (Ingersoll, 2001). There were several student teachers who stated that if they felt that they could not live up to their ideals, they'd prefer to quit teaching altogether. Some also indicatd that in order to be good teachers, they want to start as part-time teachers. These findings challenges whether the ideals that are developed are actually realistic. Have the student teachers set too high standards for themselves? Maybe the expectations of the teacher's role have become so demanding in today's society that student teachers consider these unachievable goals before they even grow into the profession. Perhaps reflecting on one's ideals during teacher education should be more encouraged, and mentors and teacher educators should support student teachers in the process. However, student teachers should not leave teacher education with overly idealistic perceptions either (Hong, 2010), so the challenge for teacher educators is to help student teachers find a balance between ideals and reality. The need to pay attention to student teachers' unrealistic role perceptions has also pointed out by Leijen, Kullasepp and Toompalu (2018).

Several time-management issues were raised in Studies II and III. Student teachers perceived their workload to be very high, especially during teaching practice, when they take a lot of time to prepare for lessons. This raises questions of whether student teachers actually have time to reflect on their experiences so as to connect theory with practice or whether teaching practice is just a place to practice teaching (cf. Gale & Jackson, 1997). In light of the recent literature on reflection and teacher identity development discussed in the chapter 2, the results of this study suggest that supporting reflection should be given more importance during teacher education. This was also supported by Stokking et al (2003), who argued that gradual development into the profession can help to overcome practice shock. They further argued that excessively idealistic expectations and demanding work conditions can be overcome by letting student teachers thoroughly prepare for their lessons during teaching practice, while formulating their learning goals consistent with their own personal development. Therefore, more individual approach seems to be needed in teacher education.

There were student teachers who worked as teachers during their studies or had other work experience in the field. Experiences and reflecting on experiences are considered essential in developing teacher identity (Korthagen, 2001). Working during studies can also help student teachers to develop their teacher identity. For example, one multiple subject teacher in Study III reflected on her experiences both in the workplace and at the university, making use of both, as well as her student status and mentors' help. By the end of her studies, she was confident and aware of herself as a teacher. Working as a teacher, with a low workload during studies, seems be helpful at least for some student teachers in terms of identity development, as it allows them to reflect on experiences more than only teaching practice allows. However, when the workload increases, student teachers then have less time to reflect and learn from the experiences. Therefore, working during teacher education, especially full-time and especially outside of schools, may be one of the factors that prevent student teachers from fully exploiting opportunities to explore and develop teacher identity.

5.3 Reconciling personal and professional aspects of identity and tension

Identity tensions are considered to arise when student teachers' personal and professional identities are not reconciled: a process that is often accompanied by negative emotions. The pressure to negotiate between multiple role expectations has not been included in discussions of supporting the development of teacher identity, although several types of identity tensions have been identified (Alsup, 2006, Pillen et al., 2013a,b, Leijen & Kullasepp, 2013a). Building on the Dialogical Self Theory (Hermans, 2001) and using Gee's (2000) identity model, Study III allows us to propose an additional type of identity tension, namely the multiple role tensions that occur within the I-identity. This type of identity tension has not been discussed before in the literature and is therefore a contribution of this research. Multiple role tensions bear a resemblance to the identity tensions described (Alsup, 2006; Leijen & Kullasepp, 2013a; Pillen, 2013a) that are accompanied by negative emotions, and involves, for example, worries about not having enough time for friends and family. While it is natural that student teachers have less knowledge and skills than experienced teachers, it can be argued that student teachers perceive their competence gaps more seriously than they perhaps should perceive. Study III also showed that tensions connected to multiple role perceptions do not resolve easily compared to, for example, the perceived tensions between *role expectations and university training*, which also addresses the concerns related to the perceived competence gaps.

Study III revealed that subject teachers in particular tended to experience tensions towards the very end of the program, especially tensions between the personal and professional aspects of identity. This indicates that the process of

reconciling the personal and professional sides is ongoing and student teachers may need more time during teacher education to develop their teacher identities. This finding also raises concerns, as developing one's teacher identity is found to be connected to stronger commitment to the profession.

Particularly this type of identity tensions when left unresolved can lead to dropping out of the profession (e.g Alsup, 2006; Smagorinsky et al., 2004). Prior literature suggests possible explanations for why tensions occur at the end of studies and why they have not been resolved by the time subject teachers graduate. For example, Alsup (2006) has argued that in order to develop teacher identity, it is important that student teachers have opportunities to engage with borderland discourses. These are discussions that allow one to reflect on not only practice experiences, but also on oneself as a teacher. Secondly, as discussed above, subject teachers tend to have a more subject-oriented understanding of the teacher's role when they start their studies. When their understanding of the teacher's role broadens, especially during teaching practice, their understanding of the profession in relation to themselves as a person changes, causing tensions. While teaching practice in particular provokes tensions, it seems to be important that subject teachers have the opportunity to practice teaching early on in a master'slevel program or even during bachelor'slevel studies, as two years might simply not be sufficient to develop teacher identity, especially when this time is not only filled with teacher education studies, but also with subject studies, leaving less time for pedagogical and didactical studies and to learn from practice. Similar suggestions have been made elsewhere (e.g. Löfström et al 2010, Poom-Valickis & Löfström, 2018). However, if this is how far the subject student teachers get with their identity development process during pre-service teacher education, it is important to realize that their identity development continues upon entering schools as qualified teachers and should thus be supported when they start working.

One of the results of Study III was that there were quite many student teachers, especially from the subject teacher program, who did not say that they had experienced any tensions during the interviews. The reason for the lack of expressed tensions may be that these student teachers did not want to share the challenges they had faced. It could also be that they had experienced tensions but had had the chance to overcome them. However, it may also be that these student teachers did not experience tensions during their studies. Although that may seem like a good thing, it has been argued that tensions, conflicts and gaps contribute to the development of teacher identity (Schatz-Oppenheimer & Devir, 2014). Moreover, Meijer and her colleagues (Meijer et al., 2011, Meijer, 2011) argue that key experiences and even crises play an important role in teacher identity development and student teachers may develop deeper commitments to teaching after such crises (Nias, 1989). Therefore, if student teachers do not experience tensions, they might not go through the process of transformative learning: the type of learning that helps to reconcile the personal and professional sides of being teachers. Teacher educators (or mentors) can support student teachers in the development of their teacher identities if they push

student teachers to move out of their comfort zones, or even provoke crises (very carefully) and use methods that foster critical self-reflection (Mezirow, 1990, cited in Meijer, 2011). However, if student teachers do experience crises or go through critical situations, there has to be enough time available for reflection and mentor support in this process (Meijer, 2011). The results of this study also offer further support to the previous studies of Meijer et al. (2011), as well as Timoštšuk and Ugaste (2010), who argue that more positive experiences and emotions should be fostered during teacher education. In their studies, student teachers who had positive key experiences and emotions were more likely to engage in self-reflection and growth, as well as feeling inspiration to be teachers.

6. CONCLUSIONS, IMPLICATIONS AND LIMITATIONS OF THIS STUDY

Teacher identity has been a focus of various studies. In this dissertation, student teachers developing teacher identity was explored with the following main research question in mind: How do student teachers develop their professional identity as seen through roles and conceptions of self in pre-service teacher education curricula? Focusing on the different types of programs within the same institution made it possible to take a comparative look at the development of teacher identity during initial teacher education. In this chapter, the implications and limitations of the study are discussed. Also, suggestions for further empirical studies are offered.

6.1 Conclusions and practical implications of the studies

Based on this dissertation, the following conclusions and recommendations can be made to improve teacher education:

Recommendations for teacher educators and program developers:

- Previous studies have pointed out that in order to enable student teachers to combine the personal and professional sides of being teachers (i.e to develop teacher identity), teaching practice should start early in the program. The results of this study make it possible to specify that this is especially important for subject teachers, as in the shorter time-frame of master-level studies, they have less time than primar teachers to develop their identities. While observation practice can be helpful, self-related components surface only after student teachers are able to reflect on their own *experiences* and to gradually grow into the profession. Within a 3+2 study model, student teachers also benefit from the oportunities to reflect on themselves in relation to the teaching profession as early as bachelor-level studies.
- It has been found to be important that teacher education help student teachers to recognize prior beliefs and broaden their knowledge base from the start of the program. The results of this study show that the understanding of the complexity of the teacher's role and the importance of subject knowledge should especially be emphasized for primary teachers, as should the role of the pedagogue for subject teachers, as these aspects of the teacher role seem to be more difficult to connect with other aspects of the teacher role.
- Primary teachers tend to struggle more with subject knowledge as they need to master different subject areas. While it is not be possible to learn everything there is to know during studies, it would be helpful to consider what the essence of the subject area is and also focus on the knowledge and competences that primary teachers need in order to master the subject

knowledge after they graduate. To support primary teachers when they start working, as well as during teaching practice, learning materials should be designed to help them deepen their subject knowledge as they teach. This can also be helpful for multiple subject teachers who also focus on more than single subject studies during their teacher education.

- The results of this study show that student teachers from subject teachers' programs experienced tensions even at the very end of their master studies. This indicates that although teacher education programs include pedagogical, didactic and subject studies, the program should offer more opportunities to integrate pedagogical studies, subject didactics and subject specialization. While subject studies and subject didactics seem to align more naturally, integrating pedagogical knowledge and didactics into the subject knowledge can take longer and requires additional support and cooperation from the university teachers who are responsible for teaching subject didactics and pedagogical subjects. With the opportunity to practice teaching early in the program, student teachers can start to connect their personal and professional roles and have more time to reflect on their experiences during studies.
- Based on the literature as well as the results of the three studies, considerably more time and attention should be allocated for reflection and reflective activities, both retrospective and prospective. Developing reflection skills should be supported and taught and student teachers should be given more responsibility for reflection so that they can develop more confidence in their own judgments. As student teachers tend to have different kinds of prior experiences in teaching, this could be accomplished by tailoring reflective tasks more to students' development needs.
- Student teachers who work as teachers during their studies seem to have advantages in terms of developing teacher identity earlier, during studies than students who don't teach. Student teachers benefit from work-based teacher education programs and closer connections with schools that offer opportunities to practice teaching. Working part-time as teachers during studies should therefore not be discouraged and structures should be provided to support the development process. However, working full-time or in professions not related to teaching during studies can have a negative effect, as this can increase time-related tensions and leave less time for the reflection process. Student teachers should also be aware of this.
- Teacher educators need to be especially aware of when tensions occur in the program and address these tensions as they arise. Previous studies have shown that negative experiences and experiencing several types of tensions are indicators that student teachers are experiencing tensions that they might not be able to resolve. This study confirms that attention should be paid to tensions connected to the process of reconciling the self and the role, as well as the fact that tensions connected to the time management issues and connecting the role conceptions of the teacher are important to pay attention to and support as well. Tensions, when addressed properly, can be helpful in terms of identity development. After negative experiences, positive encoun-

ters with pupils can help to overcome tensions. Student teachers dealing with tensions and negative emotions should not be left alone.
- Although in this dissertation the focus has been on the overall differences between the different types of curricula, student teachers bring with them their personal beliefs, motivation, conceptions and understandings of good teachers and teaching, their own personality and their own resources. Therefore, the personal approach in teacher education should be emphasized in teacher education.
- During the induction year, more emphasis should be placed on supporting beginning teachers' identity development.

Recommendations for policy makers and school leaders:
- It has been pointed out in previous studies that student teachers frequently describe the teaching profession as demanding, time-consuming and exhausting. Teaching practice is often experienced in the same way. This study confirms this and adds that beginning teachers in their first teaching jobs feel the need to be profoundly prepared for each class and follow their ideal of being a learner-centered teacher. In addition, they need time to develop their teacher identity by reflecting on their experiences. This combination is time consuming during the first years and might become overwhelming for beginning teachers. Beginning teachers should have, to begin with, a reduced workload without compromising contractual benefits. In addition, offering strong mentor support at least during their first year working as teachers helps to create time and opportunities for reflection. School leaders can support beginning teachers by finding ways to enable novice teachers to gradually increase their workloads. Based on this research, it is suggested that especially subject teachers who have not worked as teachers before graduation need more time and support to continue to develop teacher identity. Primary teachers can be best supported by enabling them to start with younger students, where the role of subject knowledge in preparing for classes is less important.
- Gradually growing into the profession should be supported more. Student teachers benefit from having teaching experiences from the start of their studies to develop their teacher identity. Experience itself is not enough; reflection and support are needed as well. A national priority should be to support beginning teachers into good starts and sustained careers in teaching. Support in gradually growing into profession, in turn, can make them more prepared for the teaching profession: a factor that has been found to be connected with teacher retention. Therefore, supporting student teachers' identity development throughout the entire program should be emphasized and more finances should be allocated for that purpose.
- The growing tendency to work while studying is a threat to developing teacher identity as it adds to the heavy workload during studies, especially during teaching practice, and takes the focus off reflective activities, which help to combine the professional and personal aspects of becoming a teacher:

developing teacher identity. Support structures, including scholarships, might be needed to increase the opportunity for student teachers to focus on their studies.

6.2 Limitations and recommendations for further research

The methods section of this dissertation describes limitations connected to the methodology of studies. However, some additional limitations should be considered when interpreting the results.

The study aimed to explore teacher identity development in three different types of pre-service teacher education programs in Estonia. However, the data make it possible to draw only limited conclusions about how the program itself influences teacher identity and focus mostly on the placement of teaching practice and integrated/not integrated forms of the program. More extensive studies that use multiple data collection methods are needed. The results of the studies are not generalizable, but generalizing was not an aim of the sub-studies. Patterns that emerged merely highlight the observed differences between the programs and provide insights regarding areas for further investigation.

The approach that was chosen, pragmatism, has provided information about the teacher identity from different angles, using multiple methods, and taking participants' voices into account. Other methods, e.g. phenomenology and narrative-biographical analysis, would have led to a more thorough inquiry of identity and identity development. Moreover, focusing on the co-construction process of the teacher identity could have shed more light on the development of teacher identity.

Regarding methods, it is important to acknowledge that although mentor teachers play a significant role in supporting student teachers' learning and development, in this study student teachers' personal characteristics and the context of the practice schools and mentor support were not examined in depth and were only taken into account in data analysis when mentor support and practice schools were brought up by the participants.

There are also limitations connected to the respondents involved in this research. The time of the interviews in Study III might have influenced the results. Although the first interviews were attempted before classes started, the final interviews were conducted two or three months into the first semester. As the students had already had classes by then, it was possible that they gave answers that they thought the interviewer expected. Also, the way that respondents expressed themselves varied. More talkative people naturally gave more detailed descriptions than less talkative people. The same is true for the writing tasks in Study II, where student teachers' ways of expressing themselves through writing might have influenced the data collected.

Since the data collection of Studies I, II and III, several changes have been made to subject teacher education curricula (with the main aim being to integrate theoretical studies and teaching practice). Teaching practice now starts

earlier in the program for subject teachers and pedagogical studies are more integrated with observation practice and practical tasks that take place in practice schools. Teacher educators and researchers monitor the process and studies have been carried out that attempt to determine if these changes are beneficial in terms of supporting student teachers' identity development. Several recommendations offered here are in line with the already initiated changes in teacher education in Estonia.

Based on this dissertation, the following focus areas for further studies have been identified.

Firstly, the current research highlights the need to investigate at what point student teachers start to combine personal and professional aspects of teaching in renewed teacher education programs. Essays (used in Study II) could be useful research tools for that purpose.

Secondly, the (types of) tensions student teachers experience during their studies warrant further exploration. It may be fruitful to examine student teachers who do not report tensions during teacher education in their first year working as teachers. The literature suggest that experiencing crises is helpful in terms of identity development (Meijer, de Graaf & Meirink, 2011), which suggests that student teachers who do not experience crises or tensions may not develop their teacher identity to the same extent as student teachers who experience tensions but learn to overcome them. Current studies have not focused enough on the lack of tensions in connection with student teachers. It is vital to understand what lies behind these differences among student teachers who do and do not experience tensions.

Thirdly, this dissertation focused mainly on primary teachers and subject teachers and provided little information on multiple subject teachers' identity development in terms of role conceptions and tensions compared to primary and subject teachers. Future studies could focus more on these student teachers as their curricula combine both the strengths and weaknesses of subject teachers and primary teacher programs. The fact that there is more than one subject area to learn seems to create tension for primary teachers and it seems reasonable to suggest that the same holds true for multiple subject teachers. Compared to single-subject teachers, their studies last longer and subject, didactics and pedagogical studies could be combined as early as bachelor studies, which would be beneficial for teacher identity development.

The role of emotions in developing teacher identity has been acknowledged to be an important factor and is a growing research interest, including in Estonia (Timoštšuk & Ugaste, 2012). The present study also points in that direction. Thus, studying the role of emotions in connection with resources available to student teachers would add valuable knowledge.

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APPENDICES

Appendix 1.
Extract from the teaching and learning questionnaire

	The teacher should set an example for students regarding getting along with others.
	In the lessons, the teacher should pay a lot of attention to the diversity of the forms of study.
	The teacher should primarily be a specialist in the subject.
	The teacher should consciously shape good relationships between students.
	The most important part of the teacher's work is good knowledge of the subject.
	The teacher should make sure students use their study and work time efficiently.
	The teacher should notice and react to students' problem behaviours.
	The teacher should use supporting materials as much as possible in the lessons.
	The teacher should take part in subject-related discussions between colleagues.
	The teacher's most important task is creating an atmosphere in which students feel safe and valued.
	The teacher should keep herself up to date and further her knowledge in her subject through independent study and/or additional training.
	The teacher should analyse her teaching.
	In her lessons, the teacher should consider the development of the student's personality.
	The teacher should primarily pay attention to students' learning and solving problems with learning.
	The teacher should be very interested in developments in her subject (or specialty).
	For the teacher, the student's self-image should be an important starting point for planning the teaching.
	The teacher should spend time choosing the study materials most relevant for her students.
	Everything dealt with by the teacher when teaching a subject should be significant with regard to the subject being taught.

Note: The questionnaire is based on Beijaard et al., (2000).

Appendix 2. Interview guide for Study III

I The motivation for starting and continuing study

1. Main question. How did you become a student in teacher training?
2. Do you see yourself working as a teacher after completing (*master) studies? Why?

II I as a teacher, the role of the teacher

1. Main question: if you had to describe today what you're like as a teacher, how would you describe yourself?

Specifying questions:

2. What do you think are the role and tasks of the teacher?

*3 Have the first courses in your master's studies changed your opinion of the role of the teacher? If yes, how?
If yes: Do you remember what it was before? How did your opinion change? *(subject teachers only)*

*4. Do you have a specific age level in mind when describing that role? / Do you feel that it is the same for all age groups (grades)? *(subject teachers only)*

5. Do you have a person in your life who is a role model for you as a teacher?
6. Are any of your professors at the university role models for you as a teacher?
7. What would your typical lesson be like?

III Influence of the curriculum

1. Main question. Please think of events and people in specific courses during your university studies that have particularly affected you as a future teacher. How have they done so?

Specifying questions:

*2. During your bachelor's studies, have you had a chance to reflect upon questions like the characteristics of a good teacher, the role of the teacher, etc? *(subject teachers only)*

3. Has your opinion of the role and responsibilities of the teacher changed during your studies? In what way? Have specific courses, professors or fellow students influenced you?
4. Looking back on your (*bachelor) studies, do you feel like more of a teacher than at the beginning of your studies?
5. Have (*bachelor) studies helped you to prepare to become a teacher? How, specifically?
6. What do you value in your present (*master's) studies?

*7. What are your first impressions from observation practice? *(subject teachers only)*

*8. What do you expect from master's studies? *(subject teachers only)*

*9. Please describe your impressions of practice? *(primary teachers only)*

*10. What has been the most difficult part of starting to teach? What has been the easiest? *(class teachers only)*

*11. What do you expect from the last years of study? *(primary teachers only)*

IV Starting work, worries and fears

1. What do you feel you definitely want to develop in yourself as a teacher?
2. If you were offered a job as a teacher now, would you take it?
3. Do you feel you would be ready to start working as a teacher now? Explain.
4. What do you feel are your strengths at the present stage? What are your weaknesses?

V Social image

1. If you're asked who you're studying to be, how do you answer? What feelings do you have in relation to that question?
2. Are you proud to be a student teacher?
3. Do you feel the teacher's job is valued in society? Does it influence or has it influenced your choice of career?

* Questions asked only of primary teachers or only of students of subject teacher curricula, including specifying questions on the curriculum in case of common questions.

SUMMARY IN ESTONIAN

Õpetajaidentiteedi kujunemine erialase rolli ja minakontseptsiooni kaudu õpetajakoolituse esmaõppes

Uuringu taust ja teoreetiline ülevaade

Üliõpilased, kes asuvad õppima õpetajateks, peavad saama parima võimaliku hariduse, et nad oleksid valmis pärast lõpetamist õpetajana ka tööle asuma. Uuringud aga näitavad, et mitte kõik õpetajakoolituse lõpetanud ei asu õpetajana tööle või kui asuvad, siis lahkuvad peagi (Riigikontrolli Aruanne, 2004, Rots jt., 2007). On leitud, et võrreldes klassiõpetajatega on aineõpetajad Eestis vähem kutsekindlad (Ots, jt., 2009). Samuti, et 3+2 süsteemi lõpetanud tunnevad end võrreldes integreeritud õppekava läbinutega vähem õpetajana töötamiseks ette valmistununa (Rots jt., 2007).

Õpetajaidentiteet (ka õpetaja professionaalne identiteet) on üks teguritest, mis õpetajaks kujunemise ja õpetajana tööle asumise juures olulist rolli mängib (Beauchamp & Thomas, 2009) ning seega peaks õpetajakoolituses õpetaja identiteedi arengule olulisel määral tähelepanu pöörama (Alsup, 2006, Korthagen & Vasalos, 2005). Õpetajaidentiteeti on defineeritud erinevalt. Kõige üldisemalt peetakse õpetajaidentiteedi all silmas seda, kuidas inimene ennast õpetajana tajub. Identiteedi areng tähendab tasakaalu leidmist enda kui isiku ja enda kui professionaali ehk personaalse ja professionaalse identiteedi aspektide vahel (Beijaard jt., 2004; Lipka & Brinthaupt, 1999). Õpetajaidentiteet on pidevas muutumises ja arengus, kujunedes indiviidi ja sotsiaalse keskkonna vastastikmõjus, seda arengut mõjutavad omakorda nii õppija varasemad uskumused, kogemused väärtused kui ka õpetajakoolituse jooksul saadud kogemused ning nende kogemuste interpreteerimine (Flores & Day, 2006; Kagan, 1992; Kerby, 1991; Löfström, Poom-Valickis, Hannula, & Mathews, 2010).

Professionaalses identiteedis saab eristada erinevaid alaidentiteete, näiteks võib õpetaja näha end kas ainespetsialisti, didaktika eksperdi või pedagoogika eksperdina või kombinatsioonidena neist (Beijaard jt., 2000). Varasemalt välja kujunenud uskumused ja arusaam õpetajast ja tema rollist mõjutavad seda, kuidas õpetajakoolitust tajutakse, millele õpetajakoolituse jooksul tähelepanu pööratakse ja mida lõpuks õpitaksegi ningseetõttu tuleks neid kindlasti teadvustada (Calderhead, 1996; Joram & Gabriele, 1998; Pajares, 1992. Identiteedi arengu protsessis on olulisel kohal üliõpilase elulugu, õpetajakoolitus, sh pedagoogiline praktika, mis annab võimaluse nii kogemusi omandada kui neid interpreteerida (Flores & Day, 2006). Küsimused "kes ma praegusel hetkel olen" või "milline õpetaja ma tahan olla", aitab kaasa õpetajaidentiteedi arengule (Korthagen & Vasalos, 2005).

Õpetajaidentiteeti on uuritud erinevalt. Mõned uuringud keskenduvad eelkõige õpetajaks olemise personaalsusele, teised aga rohkem erialaga seotud professionaalsusele (nt roll ja teadmised) (Beijaard, jt., 2004; Lamote & Engels, 2010). Viimaste aastate õpetajaidentiteedi uuringutes peetakse aga üha olulise-

maks mõlema poole, s.o personaalse ja professionaalse identiteedi seostatust ja kooskõla saavutamist, milles lähtutakse dialoogilise käsitluse kontseptuaalsest raamistikust (Akkermann & Meijer, 2011; Hermans, 2001) ning uuritakse pingeid, mis selles protsessis üles kerkivad (Leijen, Kullasepp, & Anspal, 2014; Pillen jt., 2013a, b, c).

Õpetajakoolituse õppekavad on üles ehitatud erinevalt (Zeichner & Conklin, 2005, Flores, 2016) ning uurijad on püüdnud tuvastada, millised programmid on parimad. Efektiivsuse näitajatele toetudes on leitud, et head õpetajakoolituse programmid on selge visiooniga, panustavad pedagoogilisele praktikale, pakuvad tugevat mentori tuge ja teooria ning praktika on omavahel tugevasti seotud. Kuigi nii efektiivsete programmide kui õpetajaidentiteedi kohta on juba päris palju teada, on siiski vähe selliseid uuringuid, mis seostavad õpetajaidentiteedi kujunemist õpetajakoolituse õppekavaga ning uurivad, kuidas erinevalt üles ehitatud õppekavad õpetajaidentiteedi arenguga suhestuvad.

Eestis, nagu mitmes teiseski riigis, on klassiõpetaja ja aineõpetaja õppekavad erinevalt üles ehitatud. Aineõpetajaks saadakse 3+2 süsteemis, st bakalaureusetasemel õpitakse ainet, millele järgnevad õpetajakoolituse õpingud magistritasemel. Klassiõpetaja õppekava on 5-aastane integreeritud õppekava.

Fookus ja uurimisküsimused

Käesoleva doktoritöös eesmärgiks oli uurida õpetajaidentiteeti ning selle kujunemist erinevat tüüpi õpetajakoolituse õppekavadel (st klassiõpetaja ja aineõpetaja õppekavad). Peamine uurimisküsimus sõnastati järgmiselt: kuidas areneb õpetajakoolituse üliõpilaste õpetajaidentiteet õpetajakoolituse õppekaval, nähtuna läbi õpetaja rolli ja minakontseptsiooni.

Et õpetajaidentiteeti on eelnevalt uuritud erinevatel viisidel, sõnastati käesoleva doktoritöö spetsiifilisemad uurimisküsimused järgmiselt:

1. Kuidas avalduvad uskumused õpetaja rollist õpetajaidentiteedi arengus erinevat tüüpi õppekavadel?
2. Kuidas konstrueerivad õpetajakoolituse üliõpilased oma minakontseptsiooni erinevat tüüpi õppekavade?
3. Milliseid pingeid kogevad erinevatel õpetajakoolituse õppekavadel õppivad üliõpilased oma identiteedi arengu protsessis ja kuidas need pinged magistritaseme jooksul muutuvad?

Uurimisküsimustele vastamiseks viidi läbi kolm uurimust. Esimesele uurimisküsimusele aitavad vastata uurimused I, II ja III, teisele uurimisküsimusele uurimused II ja III ning kolmandale uurimisküsimusele uurimus III.

Uurimuste valim ja metoodika

Esimene uurimus (Artikkel I) keskendus üliõpilaste arvamusele ja uskumustele õpetaja rollist, mida uuriti, kasutades metafooride analüüsi ja küsimustikku. Valimi moodustasid bakalaureuseõppe 3. aasta tudengid, kes ei olnud veel

õpetajakoolitusse astunud ning õpetajakoolituse 1. ja 2. aasta magistriõppe tudengid.

Teise uurimuse (Artikkel II) fookuses olid üliõpilaste narratiivid endast kui õpetajast antud ajahetkel. Tegemist oli läbilõikeuuringuga, mille valimi moodustasid klassiõpetaja õppekava kõik aastakäigud kokku 38 üliõpilast.

Kolmas uurimus (Artikkel III) keskendus identiteedi kujunemisele, pingetele, mis selle käigus tekivad ning nende pingete seostele õpetaja rolli kontseptsiooniga. Valim moodustus 20-st aineõpetajate ja klassiõpetaja õppekava üliõpilastest, keda intervjueeriti õpingute kahel viimasel aastal (magistriõppe puhul 1.aasta alguses ja 2. aasta lõpus).

Tulemused ja diskussioon

Käesoleva doktoritöö tulemused viitavad sellele, et erinevate õppekavade üliõpilased tajuvad õpetaja rolli mõnevõrra erinevalt (Uurimused I ja II). Aineõpetajad näevad õpetaja rolli tüüpiliselt ainekesksemalt kui klassiõpetajad, näiteks räägitakse õpetajast kui kõige targemast inimesest või kui raamatust. Klassiõpetajad näevad õpetajat eelkõige pedagoogi rollist lähtuvalt ning rõhutavad toetavat ja hooliva vanema sarnast rolli. Didaktika eksperdi rolli tajumises on samuti erinevusi: kui aineõpetajad näevad õpetaja kui didaktikaeksperdi rolli pigem kui „teha aine huvitavaks“, siis klassiõpetajad rõhutavad õppija arengu toetamist ja õppeprotsessi huvitavaks tegemist ning õppeainet käsitletakse pigem selle saavutamise vahendina. Õpetaja kui pedagoogi rolli rõhutavad õpetajakoolituse üliõpilased võrreldes teiste erialade üliõpilastega rohkem (Artikkel I). Sarnastele järeldustele on jõudnud ka teised uurijad (Beijaard, 1995; Poom-Valickis & Löfström, 2014, 2018). Esialgne veidi idealistlik ja üsna lihtsustatud arusaam õpetaja rollist mitmekesistub õpingute jooksul (Uurimus II ja III). Kui üliõpilane tähtsustab pedagoogi rolli (enamasti klassiõpetajad), siis lisandub esmalt arusaamine didaktika olulisusest ning aine tundmise olulisusest arusaamine tuleb pigem koos praktikaga. Kui tähtsustatakse õpetaja kui hea ainetundja rolli (enamasti aineõpetajad), siis lisanduvad järkjärgult pedagoogika ja didaktika olulisusest arusaamine teoreetiliste õpingute kaudu. Selliste erinevuste teadvustamine aitab õpetajakoolitajaid koostöös paremini õppijaid toetada.

On positiivne, et klassiõpetajad on orienteeritud õppijale, kuid seejuures on oluline silmas pidada ka aineõpet. Et õpingute jooksul ei ole võimalik kõiges eksperdiks saada, siis on oluline, et õpetajad saaksid tuge nii õpingute ajal kui ka pärast õpingute lõpetamist, sh läbi võimaluse järk-järgult õpetajatöösse sisse elada. Käesolev doktoritöö viitab, et klassiõpetajate puhul on siinjuures oluline keskenduda just ainevaldkonna teadmistele, aineõpetajad peaks saama rohkem tuge oma õpetaja identiteedi tugevdamisel.

Minakontseptsiooni arengus on kesksel kohal õpetajakoolituse praktika, mille paiknemise olulisust õppekavas rõhutasid nii Uurimus II kui III. Uurimus II tõi välja kolm faasi, mida klassiõpetajad oma õpingute jooksul läbisid. Neid faase võib käsitleda kui arenguülesandeid, mida üliõpilane oma identiteedi

arengus läbib. Esimeses faasis kirjeldasid üliõpilased ennast kui õpetajat ainult läbi varasemate kogemuste, viidates enda kooliaegsetele õpetajatele. Nad väljendasid enamasti entusiastlikult enda soovi saada „heaks õpetajaks“. Uurimus III tõi ka välja, et „hea õpetaja“ on aineõpetajate ja klassiõpetajate jaoks natuke erinev ning seotud nende arusaamisega õpetaja rollist. Arusaamine õpetaja rollist kui muutuste loojast ja võtmeisikust on olulisel kohal õpetajaks õppima asumisel (Uurimus II). Teises faasis keskendutakse enamasti teoreetilistele õpingutele, oodates pedagoogilise praktika algust. Enne pedagoogilist praktikat (või enne õpetamisega alustamist laiemalt) räägivad üliõpilased endast kui õpetajast teoreetilisel moel, oskamata end päriselt õpetajana kirjeldada. Praktika on tugev motivaator ning praktika järgselt hakatakse end ka õpetajana tajuma ning ennast kui õpetajat kirjeldama ja reflekteerima. See omakorda toob välja mitmeid hirme, muresid, pingeid. Viimases faasis tajutakse endas muutusi, mille kirjeldamises Seega on minakontseptsioon selles faasis praktilisele õpetajatööle põhinev ning pidevas muutumises.

Uurimuste II ja III põhjal võib öelda, et klassiõpetajate õppekavas algab praktika piisavalt vara, et üliõpilased jõuaks ennast õpetajana mõtestada ning enamasti jõuti õpingute lõpuks arusaamisele, kas õpetajatöö on sobiv või ei ole. Aineõpetajate õppekava üliõpilased kogesid pingeid ka õpingute lõpus.

Ideaalidel on õpetajakoolituses oluline roll (Arnon & Reichel, 2007; Korthagen & Vasalos, 2005). Samas võib neist saada ka takistus kui üliõpilane tajub, et ta ei suuda ideaalini jõuda ka suure pingutusega. Siinkohal tasub küsida kas õpetaja ideaal on seatud meie ühiskonnas liiga kõrgele või on ehk üliõpilased liialt enesekriitilised? Võib arvata, et õpetajakoolituse üks suuremaid väljakutseid teooria ja praktika tasakaalu kõrval on tõenäoliselt ka aidata üliõpilastel leida ideaalide ja tegelikkuse vahelist tasakaalu. Selles protsessis on omakorda oluline leida aega oma kogemuse mõtestamiseks läbi refleksiooni.

Uurimuse III põhjal saab välja tuua kolm pingete valdkonda: a) pinged enda tajumise ja rolli tajumise vahel ehk see, millisena ennast tajutakse, ei sobi sellega, milline õpetaja peaks olema; b) pinged enda teadmiste ja selle vahel, mida õpetajana päriselt teha on vaja; c) pinged seoses sellega, et tajutakse, kuidas tegelikult peab õpetaja täitma kõiki kolme rolli: olema hea pedagoog, ainetundja ja didaktikaekspert. Sellised kolme rolli vahel tekkivaid pinged ei ole õpetaja identiteediga seotult teadaolevalt varem kirjeldatud ning käesoleva uurimuse järgi saab öelda, et need sarnanevad identiteedi personaalse ja professionaalsete aspektide vahel tekkivate pingetega. Ka pingete tekkimisel on keskel kohal pedagoogiline praktika, mille käigus hakkavad üliõpilased tajuma, milline on õpetaja roll tegelikult – ja see on enamasti oluliselt komplekssem kui nad on eeldanud. See aga viib õpetajaidentiteediga seotud pingeteni. Erinevaid pingeid, hirme ja muresid, mis algajatel õpetajatel tekivad, on varasemalt kirjeldatud mitmeid, eelkõige rõhuasetusega üliõpilase personaalse mina ja professionaalsete nõudmiste vahel tekkivana ehk pinged, mille puhul üliõpilane tajub, et tema isiksus ei vasta sellele, milline õpetaja olema peab ehk õpetajaidentiteedi personaalne ja professionaalne pool ei ole omavahel kooskõlas (Alsup, 2006; Leijen & Kullasepp, 2013b; Pillen jt., 2013a,b,c). Selliseid pingeid kogesid

käesolevas uurimuses rohkem aineõpetajad ning just eelkõige õpingute viimasel aastal. See võib viidata, et nende üliõpilaste õpetaja identiteedi areng ei ole jõudnud veel niikaugele, et personaalse ja professionaalse identiteedi kooskõla oleks saavutatud. Klassiõpetajate puhul oli endas kui õpetajas selguseni jõudmine selgemalt näha isegi juhul kui sellega kaasnes otsus õpetajaametist loobuda. Kui klassiõpetaja õppekava on 5-aastane ja esimene praktika on hiljemalt 3. kursusel (tänapäeval veelgi varem), on üliõpilastel võimalik pingete ilmnemisel leida õpingute jooksul viise neid hajutada, sh järgmiste praktikatega. Aineõpetajatel, kui nende praktika algab teisel ehk viimasel õppeaastal ning kestab järjest, seda võimalust pole. Aineõpetajate õppekava puhul, kui praktika ei ole hajutatud, võib seetõttu kergemini juhtuda, et pinged ei jõua enne lõpetamist laheneda.

Analüüsides arusaamist õpetaja rollist ning pingeid, võib öelda, et identiteedi arenguga seotud pinged on seotud teadmiste ja oskuste vähesusega selles osas millist õpetaja rolli pole õpingute jooksul piisavalt tähtsustatud. Aineõpetajate puhul on see tihedamini seotud pedagoogi ja didaktikaeksperdi rolliga ning klassiõpetajatel valmistab muret nende vähene ainetundmine. Enda ebakompetentsuse tajumine mõnes olulisel õpetaja rolli aspektis tähendab üliõpilasele tihti, et ta kulutab tunni ettevalmistamisele palju aega. Sellised, pideva ajapuudusega seotud pinged ei lahene kergelt. Kui tekkivad pinged ei leia lahendust, siis võib üliõpilane õpetajana töötamisest loobuda (Alsup, 2006; Smagorinsky jt., 2004). Lahendusena võib tuua võimaluse harjutada õpetamist võimalikult vara, ka juba bakalaureuseõpingute ajal. Võib arvata, et õpingute kõrvalt väikse koormusega õpetajana töötavad üliõpilased on õpetaja identiteedi arengu seisukohast paremal positsioonil kui need kes õpetajana ei tööta. Samas on oluline, et üliõpilastel oleks võimalik enda õpingutele pühenduda, sest õpetajaidentiteedi kujunemine vajab aega enda kogemuse reflekteerimiseks, mistõttu võib suur töökoormus või töötamine väljaspool valdkonda õpetaja identiteedi arengut takistada.

Kokkuvõte

Kokkuvõtteks võib öelda, et õpetajakoolituse õpingud, pedagoogiline praktika, seal kogetu, sh pingete mõtestamine ja oma kogemusest õppimine on hädavajalik, et õpetajaidentiteet saaks kujuneda. Selleks peab õpetajakoolituse üliõpilastele, aga ka noortele alustavatele õpetajatele rohkem aega ja võimalusi andma, et õpetajakutsesse sisse elamine saaks olla järk-järguline. Õpetajakoolituse üliõpilased peavad omakorda teadvustama, et õpetajaks õppimine nõuab aega ja pühendumist õpitu ja kogetu mõtestamiseks, et nende õpetajaidentiteet saaks kujuneda.

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2005–2006	University of Tartu, Faculty of Education, coordinator of the ESF project 1.1 LÜKKA (teaching methods group), 0,75
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2002–2003	H. Eller Tartu Music College, department leader
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List of publications

Anspal, T., Leijen, Ä., Löfström, E. (2018). Tensions and the teacher's role in the student teacher identity development in primary and subject teacher curricula" *Scandinavian Journal or Educational Research*, 1–17.

Leijen, Ä., Kullasepp, K., Anspal, T. (2014). Pedagogies of developing teacher identity. C. Craig, L. Orland-Barak (Eds.) *International Teacher Education: Promising Pedagogies (part A. Advances in Research on Teaching), 22*, 311–328.

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2007–2015	SA Archimedes, kõrghariduse arenduskeskus, haridusteaduse ja õpetajakoolituse programmi Eduko tegevjuht/büroo juhataja
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Teadustegevus

Õpetajakoolituse üliõpilaste õpetajaidentiteedi areng, õpetaja enesearen g, õppimine ja õpetamine kõrgkoolis

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Anspal, T., Leijen, Ä., Löfström, E. (2018). Tensions and the teacher's role in the student teacher identity development in primary and subject teacher curricula" *Scandinavian Journal or Educational Research*, 1–17.

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