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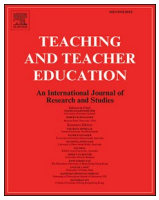
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Research paper



Finnish pre-service teachers' identity development after a year of initial teacher education: Adding, transforming, and defending

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ABSTRACT

Amidst the broad range of teacher competencies, professional beliefs and professional identity are two important domains of personal orientations that inform teacher quality. This study examines how pre-service teachers have negotiated their professional identity after their first year in initial primary teacher education. The study uses qualitative data from an online survey voluntarily answered by seventy-two Finnish pre-service teachers in Spring 2022. The data were thematically analyzed and further examined for additive, transformative, and defensive identity development using Ruohotie-Lyhty's (2018) framework of teachers' identity-agency. The study supports the notion of identity as social, multiple, and discontinuous.

1. Introduction

It is during teacher education that prospective teachers become more reflective and begin to develop "a solid teacher identity that would support and sustain them in their future profession" (Timoštšuk & Ugaste, 2010, p. 1563). More particularly, the transition from coursework to teaching practice may be pivotal for pre-service students' identity development, as this is not only the first time pre-service teachers begin to internalize experiences and contemplate themselves as teachers, but also when they are seen as teachers by colleagues and students (Dassa & Derose, 2017). It is, moreover, a time when pre-service teachers are confronted with real-life teaching situations and encouraged to reexamine their philosophies, life-course experiences, and beliefs about teaching (Friesen & Besley, 2013). This reexamination is coupled with pre-service teachers' motivation (e.g., engagement, willingness to become a teacher), self-image, self-efficacy, and task perception, which have been found to important domains in teacher identity development (Hanna et al., 2020). Furthermore, teacher education enables workplace leaning; it affords pre-service teachers the time and space to navigate, integrate, or contest professional demands and personal or practical experiences in relation to "their personal conceptual framework" (Leeferink et al., 2019, p. 70).

Yet, the choice to enter teacher education is influenced by years of observing teaching as a profession from a pupil's perspective (see Lortie, 1975). Key to this extended period of observation is evaluation, whereby pupils connect teachers' observable actions to intended consequences in their teaching (Harford & Gray, 2017). This results in pre-service teachers' implicit beliefs about being a teacher that are intuitive and imitative in nature, and that remain largely unchallenged by external evidence prior to critical reflection in teacher education (Harford & Gray, 2017). Beliefs may be understood as "closely held principles about teaching and learning and how teachers get better," serving as "a durable but permeable filter" in teachers' sense-making that reflects and refracts teachers' identities (Noonan, 2019, p. 2). Beliefs, therefore, affect how pre-service teachers interpret and respond to their professional roles, responsibilities, and challenges.

The study takes place at a unique time in Finland following the national reform in 2020 through which the admission processes for initial teacher education (ITE) were unified across the key programs of all teacher education units. Primary teacher education is one of the most attractive university study programs, but only a small percentage of the applicants are admitted (Metsäpelto et al., 2022). Teacher education in Finland entails a five-year academic study program leading to a master's degree. Being a primary teacher is a strong and valued profession in Finland, with high teacher retention until retirement (Niemi et al., 2018). However, teachers' work satisfaction and burnout have recently

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become prominent issues (Malinen & Savolainen, 2016), and teachers have been dissatisfied with the image of their profession in the media because only downsides have been presented (Heikkilä et al., 2022). Amidst increasing demands and changing social representation, pre-service teachers' identities cannot be taken for granted or only grasped through external factors, but require a more nuanced approach. This study examines qualitative data from a cohort of pre-service students at a Finnish university to explore the following research question:

How do pre-service teachers negotiate their professional identity as teachers after their first year of teacher education studies?

The qualitative data are first analyzed through the concepts of identity and beliefs, which are identified as two important domains of personal orientations affecting teacher quality; professional beliefs are aspects of general patterns of adaptation to work environments, and professional identity is the ongoing (re)interpretation of work-related experiences (Metsäpelto et al., 2022). These domains "represent distinct facets of individual differences and universal dimensions of human behavior" (Metsäpelto et al., 2022, p. 156). These two foci are then jointly analyzed through the lens of identity-agency, using a novel theoretical framework that argues for three forms of identity development (Ruohotie-Lyhty, 2018). The following sections address the main theoretical concepts used in this study, i.e., teachers' beliefs and identity.

1.1. Pre-service teachers' beliefs

The field of teacher beliefs is well examined in educational sciences. Teacher beliefs may be understood as subjective ideas about teaching and learning that evolve with experience, but are also firm and highly resistant to change early in teacher education (Metsäpelto et al., 2022; Ng et al., 2010). These subjective ideas are influenced by immediate interactional classroom contexts, national policies about teacher quality (e.g., standards, accountability procedures), and cultural norms and values pertaining to children and teaching (Hoy et al., 2006). Moreover, beliefs include evaluations from the past as well as future intentions and aspirations related to children and young people, teaching, or educational purposes (Biesta et al., 2015). The power of beliefs lies in their potential to develop into practical theories with conceptual structures and images that bear on teachers' thinking, instructional behavior, and decision-making (White & Chant, 2014). Unsurprisingly, international research agrees that teaching-ability beliefs are important to pre-service teachers' career motivations and commitment to teaching (Heinz, 2015; Sinclair, 2008). Teaching-ability beliefs are part of pre-service teachers' general belief system and affect how much pre-service teachers explore and commit to their identity as teachers (Pop et al., 2015). These beliefs may be perceived as innate or learned, followed respectively by an outcome-oriented (e.g., measuring, validating) or process-oriented (e.g., effort, strategies) approach to teaching tasks (Pop et al., 2015).

Teacher education may serve as an intervention phase for pre-service teachers in their transition from experiencing education as students to experiencing education as prospective teachers. However, pre-service teachers would need to directly engage with the multidimensionality of and ecological influences on their teacher beliefs for meaningful change to occur. Teacher education undertakes, not always successfully, the task of addressing and making explicit pre-service teachers' beliefs (Harford & Gray, 2017). For example, teacher education may draw connections between the systemic world of educational policy and individual teacher characteristics (Harford & Gray, 2017). Teacher education is further tasked with developing pre-service teachers' epistemological knowledge, for instance by effecting a change to the content of practical theories over time (Pitkaniemi et al., 2014). Additionally, teacher education affords pre-service teachers professional learning activities and experiences. These aim to promote pre-service teachers' sense of competence (McLennan et al., 2017), and critical reflection on preconceived perspectives as they gain research-based knowledge (Metsäpelto et al., 2022). Without a robust professional understanding about teaching and education in general, teachers may struggle to locate their work within the purposes of education (Biesta et al., 2015). To connect their identities to the goals of education, teachers have to be supported in developing their beliefs already in their pre-service education.

1.2. Pre-service teachers' identity negotiation

Despite the discrepancies in conceptualizing teacher identity because of different paradigms prevailing in various periods, teacher identity is commonly understood as a fluid concept, which cannot simply be perceived directly (Hanna et al., 2019). One of the early definitions of teacher identity posits it is "the person's self-knowledge in teaching-related situations and relationships that manifest themselves in practical professional activities, feelings of belonging and learning experiences" (Timoštšuk & Ugaste, 2010, p. 1564). This definition underscores social contexts at work, teachers' agency, affective orientation towards work, and professional learning. More recently, Buchanan and Olsen (2018) saw identity negotiation through an iterative model of human development, where individual meaning-making processes are of central importance, yet "situated within, and therefore co-constructed by, broader cultural, social, and historical contexts" (p. 197). The iteration taking place within context-bound social activity results in not only the transmission of tacit knowledge and skills, but also in new understandings and a changed version of oneself. This ecological dynamic implies that the various macro-influences, meso-forces, and the micro-contexts of daily work are not mere influences on ongoing learning processes, but a part of it (Buchanan & Olsen, 2018). Dahl's (2020) findings supported this notion; student-teachers' identity negotiation is a learning process of professional becoming and identification through enculturation. This learning process is mediated in personal meaning-making and life-stories, and catalyzed by moments of change often ingrained in social relationships in teacher education (e.g., classmates, tutors, pupils, teaching practice) (Dahl, 2020). It is those moments of change that instigate a (re)negotiation of the various socially-constructed conceptualizations teachers hold about themselves as professionals, highlighting identity as social, multiple, and discontinuous in nature (Akkerman & Meijer, 2011).

To come to terms with the multidimensional nature of identity as a phenomenon in teaching and teacher education, Ruohotie-Lyhty (2018) proposed the concept of identity-agency. Identity-agency has a mediatory role between pre-service teachers' conditions in schools and pre-service teachers' individual interpretations of their experiences therein as they negotiate their professional identity. This negotiation is an ongoing, dynamic process of defining the self in relation to the profession (e.g., tasks, influences), and may take the form of additive development, transformative development, or defense. According to Ruohotie-Lyhty (2018), additive development occurs when pre-service teachers' original ideas, expectations, values, and self-concept match their work environment in such a way that pre-service teachers accept new aspects to their work, without necessarily experiencing significant changes in how they perceive themselves as prospective professionals. Transformative development occurs when the mismatch between pre-service teachers' original identity and expectations about the teaching profession is considerable, causing tension, emotional load, and uncertainty about one's competence, thus rendering identity (re) negotiation more demanding. Defending occurs when pre-service teachers actively refuse to (re)negotiate their identity when they perceive a mismatch between their original identity and expectations at work.

This study draws on these three types of identity development to interpret how the participating pre-service teachers negotiated their understanding of teacherhood in their first year of study. Rather than looking at each participant individually to ascertain their additive, transformative, and defensive identity development, the study examines participants' understandings and perceptions collectively to identify

additive, transformative, and defensive aspects within shared themes. The following sections elaborate on the methods and findings of the study.

2. Methodology

2.1. Data collection

The data for this study were collected by the third author in Spring 2022 at a Finnish university offering primary teacher education. The data were collected via an online survey as part of a longitudinal study on student selection and competence development examining pre-service teachers' educational paths and development as teachers. The survey included scales related to learning strategies, motivation, commitment to a teacher's career, and teacher self-efficacy beliefs. This study utilizes data from two open-ended questions at the end of the survey.

1. What do you think about yourself as a teacher now that the first year of study is almost over?
2. Has your perception of teaching changed? If so, how? If not, why not?

By asking participants about perception instead of beliefs, which has stronger connotations of teacherhood, we aimed for less biased and self-conscious answers that could elaborate on participants' answers concerning changes in identity. The data were collected in small group meetings at the end of the participants' first year of study, after they had completed their basic studies in education and first teaching practice. Of the ninety applicants admitted to the five-year primary teacher education program in 2021, seventy-two pre-service teachers answered the survey (80% response rate). The pre-service teachers' answers to the first question averaged 29 words, and to the second question 28 words. The survey, the open-ended questions, and participants' answers were in Finnish, the participants' first language. Participation in the survey was voluntary, anonymous, and not connected to any coursework.

2.2. Data analysis

Participants' individual response to each of the two open-ended questions constituted the unit of analysis in this study. These qualitative data were analyzed using qualitative thematic analysis (Terry et al., 2017). The analysis had three phases. In the first phase, the anonymized data were read in their entirety to facilitate familiarity with participants' answers. During the second reading, each response to the first open-ended question was categorized for (A) certain change, (B) moderate change, and (C) little to no change in identity, depending on latent meaning where a participant's explicit answer was missing. Then, each response to the second open-ended question was categorized for change (Y) or no change (N) in perception of teaching. For example, participant 02 was renamed CY-02, meaning their answers showed or suggested little to no change in identity (C), and a change in perception (Y). Table 1 presents the distribution of participants regarding degree of change in identity, and change or no change in perception per group with illustrative examples.

In the second phase, each participant's answer was coded independent of other participants' answers to the same open-ended question, and separately from the same participant's answer to the second open-ended question. Answers to the first question were coded from the perspective of identity, and answers to the second question were coded from the perspective of perception. The codes were developed inductively and semantically from the textual data. Each answer had between one and three codes. The codes were then revised where necessary and later organized into subthemes. The codes meaningfully captured segments of data, and the developed subthemes communicated salient patterns of meaning in the data, based on the first author's subjective interpretation of the data considering the generated codes and research objective (Terry et al., 2017). Two main themes were developed in response to each open-ended question. Concerning identity, the themes were *transitioning* (subthemes: "developing through teacher education" and "clarity through practice"), and *struggling to transition* (subthemes: "uncertainty" and "doubtful of person-profession fit"). Concerning perceptions, the themes were *changed perception* (subthemes: "going broader and deeper" and "sketching teachers' professionalism"), and *unchanged perception* (subthemes: "dominant past" and "unchallenged perceptions").

In the third phase, each minor thematic unit comprising the subthemes was individually examined for additive, transformative, and defensive identity development (Ruohotie-Lyhty, 2018). Fig. 1 depicts the thematic units related to changes in identity (in light grey) and perception (in dark grey) under their corresponding type of identity development. The following section elaborates on the participants' identity negotiation.

3. Findings

Having finished their first year of teacher education, most of the participating pre-service teachers reported a qualitative change in what they thought of themselves as teachers – where "opettajuus" in Finnish may be understood as "teacherhood" in English – and how they

Table 1
Number of participants with changes in identity and perception of teaching.

Distribution of participants			
Changes in identity		Changes in perception	
Degree	Participants	Yes	No
(A) Certain change	48 I feel that the journey towards my own teacherhood is still at the very beginning, but already during the first year I have noticed how my thoughts and perspectives are changing. I know that I will certainly reflect a lot on what my own background is, and this has become stronger during the year. (AY-11)	34 I have come to understand the extent of the different dimensions of the teaching profession. Just being in class requires paying attention to and knowing many things. The teacher also has fewer teaching hours than I thought. (AY-20)	14 It has not, I've always known what a teacher's job would really be like. (AN-24)
(B) Moderate change	16 I don't think of myself as a teacher yet. However, I have noticed that I have skills that are needed in teaching and that are useful at work. I am quite sure that I will be able to work as a teacher in the future after my studies. (BY-13)	10 It has changed in terms of how much is required of a teacher and how responsible a profession being a teacher is. (BY-28)	6 My perception of teaching has not changed, but it has remained the same. (BN-31)
(C) Little to no change	8 I think I'm very much incomplete and searching for myself a lot. (CY-49)	5 I have gained a broader understanding of what a teacher's job description entails. (CY-21)	3 It hasn't changed, I already had experience in the school world, so it's familiar. (CN-47)

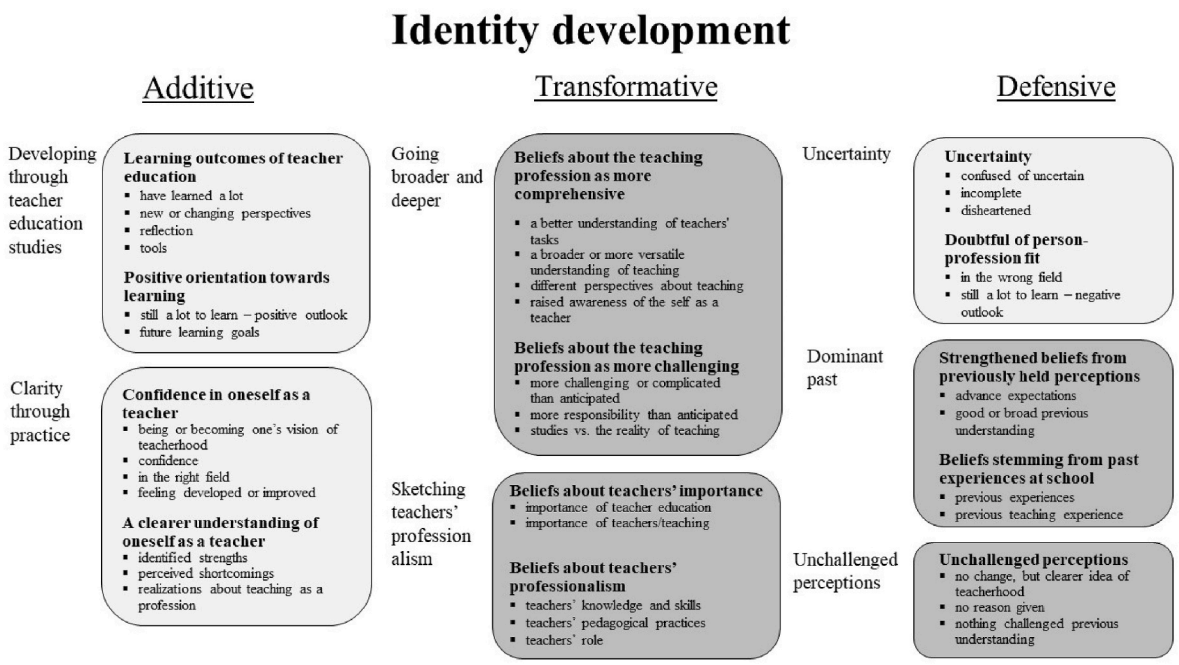


Fig. 1. Pre-service teachers' identity development.

perceived teaching as a profession (see Table 1). This section presents the four main themes from the perspectives of additive, transformative, and defensive identity development (Ruohotie-Lyhty, 2018).

3.1. Additive development

Most participants indicated a clear transition in their identity when thinking of themselves as teachers after their first year of teacher education studies and, more particularly, after their first teaching practice. However, for many participants, this transition was not jarring to their former identity as prospective teachers. Rather, their renegotiated identity entailed the acknowledgement of a margin for improvement, the incorporation of new elements, and a strengthened confidence in oneself as a teacher. As such, their renegotiated identity did not undergo significant changes, but rather improved its alignment to the notions, concepts, and practices promoted in teacher education.

Additive identity development could be largely seen in the participants' perceived learning at university, which was mainly addressed by participants indicating a clear change in their identity. Some students wrote about the degree of the learning achieved, the most characteristic example of which was AY-51's:

> I think I've really learned a lot of important practical things related to teacher training. In my opinion, I have received a huge amount of meaningful information about the comprehensiveness of the teaching profession.

Other students wrote about gaining new perspectives or changing former ones, indicating an enrichment in thinking about themselves as teachers. For example, AN-11 characteristically writes that, although their identity is still "at the very beginning," they have already "noticed how my thoughts and perspectives are changing." Other classmates wrote about gaining "a new, more modern perspective" (AY-30), or "insights and help to articulate my own actions, which I have found to be important" (BN-05). For some students, their academic learning consisted of tools serving as building blocks in professional identity development. The acquired tools were seen as valuable help to "deepen my own thinking" (AY-33), "support my experiences" (AY-39), and "develop my own teacherhood" (AY-164). Some students also noted the potential for developing the acquired tools in the future, and how these tools are meant to support their work as teachers. In addition to negotiating their identity by means of adding new perspectives and tools, a small number of students mentioned reflection, for example "on what my own background is" (AN-11), "about what went wrong when I was a substitute and what went well" (AY-32), "on my own actions" (AY-175), and on issues that troubled them, like pupils' violence and behavior problems (AN-58).

Additive identity development was further seen in pre-service teachers' understanding that learning is ongoing, and in their overall attitude towards learning. A strongly shared outlook was that there are "still endless things to learn" (AY-175) and "a lot to develop" (BY-28). While this is to be expected, it is worth noting that many participants' answers suggested a positive orientation to future learning. For example, AY-33 writes, "I've gotten a scratch of the surface and I'm looking forward to learning more," while AY-15 writes, "I have a lot to learn, but I believe that I also want to learn, even after graduation." Some students even had a clear idea of what they would like to learn more about in the future, such as classroom interaction and "meeting pupils as individuals" (AN-07), "more theoretical knowledge" (AY-20), or "versatile exercises and teaching methods" (AY-65). These learning goals were formed primarily with the pupil's benefit in mind, rather than themselves as teachers.

Additive identity development was also seen in the participants' increased confidence in themselves as teachers. The match between their original teacher identity and the professional circumstances or expectations during their studies and teaching practice did not cause an imbalance. Instead of introducing new directions or tension, these pre-service teachers' self-concept as teachers was validated. Several pre-service teachers reported feeling satisfied with and more confident in their teaching abilities because of their studies. Several others felt they had clearly improved or developed during their first year. For instance, BN-31 observes "I got to advance my own teaching towards a better one", and AN-06 comments:

> I feel that I have improved as a teacher during my first year of study. The internship at [teacher training school] has put the things I studied into practice, and I feel that the internship in particular has given me the most of all.

Participants' increased confidence was additionally seen in their

expressed belief about embodying their idea of a good teacher. For example, AY-54 states "I think I'm the kind of teacher I dreamed of as a child," and AY-15 writes "I think I will become the kind of teacher I would like to be." Some pre-service teachers believed themselves to be in the right field of study and work, further confirming that, for the majority of the participants, there had been a good fit between their original identity and teaching as a profession. While this is positive, only AY-66 was more critical in this respect:

> This year has given a lot and strengthened the feeling that I am studying in the right field. Especially with my substituting (also in middle school), my self-perception as a teacher has strengthened, especially in terms of e.g., group management, classroom management, etc. The field really feels like my own. Studying has been really interesting, and I am really conscientious to do everything required, and the desire to learn is great. However, time limits independent learning and finding out about things. Maybe, however, how much you want to invest in things also tells yourself that the field is the right one.

The first year had confirmed many of the pre-service teachers' choice to pursue teaching as a career. AY-66's answer, however, problematized (additive) identity development by suggesting it depends on how one negotiates time restraints on professional learning against personal investment.

Connected to their enhanced confidence are the realizations participants made about themselves as teachers, with an emphasis on the strengths and shortcomings they identified after their teaching practice. Most of the participants who did so where those whose answers suggested a change in their original identity. Many participants recognized personality traits or knowledge that were an advantage to them as teachers, such as "I am positive and compassionate" (AN-04) or "have learned more interaction skills to support working with children" (AY-38). At the same time, several shared the need for more experience and skills to make a connection between learned theory and practice. For example, "I feel that I have theories, ideas and ideals, for which I still need practical experience and implementation" (BY-09). The meaning of participants' realizations about where their capabilities lie and how they contribute to the learning environment was succinctly captured in AY-169's phrase: "I know better what kind of teacher I want to be and in which areas I want to develop myself." Even a couple of participants who struggled with identity change felt they had necessary skills and motivation, although they prefaced that by saying "I don't think of myself as a teacher yet" (BY-13) and "I am not really a ready teacher" (CN-63). Participants' ability to pinpoint important strengths as teachers, but also their reporting shortcomings as something that can change, underscores the potential for transformative identity development in participants' upcoming study years.

3.2. Transformative development

Many of the pre-service teachers wrote about gaining a more comprehensive picture of teaching, which arose from tension between their preconceptions about teaching as a field of work and what teaching entailed in practice. The participants' transformative identity development was seen in their revised understanding of teaching, involving realizations about the challenging nature of the profession as well as about themselves in a teachers' role.

The inherent challenge in teaching and the degree of responsibility teachers have were prominent in transformative identity development. Of the pre-service teachers who indicated a transition in their identity, sixteen reported that teaching was more challenging or complicated than they had initially anticipated. For example, participants wrote:

> There is a lot more subtle work involved, on top of all the other administrative work. You have to manage a lot of things mentally and physically. Self-esteem and your own boundaries must also be very strong and clear. (AY-15)

> At least I have realized that a teacher's everyday life is really hectic and that it is difficult to limit the teacher's work, e.g. planning work. (AY-173)

At the same time, other participants mentioned "a lot of work in advance" (AY-34), and "[a] lot of societal pressures and expectations" (AY-37). The difficulty in teaching was compounded by the pre-service teachers' belief that teaching entails a lot of responsibility. The five pre-service teachers touching on the matter shared AY-69's realization about "how much responsibility a teacher really has," but CN-63, who struggled to renegotiate their identity, stressed the importance of such realization: "the amount of real responsibility of a teacher has increased the most for me, which I feel is important to know when studying to become a teacher." A few pre-service teachers, who indicated a moderate change in their identity, addressed the contrast between studies and work life: "Studying does not prepare you for the challenges of the profession" (BY-41). These responses suggest that teacher education helped make visible the complexity in teaching, and that some of the pre-service teachers' impressions led to transformative identity development by not only altering, but also refining previous notions about the teaching profession.

Connected to this perceived complexity and level of difficulty was a more comprehensive portrayal of teaching alongside a raised awareness about oneself as a teacher. The disjuncture between initial views on teaching and the self as a teacher, and the beliefs held after their first year is exemplified in some of the participants' answers about new understandings concerning the profession. These participants agreed that they had "a more versatile understanding of what teaching is and what working as a teacher is like" (AY-46), which included a clearer idea of teachers' tasks and job description. Even CY-02, who did not indicate a notable change in their identity, observed that "[teaching] is not just teaching a new subject, but wide-ranging educational work that involves many areas." However, transformative identity development could be best seen in longer excerpts, which underlined active interaction with others in the professional environment and a shift in perspective, such as:

> My understanding of teaching has perhaps become more diversified compared to before. […] as a result of having met a huge number of people studying to become teachers and working as teachers. (AY-39)

> I have learned to look at things more precisely from the teacher's point of view, and not so much from the student's point of view anymore. By this, I mean that you got to learn a lot about things that are not visible to students. That is, everything that a teacher needs to know, take into account, take care of, etc. (AY-66)

Transformative identity development was further seen in participants' observations about themselves. Interestingly, CY-71, who reported an unaffected identity, eloquently described their change in perception of teaching showing a clear impact on their self-understanding:

> The first year has given me a lot of tools and perspectives on becoming a teacher, but of course also brought out my own limits and where I could improve. […] Perhaps the most interesting thing has been dreaming about what kind of teacher you see yourself as, what kind of things you consider important. […] I wouldn't want to be a teacher who does her job well and nothing else. There is nothing wrong with that, but I would like to be a teacher who does her job well and is excited to learn and try new things and develop the school's activities, to see what is important to develop and why, without being exhausted in her work.

Transformative identity development could be seen in how the

academic and teaching practice environment caused CY-71 to define her beliefs about teachers' goals and acknowledge a physical or emotional load. Exhaustion was also AY-173's concern, suggesting the belief that person-profession tension can be detrimental to health: "In my teaching, I want to pay attention to not burning out." Transformative identity development could also be seen in a few students who chose to be slower or more realistic in how they approach work as a teacher, perhaps as an emotionally protective measure. BY-13 believed they have changed "the image of […] perhaps the attitude towards myself. I don't want to decide now where I'll be in 5 years, I'll take about a year at a time," and AY-38 stated their perception of teaching "has changed in a more realistic direction", becoming "more aware of my own resources and what I can influence as a teacher."

Finally, transformative identity development was seen in the pre-service teachers' collective definition of teachers' professionalism (22/71). This included changed beliefs about "the importance of teacher training in the work of a teacher" (BY-67), and teachers as trained and valued professionals:

> During this year, I have noticed how important the teacher is to the child and the class. Understanding the importance of a teacher has opened my eyes to my future profession. It is demanding, but really important and appreciated work. (AY-22)

Teachers' professionalism further included changed beliefs about teachers' knowledge and skills, pedagogical practices, and role in the classroom. For example, participants "learned what modern teaching is" (AY-30) and "basing the work on scientific research" (BY-172), that "the teacher has to know about things extensively and understand a lot about the subjects" (AY-33), and "how extensive work and know-how teaching requires" (AY-164). Even when some participants described this change as an expansion of their learning, transformative development is evident in their "hav[ing] realized (sometimes really self-evident) things about teaching that [they] hadn't even thought about" (AY-164). This realization would not have happened had there not been tension between their preconceptions and the environment. The tension also affected beliefs about what teachers do and represent in the classroom. The pre-service teachers talked about interaction (AY-69, BY-67, BY-172), daily ethical choices (AY-170), thorough lesson preparation (BY-64), and giving "students the opportunity to understand and learn things themselves, and to think critically" (AY-65). Additionally, a few pre-service teachers reconsidered former understandings of teachers' role:

> My perception of teaching has changed more in the direction that a classroom teacher is primarily an educator whose task is to raise socially capable citizens. I used to think that the most important thing is to teach subjects. (AY-12)

Transformative identity development was seen in the pre-service teachers' revised belief that a teacher is principally a communicator of content knowledge; the teacher became a professional with moral and developmental responsibility. From being the "giver of the right answers" (AY-26), a teacher became "more of a safe adult, an educator" (AY-51), who "is a member of the class" (AY-54) and "the creator of a good learning situation" (AY-65).

3.3. Defensive development

The pre-service teachers' defense of their original identity could be seen in their reporting no change to identity and struggling to find confidence as teachers. Some pre-service teachers felt they had too much still to learn, causing them to doubt their readiness and feel incomplete. For example, BY-67 stated, "I feel really incomplete and lacking," and BN-53 shared, "I've learned a lot of everything, but I'm afraid I won't remember those things at all after many years, when I maybe graduate and get to go to work." The emotional aspect of renegotiating teacher identity was further seen in participants' confusion and uncertainty after their first teaching practice (14/72). Some felt they were still "just figuring out everything that has to do with teacherhood" (BY-41), or "what kind of teacher" they wanted to be (BN-62, BY-172, CY-21). Others, who found education a meaningful and suitable profession, felt their teaching experience was "confusing and fragmented" (BN-05) or found their "ability to cope and immerse oneself in [future teaching] questionable" (CY-71). Defensive identity development could be seen in how these pre-service teachers, whose answers indicated moderate (10/18) to no (8/18) change to their original identity, felt confused when caught in the middle of contextual demands. This suggests a vulnerability that could be counterbalanced by more experience and skill-building later in their teacher education, and perhaps a heightened awareness of the need for direction as their studies progress.

The pre-service teachers' defensive identity development could further be seen in how they processed their perception of teaching at the end of their first year. It is notable that several participants (10/15) whose answers suggested a change in their original identity did not change their initial perception of teaching as a profession. Rather, earlier beliefs were confirmed or strengthened, and expectations were met. For most of these participants, this was due to positive prior experiences as students, work experience in a school, or a family member who was a teacher. For example, AN-11 and AN-70 respectively state:

> I think I have had a clear understanding of teaching for quite a long time, as my mother is a teacher. I believe that the education has brought more understanding of the different aspects of teaching, but the fundamental understanding of teaching and its meaning has not changed. In my opinion, a classroom teacher is above all an educator, whose work is supported by pedagogical and content skills.

> Yes and no, in a certain way the pre-expectations have perhaps only become stronger. I knew very well what I was getting into and what the current situation was in the school world. Of course, based on the first internship (which was spread over the whole school year), I have still been able to observe and talk about things with other interns and also with the school staff, at the same time confirming my own thoughts.

People affiliated with teaching helped shape participants' beliefs about the profession, and the teaching experience gained during their first year supported participants' having a "good idea of teaching before coming to university" (AN-06). Here, defensive identity development could be seen in how the pre-service teachers encountered professional or institutional demands that matched their anticipated difficulty in teaching or earlier beliefs about what it might entail, and did not change their original perception of teaching. Their beliefs were not challenged, added to, or transformed, but remained constant through validation or confirmation. Moreover, these pre-service teachers' (15/23) confidence in their belief that they understand teaching as a field and their having "a pretty good idea of the skills and teaching required of a teacher" (BN-53) contrasts the lack of confidence expressed by the participants described earlier (18/23), who struggled with identity negotiation. Because these pre-service teachers' answers concerning identity suggested a change, the certainty or confidence underlying their answers about no change in beliefs may imply that reinforced beliefs about teaching formed before teacher education are important to maintaining a steady or resilient professional identity as teachers.

4. Discussion

This study examined pre-service teachers' identity development at the end of their first year of study. It drew on answers to two open-ended questions in a survey answered by seventy-two Finnish pre-service teachers. The answers to each question were respectively analyzed for change in identity and change in perception of teaching. The subthemes developed from these answers were examined for additive, transformative, and defensive identity development. This section discusses the practical and theoretical implications of the findings, and addresses

the limitations and conclusions emerging from the study.

Additive identity development occurs when new challenges and changes in the professional environment match a teacher's expectations and values, leading to increased self-efficacy and inclusion of new work-related elements into their identity (Ruohotie-Lyhty, 2018). For most participants, the change in how they saw themselves as teachers seemed to occur under little tension between their original identity and demands in their environment. This enabled an overall stronger orientation to their learning in teacher education, which could be seen in how participants talked about tools and perspectives acquired during their first year, but also in their positively-nuanced awareness of how much they should still learn. Such attitude towards their professional development as teachers might be accounted for by a successful consolidation of tensions thanks to identified resources (Anspal et al., 2019), like pedagogical concepts and methods. Moreover, additive identity development manifested in some participants' strengthened confidence in their abilities and identification of weaknesses. This may be a result of the teaching practice as a boundary experience, urging students to navigate tensions between internal and external understandings, and to later incorporate linkages between such understandings into their own development (Assen et al., 2018). The findings on additive identity development underscore motivation, self-image, and self-efficacy as determinants of teacher identity (see Hanna et al., 2020).

Transformative identity development occurs when new challenges and changes in the professional environment do not match a teacher's expectations and values, making identity renegotiation more demanding, and causing tension, emotional load, and uncertainty about professional competence (Ruohotie-Lyhty, 2018). In this study, transformative identity development stemmed from participants' change in perception of teaching. The teaching practice particularly prompted the belief that teaching is quite multidimensional and versatile. With an emphasis on challenge, rather than uncertainty about professional competence, transformative identity development was connected to task perception (i.e., what teachers do and what tasks are connected to teaching) (e.g., Hanna et al., 2020), and a negotiation of socially-constructed conceptualizations of themselves as teachers (e.g., Akkerman & Meijer, 2011).

For participants showing transformative identity development, the teaching practice also promoted beliefs about good teaching, seen in participants' collective description of teachers' professionalism. The participants paid more attention to student-focused instruction or student achievement (see also Ng et al., 2010), and to teaching as intellectual work including deliberate, cognitive, and decision-driven activity (see also Sinclair, 2008). These beliefs were mostly expressed from a teacher-centered perspective and, like in White and Chant (2014), seemed to reflect epistemologies encountered and likely internalized through coursework and peer interaction. The emotional load of transformative identity negotiation was not prominent in this study, but present in some cases, manifesting as concerns about burnout and a tentative approach to teaching. Because these participants' answers suggested engagement with teaching, such concerns may be due to higher sensitivity to work demands (Salmela-Aro, Hietajärvi, & Lonka, 2019).

Defensive identity development occurs when teachers respond to a mismatch between their original identity and the professional environment by refusing any changes to their identities (Ruohotie-Lyhty, 2018). A few participants' answers indicated a lack of change in their identity. This was connected to uncertainty, confusion, and doubt about teaching being the right career choice for them. These participants might have experienced a boundary moment in teaching practice eliciting a change in behavior and going beyond their comfort zone (e.g., Assen et al., 2018), although longer answers would be necessary to verify whether that accounts for the shared uncertainty. However, because of the underlying positivity in these participants' responses when considered in their entirety, identity development could be encouraged through educational experiences that enhance self-efficacy and, in turn, career adaptability and career optimism (McLennan et al., 2017). Such experiences in tandem with reflection could also strengthen commitment and beliefs about teaching as an innate ability to help pre-service teachers who are still actively searching and questioning their educational choices (Pop et al., 2015).

Defensive identity development was further seen in participants' unchanged perception of teaching, despite several of these participants reporting or suggesting a change in identity. In their case, this was due to earlier personal or vicarious experiences, former expectations being met, and the belief they already had a good grasp of what teaching entails. These participants' beliefs about what teaching is like emerged from subtle processes of enculturation through interaction at work or intimate social environments (e.g., Dahl, 2020; Heinz, 2015; Ng et al., 2010), and remained unchallenged or intuitive during teacher education (e.g., Harford & Gray, 2017). Their adherence to earlier understandings of teaching was not critically assessed, and it was unclear whether these long-standing beliefs could form the basis of a more mature teacher identity or strengthen their identification as teachers, as Friesen and Besley (2013) suggested.

Defensive identity development including an adherence to beliefs may not be an undesirable outcome of initial teacher education when accompanied by a perceived positive change in how pre-service teachers understand themselves as teachers. This adherence, however, should still be problematized when it contributes to defensive identity development in situations where a teacher's original identity and institutional demands match. Pre-service teachers' reported beliefs could be used as a prism through which to filter meaning-making about teaching as a profession (Harford & Gray, 2017), potentially leading to a strengthened teacher identity. Considering their social origins, earlier understandings of teaching could be revisited through dialogue with peers to avoid strong or dominating internalized voices (Assen et al., 2018). This should begin early in teacher education, when pre-service teachers are formally acculturated into the teaching profession at the same time as they collectively shape it. Continuing pre-service teachers' critical evaluation of their beliefs throughout teacher education could take various forms, for example learning diaries including a complementary focus on identity, written or visual narratives, and specialized peer assignments or reading circles.

This study provides further support for the notion of identity as social, multiple, and discontinuous (Akkerman & Meijer, 2011), and highlights identity-agency (Ruohotie-Lyhty, 2018) as conceptually useful in examining pre-service teachers' self-reported development. Despite the small number of participating first-year pre-service teachers, the response rate to the survey was high and the findings might resonate with the whole cohort. Although the qualitative data were short, they showcased the multidimensionality of identity negotiation through additive, transformative, and defensive means. Longer written reports and interview data on identity would be more suited to examining whether these means can be found at the same time in each pre-service teacher individually, and not only across data. Because of connections between additive development and changes in identity, and between transformative development and changes in perception of teaching, such data could further examine whether these ways of identity development are complementary in nature.

The responses to the second open-ended question were analyzed for changes in perception of teaching, where perception was understood as beliefs about the teaching profession. Because beliefs are part of one's teacher identity (e.g., Pop et al., 2015), it could be argued that the entire analysis could have only used identity as the analytical lens. However, belief as an adjunctive analytical lens helped reveal that identity development does not always translate into a change in beliefs about teaching as a profession, and that defensive identity development may take place when there is indeed a match between a teacher's original identity and institutional demands. Pre-service teachers' relationship between their beliefs and identity is worth exploring early on in teacher education, and the concepts of addition, transformation, and defense

may be used as tools for reflection on how this relationship develops over time.

The findings of this study provide valuable insights for teacher educators in understanding the variation in identity negotiation. By studying this variation, teacher educators can gain a deeper understanding of how teacher education programs are shaping and influencing student teachers' professional identities at the beginning of studies. This knowledge can help identify strengths and weaknesses in the curriculum, instructional approaches, and learning opportunities provided by the program. Understanding the variation also enables teacher educators to provide individualised learning support and guidance as different student teachers may face unique challenges and experiences when navigating their first year of study. Our research findings can help teacher educators identify common patterns and struggles in this process and tailor their mentoring and support strategies to meet the specific needs of individual student teachers, thus promoting their professional development.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

References

Akkerman, S. F., & Meijer, P. C. (2011). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher Education, 27*(2), 308–319. https://doi.org/10.1016/j.tate.2010.08.013

Anspal, T., Leijen, Ä., & Löfström, E. (2019). Tensions and the teacher's role in student teacher identity development in primary and subject teacher curricula. *Scandinavian Journal of Educational Research, 63*(5), 679–695. https://doi.org/10.1080/00313831.2017.1420688

Assen, J. H. E., Koops, H., Meijers, F., Otting, H., & Poell, R. F. (2018). How can a dialogue support teachers' professional identity development? Harmonising multiple teacher I-positions. *Teaching and Teacher Education, 73*, 130–140. https://doi.org/10.1016/j.tate.2018.03.019

Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching, 21*(6), 624–640. https://doi.org/10.1080/13540602.2015.1044325

Buchanan, R., & Olsen, B. (2018). Teacher identity in the current teacher education landscape. In P. Schutz, J. Hong, & D. Cross Francis (Eds.), *Research on teacher identity* (pp. 195–205). Springer International Publishing. https://doi.org/10.1007/978-3-319-93836-3_17.

Dahl, K. K. B. (2020). Mo(ve)ments in professional identification: Achieving professional identity and becoming a teacher in Danish and Kenyan teacher education. *Compare: A Journal of Comparative and International Education, 50*(1), 123–140. https://doi.org/10.1080/03057925.2018.1508333

Dassa, L., & Derose, D. S. (2017). Get in the teacher zone: A perception study of preservice teachers and their teacher identity. *Issues in Teacher Education, 26*(1), 101–113.

Friesen, M. D., & Besley, S. C. (2013). Teacher identity development in the first year of teacher education: A developmental and social psychological perspective. *Teaching and Teacher Education, 36*, 23–32. https://doi.org/10.1016/j.tate.2013.06.005

Hanna, F., Oostdam, R., Severiens, S. E., & Zijlstra, B. J. H. (2019). Domains of teacher identity: A review of quantitative measurement instruments. *Educational Research Review, 27*, 15–27. https://doi.org/10.1016/j.edurev.2019.01.003

Hanna, F., Oostdam, R., Severiens, S. E., & Zijlstra, B. J. H. (2020). Assessing the professional identity of primary student teachers: Design and validation of the Teacher Identity Measurement Scale. *Studies In Educational Evaluation, 64*, Article 100822. https://doi.org/10.1016/j.stueduc.2019.100822

Harford, J., & Gray, P. (2017). Emerging as a teacher: Student teachers reflect on their professional identity. In B. Hudson (Ed.), *Overcoming fragmentation in teacher education*. Cambridge University Press. http://hdl.handle.net/10197/8035.

Heikkilä, M., Iiskala, T., Mikkilä-Erdmann, M., & Warinowski, A. (2022). Exploring the relational nature of teachers' agency negotiation through master- and counter-narratives. *British Journal of Sociology of Education, 43*(3), 397–414. https://doi.org/10.1080/01425692.2022.2038541

Heinz, M. (2015). Why choose teaching? An international review of empirical studies exploring student teachers' career motivations and levels of commitment to teaching. *Educational Research and Evaluation, 21*(3), 258–297. https://doi.org/10.1080/13803611.2015.1018278

Leeferink, H., Koopman, M., Beijaard, D., & Schellings, G. L. M. (2019). Overarching professional identity themes in student teacher workplace learning. *Teachers and Teaching, 25*(1), 69–89. https://doi.org/10.1080/13540602.2018.1527762

Lortie, D. C. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.

Malinen, O.-P., & Savolainen, H. (2016). The effect of perceived school climate and teacher efficacy in behavior management on job satisfaction and burnout: A longitudinal study. *Teaching and Teacher Education, 60*, 144–152. https://doi.org/10.1016/j.tate.2016.08.012

McLennan, B., McIlveen, P., & Perera, H. N. (2017). Pre-service teachers' self-efficacy mediates the relationship between career adaptability and career optimism. *Teaching and Teacher Education, 63*, 176–185. https://doi.org/10.1016/j.tate.2016.12.022

Metsäpelto, R.-L., Poikkeus, A.-M., Heikkilä, M., Husu, J., Laine, A., Lappalainen, K., Lähteenmäki, M., Mikkilä-Erdmann, M., Warinowski, A., Iiskala, T., Hangelin, S., Harmoinen, S., Holmström, A., Kyrö-Ämmälä, O., Lehesvuori, S., Mankki, V., & Suvilehto, P. (2022). A multidimensional adapted process model of teaching. *Educational Assessment, Evaluation and Accountability, 34*(2), 143–172. https://doi.org/10.1007/s11092-021-09373-9

Ng, W., Nicholas, H., & Williams, A. (2010). School experience influences on pre-service teachers' evolving beliefs about effective teaching. *Teaching and Teacher Education, 26*(2), 278–289. https://doi.org/10.1016/j.tate.2009.03.010

Niemi, H., Lavonen, J., Kallioniemi, A., & Toom, A. (2018). The role of teachers in the Finnish educational system. In H. Niemi, A. Toom, A. Kallioniemi, & J. Lavonen (Eds.), *The teacher's role in the changing globalizing word: Resources and challenges related to the professional work of teaching* (pp. 47–61). Brill Sense.

Noonan, J. (2019). An affinity for learning: Teacher identity and powerful professional development. *Journal of Teacher Education, 70*(5), 526–537. https://doi.org/10.1177/0022487118788838

Pitkaniemi, H., Karlsson, L., & Stenberg, K. (2014). The relationship between Finnish student teachers' practical theories, sources, and teacher education. *International Journal of Higher Education, 3*(4), 129–141. https://doi.org/10.5430/ijhe.v3n4p129

Pop, E. I., Negru, O., & Opre, A. (2015). Challenging or conserving your beliefs: A person-centered approach of pre-service teachers' educational identity. *Procedia - Social and Behavioral Sciences, 187*, 147–152. https://doi.org/10.1016/j.sbspro.2015.03.028

Ruohotie-Lyhty, M. (2018). Identity-agency in progress: Teachers authoring their identities. In P. Schutz, J. Hong, & D. Cross Francis (Eds.), *Research on teacher identity* (pp. 25–36). Springer International Publishing. https://doi.org/10.1007/978-3-319-93836-3_3.

Salmela-Aro, K., Hietajärvi, L., & Lonka, K. (2019). Work burnout and engagement profiles among teachers. *Frontiers in Psychology, 10*. https://doi.org/10.3389/fpsyg.2019.02254

Sinclair, C. (2008). Initial and changing student teacher motivation and commitment to teaching. *Asia-Pacific Journal of Teacher Education, 36*(2), 79–104. https://doi.org/10.1080/13598660801971658

Terry, G., Heyfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In C. Willig, & W. Stainton Rogers (Eds.), *SAGE handbook of qualitative research in psychology* (pp. 17–37). SAGE Publications.

Timoštšuk, I., & Ugaste, A. (2010). Student teachers' professional identity. *Teaching and Teacher Education, 26*(8), 1563–1570. https://doi.org/10.1016/j.tate.2010.06.008

White, J. W., & Chant, R. H. (2014). Challenging idealism: Pre-service teachers' core beliefs before, during, and after an extended field-based experience. *Teacher Education Quarterly, 41*(2), 73–92. https://www.jstor.org/stable/teaceducquar.41.2.73.