

Grounds for differences in motivation among Finnish student teachers and novice primary school teachers

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We used mixed methods to explore differences between Finnish certified novice teachers and student teachers who want to work as teachers, versus those who intend to leave the teaching career, and the reasons behind trans-professional changes. The student register data (N=237), survey (59 responses) and interviews (n=19) revealed that 72% of graduate primary school teachers were satisfied with their profession and would choose the career again, 47% had thought about leaving the profession, and 3% of the survey respondents were not working in teaching professions. Satisfaction with teaching career was positively related to teacher efficacy, satisfaction with teacher education and ability to control a class, and negatively with job stress, and academic knowledge test score in the teacher education entrance examination. Entrance examination success did not guarantee graduation and the academically strongest students were not the most satisfied with the teaching profession. In addition, we found statistically significant differences between the three identified teacher motivation groups: novice teachers with high teacher motivation scored significantly higher in job satisfaction, satisfaction with teacher education, and teacher efficacy, than teachers with mediocre or low motivation. Analysis of interviews revealed that profession-based and person-based reasons, and unrealistic ideas of the profession cause retention challenges in a teaching career.

Introduction

In Finland, a primary school (PS) teacher's qualifications are based on a Masters (MA) degree in research-based teacher education (TE), and teaching professions are highly valued. During the 2010s, primary school teacher education (PSTE) programs accepted one applicant out of ten. Since then, the number of applicants has diminished slightly, but PSTE is still popular. This popularity is based on a conception of the teaching occupation as an independent profession, in contrast to many countries where it is more structured and externally regulated (Martin & Pennanen, 2015). Finnish universities select students for PSTE programs through a two-stage selection process, which was recently further developed in the *Student Selection to Teacher Education in Finland* national project (OVET Project, n.d.). The current study is part of this development project.

The data for the most recent national enquiry into teachers' satisfaction and their motivation to pursue or leave teaching profession in Finland were collected in 2011 (Jokinen et al., 2013). Thus, it is important to conduct new research into this topic.

The varying numbers of applicants in recent years, some students dropping out of or changing their study programs, and discussions on teachers' increased intentions to leave the profession (e.g. Jokinen et al., 2013) have created concern over the adequacy of supply of qualified teachers in the future. It is very important to investigate how student teachers who aim at completing their studies to work as teachers differ from those students who

leave this occupation after a couple of years. This knowledge will help to restore the high appreciation of teaching professions in Finland. In addition, Finnish TE aims to improve the selection process, and all research-based knowledge of the applicants' educability, study motivation, and teacher motivation is valuable.

The intent of this paper is to contribute to the existing research by exploring the reasons for novice teachers' retention challenges. The added value of this study is based on investigating teacher retention also from the point of view of student selection results, both aptitude and academic skills. In addition, we explore how the level of teacher motivation affects teacher retention. Our research questions are:

1. How satisfied are certified novice teachers with the teaching profession?
2. How do student teachers and novice teachers who want to work as teachers differ from those who intend to leave their teaching careers?
3. How do novice teachers with high, mediocre and low teacher motivation differ?
4. What are the issues causing retention challenges in a teaching career?

Teachers' career mobility

Mobility between different careers has increased as attitudes have become more flexible regarding changes. Lyons et al. (2015) showed that the number of job and organisational moves per year increased strongly with each successive generation. Millennials (born in 1980 or later) made 4.5 times as many moves as matures (born prior to 1945). In addition, Lyons et al. (2015) evidenced that millennials and generation Xers (born 1965 - 1979) permanently commit to their professions at an older age than older generations did.

The challenge concerning teachers leaving the occupation is global (Clandinin et al., 2015). Previous research showed that 25% to even 50% of educators in Western countries resigned within the first five years of teaching (Arnup & Bowles, 2016). Nissinen and Välijärvi (2011) calculated that, in Finland, 90% of those students who graduate with an MA begin work as PS teachers. Based on the statistics and knowledge of experts, they estimated that during their first five working years, 2.5% and from the sixth working year onwards, 1% of PS teachers move to other careers each year. To sum up Nissinen and Välijärvi's (2011) estimation, five years after beginning teaching professions, 12.5% of teachers have moved to other careers, and 20 years after, around 27% have changed their occupations. Similarly, Jokinen et al. (2013) showed that almost 12% of Finnish graduate teachers after five or more working years had changed profession within the educational sector (intra-professional change), and 9.3% had left the educational sector (trans-professional change).

Nationwide, Finnish universities monitor students' careers through a survey completed five years after graduation. The *Career Monitoring Report* – response rate being 45% – showed, in line with Nissinen and Välijärvi's (2011) estimation, that of the year 2013 PSTE graduates at the University of Helsinki, 86% were working in education and teaching professions, 5% worked in research, 5% in management and supervisory careers and 4% in other careers (Carver & Kangas, 2019).

Teacher motivation

Dörnyei and Ushioda (2010) distinguished two dimensions of teacher motivation: the motivation to teach and the motivation to remain in the profession. In the current study, we investigate the latter dimension: the willingness to begin a teaching profession after graduation and remain in the profession.

Several factors influence teachers' motivation, e.g. job satisfaction, which Klassen and Chiu (2010, p. 742) defined as perceptions of fulfilment derived from day-to-day work activities. Howes and Goodman-Delahunty (2015) evidenced that the main reasons for Australian teachers' dissatisfaction, causing them to consider career changes, related to day-to-day issues with teaching, including high workloads and a lack of support from principals, the lack of enjoyment, negative interactions with staff, poor workplace conditions, poor student behaviour, and stress. In addition, practical considerations, such as inadequate pay, a lack of job security, the new opportunities that other careers offer, and difficulties in achieving work-life balance cause teachers to change careers (Howes & Goodman-Delahunty, 2015; Kiziltepe, 2006). Evans (2001) evidenced that teachers who are dissatisfied with their work are less committed and at greater risk of leaving the profession.

The results of the *Teaching and Learning International Survey*, TALIS, showed that over 90% of Finnish PS teachers liked their profession (Taajamo et al., 2015). In addition, teachers with more teaching experience were more satisfied, and 57% of Finnish PS teachers felt that their profession is appreciated in their society (Taajamo et al., 2015). This score is much higher than the corresponding 17% for Danish teachers and 22% for Polish teachers. However, 23% of Finnish PS teachers have pondered whether it would have been better to choose another career (Taajamo et al., 2015), and 20% seriously considered changing their careers (Jokinen et al., 2013). Räsänen et al. (2020) evidenced in a recent study that half of the Finnish PS, subject, and special education teachers have considered leaving their profession.

Jokinen et al. (2013) claimed that the main reason for considering leaving the teaching profession was the desire to move ahead in one's career, but also the demands of the profession had increased. Webb et al. (2004) discovered that low pay, deterioration in the behaviour of pupils, and perceived decline in public respect for teachers were the biggest disincentives to remaining in the teaching profession among Finnish PS teachers. Räsänen et al. (2020) discovered that lack of commitment, (e.g. few opportunities to learn and establish something new that have personal relevance for work), a heavy workload, increased work requirements, perceived low appreciation, and low salary were the main factors for Finnish teachers' turnover intentions.

Dörnyei and Ushioda (2010) found evidence that job stress is a demotivating factor for teachers. Kyriacou (2001) defined the job stress of teachers as experiencing negative emotions resulting from a teacher's work, and evidenced that teaching is a high-stress profession. Jokinen et al (2013) showed that causes for Finnish teachers' stress were

arduous parents, pupils that caused problems and disturbances, and the demands of the teaching profession contradicting the salary and the appreciation of the profession.

Klassen and Chiu (2010, p.741) defined teachers' self-efficacy or teacher efficacy as 'the beliefs teachers hold about their capacity to influence student learning.' Tschannen-Moran and Hoy (2001) differentiated key domains of teacher efficacy, such as implementing instructional strategies, managing student behaviours, and engaging students in the learning process. Dörnyei and Ushioda (2010) found that insufficient self-efficacy was demotivating for teachers. Betoret (2006), Klassen and Chiu (2010), and Kyriacou (2001) found that teacher efficacy correlates negatively with job-related stress and with lower levels of job satisfaction (Klassen et al., 2009).

Kari (2002) found that qualified Finnish teachers were more likely to remain in the profession if the selection process of student teachers took their aptitudes into account and ensured that they make a conscious career choice. The selection process of PSTE in Finnish universities includes (1) the VAKAVA test of academic knowledge based on a set of research articles and (2) an aptitude test based on teacher educators' assessments of applicants' communication, interpersonal and leadership skills, attitude and aspirational commitment to the teaching profession (Mankki et al., 2020). It is important to study what kinds of students are accepted, to consider how the selection process has succeeded.

Method

Context, subjects, and data collection

This study addressed the PSTE program in the University of Helsinki. In Finland, it is necessary to complete an MA degree over a five-year program to qualify as a PS teacher. However, Finnish education statistics (Vipunen.fi, 2020) from recent years show that five years after acceptance to the University of Helsinki, only one third of PSTE students graduated with an MA, less than 4% changed their study programs, and about 6% of students started working as teachers without an MA. In Finnish university studies, it is characteristic that students enrol for the terms but are not graduating in targeted time.

For this study, we examined the student cohorts accepted into the PSTE program in 2010 and 2013 ($N = 237$; see Table 1). We used the application and studying phase data (e.g. scores for Masters theses) of the cohorts from the University's student register. By February 2019, 127 students had completed an MA, 68 were studying, 9 were studying another program, and 15 had dropped out of University. Among the 2010 beginners, there were 18 students from another MA program. They had applied to PSTE to complete specific studies to add the PS teacher qualification to their subject teacher qualification.

The subjects of the survey were 127 students who had completed their MA degrees. From these novice teachers, 91% had graduated 5 years, at most, before this study took place. Of them, 85% were female and 15% male. Their ages at the beginning of their PSTE studies varied from 19 to 48, with a median age of 22. The inventory was sent by post in

Table 1: The activity of PSTE beginners of years 2010 and 2013 in 2019 according to University of Helsinki's student register (N=237)

Year of beginning and years after acceptance	MA degree in PSTE		Studying in PSTE		Moved to another MA program		Dropped out without a degree		Subject teachers to qualify as PS teachers	
	n	%	n	%	n	%	n	%	n	%
2010; 8.5 years after acceptance, n=116	82	70.7%	5	4.3%	4	3.4%	7	6	18	15.5%
2013; 5.5 years after acceptance, n=121	45	37.2%	63	52.1%	5	2.0%	8	6.6%		

mid-March 2019. The graduates (n=125; 2 addresses were not found) received a paper copy of the inventory with an anonymised ID tag. The cover letters included a link to the electronic version of the questionnaire. Reminders were sent in April. By June we received 59 responses (47% response rate), 39 from 2010 beginners (49% response rate) and 20 from 2013 beginners (44% response rate). Regarding the age and gender, the respondents formed a representative sample of the graduate students.

The 59 respondents had different working experiences (see Table 2). Before graduation, more than half of them had worked for longer than six months as a teacher, and five respondents had not obtained any teaching experience. After graduation, nine respondents had worked in other professions. At the time, when responding to the survey, 97% (53 graduates) worked in a teaching profession and six persons in other professions, such as, in customer service and sales, leisure activities instructor, and as an expert in the field of competitive sports.

Table 2: Descriptives for novice teachers' work experience

Descriptive	Range	Mean (SD)	Median
Teaching experience during studies	0-6 years	1.35 (1.56)	0.83
Teaching experience before and during studies	1-14 years	4.94 (2.81)	4.50
Experience of other professions after graduation	0-3 years	0.79 (0.32)	0.00

From the survey respondents who showed interest in being interviewed, four female and two male novice teachers were interviewed between June and September in 2019. The interviewees formed a representative sample in terms of teacher motivation and their scores in the PSTE selection process. In addition, from the non-graduate PSTE students, 13 female students (five 2010 beginners and eight 2013 beginners) were randomly selected for interviews. Thus, from the student register data containing 237 students, 59 responded to the survey, and 19 were interviewed. The semi-structured interviews were conducted between June and September 2019 as telephone interviews, recorded, and transcribed.

Instrument

The instrument used for data collection within the survey was based on an instrument developed in a national student selection development project. The self-report instrument

targeted at PSTE graduates included question sets on the following topics: the quality of teacher education, job satisfaction, experiences in the teaching profession and work stress. As background information, we examined participants' age, gender, matriculation examination scores and the length of teaching experience during studies. The questions either were open-ended ones or provided the respondents with multiple-choice responses, mainly using 6-point Likert scales, ranging from (1) *fully disagree* to (6) *fully agree*. The multiple-choice items are presented in Appendix A.

Analysis

First, principal component analysis with varimax rotation and Kaiser normalisation was conducted in order to examine the factorial structure of the questionnaire sets. The Kaiser-Meyer-Olkin measure of sampling adequacy was .70, above the commonly recommended value of .60, and Bartlett's test of sphericity was significant ($\chi^2(136) = 456.19, p < .0001$). Based on the principal component analysis results, we calculated five sub-scales and examined their consistency using Cronbach's alpha coefficients. Second, Pearson's correlation coefficient analysis of the sub-scales and background variables was conducted with two-tailed significance tests.

Third, we used a person-centred approach to investigate how novice teachers with different motivation levels differed in their teaching careers. We established three clusters based on respondents' scores on the *Job satisfaction* sub-scale's items: (1) *If I was to choose a career today, I would choose the teaching profession* and (2) *I have thought of leaving the teaching profession*. The group of respondents ($n=26$) who agreed or fully agreed with item 1 and disagreed or fully disagreed with item 2 was labelled as having high teacher motivation. The second cluster was labelled as having mediocre teacher motivation ($n=19$). These novice teachers somewhat agreed or disagreed with items 1 and 2. The third cluster, labelled as having low teacher motivation, included 14 novice teachers, who agreed or fully agreed with item 2 and disagreed or fully disagreed with item 1. We applied analyses of variance (ANOVAs) to explore the mean differences between the sub-scales and background variables of the motivation groups. A one-way ANOVA with Tukey's *post hoc* test with its significant difference procedure ($\alpha = .05$) was calculated to test the significance of the mean differences between the groups. Eta squared was calculated to measure the effect size.

Content analysis method was used for the transcribed interviews. The first author initially separated all individual ideas mentioning a reason for the retention challenges of a teaching career. Then the first and second author separately studied each single idea to create categories for items describing the same reason and then collaboratively compared the categories. Finally, based on the comparison we decided to categorise the statements related to the retention challenges into three general categories.

Research ethics

During the data collection, we strictly followed our university's instructions and ethical standards. Postal addresses were only collected for those graduates who had given

permission to contact them. The data received from the University's student register were handled with special attention and anonymised as soon as the data were united with the data collected from the survey and interviews. This study was conducted following the ethical guidelines of the National Advisory Board on Research Ethics in Finland, which are in line with the ethical guidelines of the European Educational Research Association (EERA) for upholding high academic and professional standards.

Findings

Contentment with the teaching profession

In the following sections, we present the results following the order of the research questions. To answer the first research question, novice teachers' scores for the items of the *Job satisfaction* sub-scale were analysed. Of the graduate respondents, 76% were generally satisfied with working as a teacher, and 72% agreed or fully agreed with the statement, *If I was to choose a career today, I would choose the teaching profession*. Two out of three respondents were satisfied with their general working conditions. Of the respondents, 47% had thought about leaving the teaching profession, even though, only 3% of the respondents were actually working in professions other than teaching.

Table 3: Pearson correlation coefficients and descriptive statistics of items in the *Job satisfaction* sub-scale

Item	1	2	3	4
1. If I was to choose a career today, I would choose the teaching profession.	-			
2. I have thought about leaving the teaching profession.	-.627**	-		
3. I like the teaching profession in general.	.649**	-.501**	-	
4. I am satisfied with my general working conditions, such as the pay, the number of working hours and length of the holidays.	.529**	-.556**	.445**	-
Mean (SD)	4.12 (1.55)	3.24 (1.72)	5.07 (.99)	3.75 (1.34)

* $p < 0.05$ ** $p < 0.01$ (2-tailed)

The statistically significant correlations in Table 3 show that the novice teachers who would choose a teaching career again like the teaching profession, are satisfied with the general working conditions, and have seldom thought of leaving the profession. Instead, novice teachers who have thought about leaving the profession like teaching less and are unsatisfied with the working conditions more often.

Job satisfaction, job stress, teacher efficacy and background variables

To address our second question, we conducted correlation analysis on the sub-scales and background variables. The results (Table 4) show that novice teachers' *Job satisfaction* was positively and statistically significantly related to *Teacher efficacy*, *Satisfaction with PSTE* and

Ability to control a class. Conversely, *Job satisfaction* was negatively related to *Job stress*. In addition, *Job stress* was negatively related to *Teacher efficacy* and strongly negatively related to *Ability to control a class*. These results suggest that novice teachers who want to work as teachers have higher teacher efficacy, are more able to control a class and experience less job stress than those novice teachers who have considered leaving their teaching careers. In addition, the results suggest that job stress may be due to teachers having less ability to control a class.

Table 4: Pearson correlation coefficients of sub-scales and background variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Job satisfaction	-									
2. Teacher efficacy	.431**	-								
3. Satisfaction with PSTE	.379**	.265*	-							
4. Job stress	-.300*	-.384**	-.368**	-						
5. Ability to control a class	.349**	.294*	.198	-.568**	-					
6. Teaching experience during PSTE	.256	.119	-.067	-.121	.093	-				
7. Age when beginning PSTE	.093	.055	-.020	-.426**	.356**	.155	-			
8. VAKAVA exam score	-.340*	.017	-.218	.144	.003	.023	.024	-		
9. Aptitude score	-.088	-.123	-.076	.062	.052	.071	.122	.285**	-	
10. Dropping out of PSTE	-.029	-.024	-.280*	-.107	.249	.252	.359**	.199*	.182**	-
11. Graduating from PSTE	.091	.023	.169	.099	-.218	-.090	-.072	.271**	.184**	-.324**

* $p < 0.05$ ** $p < 0.01$ (2-tailed).

Note: For the analysis regarding sub-scales 1–6, the data included 59 responses to the survey. Regarding the background variables (7–11), the student register's data ($N = 237$) were used.

We also explored how the background variables related to the sub-scales and each other. *VAKAVA exam score* correlated negatively with *Job satisfaction*, meaning that those students who scored higher in the academic knowledge entrance examination had lower job satisfaction. Instead, *Aptitude exam score* did not statistically significantly correlate with job satisfaction. Nor did the amount of *Teaching experience gained during PSTE* and the *Age when beginning PSTE* relate statistically significantly to *Job satisfaction*, *Teacher efficacy*, or *Satisfaction with PSTE*. However, the *Age when beginning PSTE* related positively to *Ability to control a class* and negatively to *Job stress* meaning that students who began PSTE younger experienced more job stress and felt less able to control a class than the older beginners.

Furthermore, *Graduation from PSTE* was significantly weakly/mediocrely positively associated with *VAKAVA exam score* and *Aptitude score*. Those who are successful in entrance examinations tend to graduate from PSTE. The results also showed that *Dropping out of PSTE* was positively and moderately associated with *Age when beginning PSTE* and weakly negatively associated with *Satisfaction with PSTE*. The older beginners and those

who do not see PSTE studies as useful for a teaching career tend not to graduate. In addition, weak positive correlations were found between *Dropping out of PSTE* and the both entrance examination scores. Success in the entrance examination did not guarantee graduation.

A detailed study of the backgrounds of the 15 students who dropped out showed that the mean (55.9 points) of their matriculation examination scores was below the mean (62.5 points) of those applicants who did not drop out. However, the mean difference between these two groups was not statistically significant. The students, who had dropped out had completed 6 – 242 study credits (median 147.5), and they had not completed a degree before their PSTE studies or moved to other study programs. This finding shows that the aim of almost all these 18 students was obtaining a PS teacher's degree, but for some reason, they could not finalise their studies.

Differences between novice teachers with different teacher motivation

To answer our third question, we conducted a one-way ANOVA to compare the effect of teacher motivation on sub-dimensions and background variables in high, mediocre and low teacher motivation conditions. Table 5 presents that there was a statistically significant effect of the strength of teacher motivation on *Job satisfaction*, *Teacher efficacy*, *Satisfaction with PSTE* and *Job stress*, but no significant effect on *Ability to control a class*. The differences between teacher motivation groups concerning the background variables were statistically significant only on *Age when beginning PSTE*.

Table 5: Mean differences in different teacher motivation groups

Variable	Teacher motivation						F	p	η^2
	High (n=26)		Mediocre (n=19)		Low (n=14)				
	M	SD	M	SD	M	SD			
Job satisfaction *	5.14	.49	3.93	.61	2.52	.59	91.50	.000	.77
Teacher efficacy	4.83	.67	4.39	.76	3.95	1.09	5.47	.007	.16
Satisfaction with PSTE	4.73	.46	4.05	.98	3.77	.67	9.18	.000	.25
Job stress	4.13	1.07	3.98	1.30	5.07	.71	4.71	.013	.14
Ability to control class	4.77	.70	4.67	.92	4.31	.81	1.52	.228	.05
Years teaching experience during PSTE	1.69	1.86	1.37	1.44	0.70	.82	1.88	.162	.06
Age when start PSTE	22.83	3.92	26.63	6.86	21.43	1.79	5.496	.007	.17
VAKAVA exam score	148.8	19.05	152.7	12.76	161.0	17.89	2.205	.120	.08

* The first two items of the *Job satisfaction* sub-scale were removed from the sub-scale for this analysis as the motivation groups were based on the scores for these items.

The pairwise comparisons using Tukey's honestly significant difference test indicated that *Job satisfaction* was significantly different for all teacher motivation groups: the highest for the high teacher motivation group and the lowest for those with low teacher motivation. In addition, the mean score for *Teacher efficacy* was significantly higher for the high motivation group than for the low motivation group. Furthermore, the mean scores for *Satisfaction with PSTE* were significantly higher for high and mediocre motivation groups

than for the low motivation group. The mean scores for *Job stress* were significantly lower for the high and mediocre motivation groups than for low teacher motivation group. The mean *Age when beginning PSTE* was significantly higher for novice teachers with mediocre teacher motivation than for those with high and low teacher motivation.

Taken together, these results suggest that novice teachers' levels of teacher motivation have an effect on their general job satisfaction, teacher efficacy beliefs and job stress. Specifically, our results suggest that the higher the teacher motivation, the more satisfaction with work and teacher education, the higher the teacher efficacy beliefs and the less job stress. Finally, our results show that the mean age when beginning PSTE was highest for the novice teachers with mediocre teacher motivation.

Issues causing retention challenges in a teaching career

The interviews revealed several reasons for considering leaving the teaching profession among graduate novice teachers and PSTE students, who all had at least some experience of the profession. Of the thirteen interviewed students who had not completed their MAs, eight were already working or aimed at a PS teacher's career. However, four of them had seriously pondered whether they wanted to work as a teacher. Four interviewed students were sure or almost sure, that they would not work as teachers, despite them all planning to finish their studies. The content analysis highlighted three main reason categories why a teaching career was not attracting them: profession-based reasons, person-based reasons and an unrealistic idea of the profession.

Profession-based reasons

The three profession-based issues causing retention challenges of a teaching career were a low salary, limited possibilities to progress in the career, and challenges related to the inclusion of pupils with special needs. The low salary was the most often mentioned demotivating reason, taking into account a long study time to complete an MA, demanding duties, and long working hours. One undergraduate student criticised: *'A class teacher's salary is not very competitive. It is rather harsh that you have a university degree and several years' working experience but no possibilities to move ahead in your career'* (Student, considering another profession).

Another reason for retention challenges was that a teaching career does not offer alluring opportunities: *'I realised the routines of the school world... It is not an optimal working environment for me. Teachers have autonomy in their own classes, but they have little power over how the school practices or the whole education sector are developed'* (Student, focusing on another profession).

Half of the novice teachers specified that the inclusion of pupils with special needs into big classes has made the work more demanding and stressful. These pupils had required special attention, guidance and differentiated learning tasks. In addition, teachers had to operate in multi-professional student welfare teams, filled in different forms, and maintained close contact with parents. A novice teacher responded: *'It is hard, a teacher's job includes so much upbringing. Teacher education prepares you for teaching, and that goes well, but all other*

tasks, which take significant time every week after the teaching hours? (Novice teacher, mediocre teacher motivation).

Unrealistic ideas about a teaching career

One third of the novice teachers had thought about leaving their career because of their unrealistic ideas about the profession, and this proved to be the most common reason for leaving PSTE studies without an MA.

Almost 75% of the interviewees had discovered in discussions with their peers, that many of those without previous school working experience realised their unrealistic ideas about the profession during their practical study periods. Typical unpleasant observations were such as *'Someone may realise that I have no ability to confront the pupils'* (Non-graduate student, working as a teacher) and *'Confronting pupils may be stressful, and controlling the class is challenging'* (Novice teacher, mediocre teacher motivation).

Almost all interviewees blamed PSTE for their unrealistic ideas about the profession. Particularly, the novice teachers had found it difficult to put their knowledge and skills into practice due to studies being too theoretical, and too little school working practices. For example, a respondent stated: *'Teaching work does not correspond to teacher education. Constant situations with quarrels and violence and a class with 30 pupils—including 6 pupils with special needs—made me leave my career after two years'* (Graduate, changed career, low teacher motivation). In addition, 90% of respondents mentioned that PSTE should be developed to better meet the requirements of the teaching profession, for example by increasing and developing the practice periods. *'The first practical period should take place during the initial part of TE to be able to link the theoretical studies to the reality of teaching work'* (Student, focusing on a teaching profession). *'Practical periods should correspond with the work; students should get familiar with the operation of pupil welfare teams and other working teams'* (Graduate, changed career, low teacher motivation). The respondents proposed also that PSTE should provide more knowledge regarding special education, and how to face challenging situations in classes and in collaboration with families.

Person-based reasons

About 20% of the interviewed novice teachers mentioned person-based dis-motivating reasons, such as a limited capacity to self-direct or restrict the working hours, to endure stress, being young, and one's own experiences as a pupil. These reasons mainly related to the demands of the profession and well-being at work. For example, *'If someone cannot stand incompleteness or the feeling of inadequacy, they will probably not be able to endure the teaching profession'* (Novice teacher, mediocre teacher motivation). *'A teacher should not be a perfectionist; one may experience burnout if one does not accept that plans will often not be realised'* (Novice teacher, mediocre teacher motivation).

The non-graduate students' reasons for not wanting to work as teachers were mostly related to the conflict between the demands of the profession and their personal characters: *'A class teacher's job is too stressful for me. I take the worries of pupils too personally'* (Student delaying in studies, focusing for another profession). Some referred to their young age, lack of self-direction, or not wanting to devote to career: *'If you have previously*

studied a lot in a team and suddenly realise that you are alone with your pupils, you may have difficulties regarding self-direction' (Student, focusing on another profession, works part-time in another job). *'I do not want to use so much of my own resources to fulfil the demands of a school, my reserves are not enough for a very demanding class teacher's career.'* (Student, focusing on and studying for another profession, but also aiming to finish PSTE studies).

Finally, three interviewees mentioned that previous experiences, such as one's own time as a pupil, may create delusive ideas regarding a teaching career. *Many student teachers enjoyed their time at school, but as a teacher they find it less fun. They should understand that not all pupils learn as easily as they did'* (Novice teacher, mediocre teacher motivation).

Discussion

This study aimed to find out what kind of background variables are shared by the PSTE students who drop out and the novice teachers who consider leaving the teaching profession. In addition, we studied the differences between certified novice teachers with different teacher motivation. Third, this study explored the reasons why some students and novice teachers move or consider moving to other professions.

The results of our study, basing on the data collected in 2019, show a slight rise in the percentage of Finnish PS teachers who are thinking about leaving the teaching profession. In early 2010s, the percentage was 20-23 (Jokinen et al., 2013; Taajamo et al., 2015), and in our study and the study by Räsänen et al. (2020), almost 50% of the teachers had thought about leaving the profession. However, our discovery that only 3% of the PSTE graduates were actually working in professions other than teaching is in line with the estimate by Nissinen and Välijärvi (2011). In addition, even though the novice teachers in our study had thoughts about leaving the profession, 72% of them would choose a teaching profession again.

Our study showed that academic knowledge scores in entrance examination were positively related to graduation from PSTE and with dropping out of it, but negatively to job satisfaction. This implies that success in the entrance examination and high academic skills do not necessarily guarantee graduation from a program or staying in the teaching profession. Similarly, Smith and Ingersoll (2004) mentioned that several studies found that the 'best and the brightest' novice teachers are most likely to leave the career. Our findings suggest that the entrance examination should be developed to select persons who will graduate to work as teachers, for example by strengthening applicants' realistic ideas about teaching.

In addition, the mean of the matriculation examination for the dropped out students was below the mean of the other students. They aimed at obtaining PS teacher degrees, but they could not finalise their studies. Besides motivational issues, some of the students dropping out probably found university studies too challenging due limited academic abilities. Therefore, all freshmen need guidance to develop their learning to learn skills, and tutoring should be offered for those in need. Nevertheless, universities also have to

develop the entrance examinations. Our study proved that the examination results did not predict whether the students will graduate in targeted time, or the quality of their Master's theses.

Our results are in line with previous studies showing that job satisfaction is positively related to strong teacher efficacy (Dörnyei & Ushioda, 2010; Klassen & Chiu, 2010; Klassen et al., 2009), the ability to control a class (Howes & Goodman-Delahunty, 2015), and negatively related to job stress (Dörnyei & Ushioda, 2010). Furthermore, we distinguished differences between the novice teachers with different levels of teacher motivation. Those with high motivation scored higher in job satisfaction, satisfaction with PSTE and teacher efficacy, but lower in job stress, compared to novice teachers with mediocre and low teacher motivation.

Our finding that a low salary is the most common reason causing retention challenges for a teaching career is in line with an earlier study among Finnish teachers (Webb et al., 2004). In addition, almost all the interviewees considered their unrealistic ideas of a teacher's profession as an important dis-motivating factor. Particularly the extracurricular tasks were found challenging. These tasks may be very time-consuming and demanding for a novice teacher and may cause burnout and the consideration of another career. Many respondents mentioned that PSTE should better meet the requirements of the teaching profession. The unrealistic conceptions may be due to many student teachers' missing work experience in schools. However, our results showed that the amount of teaching experience during PSTE studies was not statistically significantly different in novice teachers with high, mediocre or low teacher motivation. Thus, long teaching experience is not necessarily required to have a realistic picture of the profession. Working, at the same time as studying, often delays studies and may discourage non-graduate students' completion of their MAs. We have to develop other means to increase the realistic conceptions held by student teachers.

The results of our study are in line with findings (Arnup & Bowles, 2016; Nissinen & Välijärvi, 2011) showing that the first years are the most demanding and stressful for novice teachers, and many novice teachers leave the career during those years. Arnup and Bowles (2016) found that having a high level of resilience helps novice teachers to cope with stress and challenging working conditions. Further, Estola (2003) and Schaefer and Clandinin (2011) understood from novice teachers' narratives that beginning teachers go through an identity-making process. They found out that it was difficult for novice teachers to compose and live a sustainable life both in school and out of school contexts. Related to individual perspectives of teacher retention, Carlson et al. (2019) argued that novice teachers' needs to change their career may arise from development of identity. In addition, our study confirmed Carlson's et al. (2019) finding that the teachers considered the knowledge gained in teacher education studies as useful even though they would not work as teachers.

Clandinin et al (2015) evidenced that novice teachers who found support, e.g. mentoring, or felt that they had support at school were more certain about staying in a teaching profession. In Finland, new teacher mentoring has gone through target-oriented

development offering in-service training for head teachers and through several development projects. The Trade Union of Education and the Teacher Student Union have published recommendations for the mentoring of new teachers. Nevertheless, the results of our study show that novice teachers still need more mentoring and peer support.

The results of our study showed that difficulties in controlling a class and job stress were connected, especially among the young novice teachers. However, there are young TE students who can easily manage a class. Is it based on mastering social interaction, or do they create a positive atmosphere of mutual trust? If they developed these skills when working as class assistants or through their hobbies, like Scouts or drama clubs, could they be considered as criteria in selection to PSTE?

The results of our study are in line with Fontaine et al.'s (2012) study showing that PSTE programs should strengthen the ability to differentiate teaching to suit all pupils in the class, especially the integrated pupils with special needs. As a result of developing Finnish PSTE according to the feedback regularly gathered from students, the special education courses are open to all PSTE students and popular among them.

Our study highlighted the importance of developing teacher education according to varying educational needs. Many subject teachers are interested in becoming qualified PS teachers. In 2011, the University of Helsinki provided an own quota for subject teachers from the PSTE majors' quota to enable them to complete the needed 60 credits to qualify as PS teachers. Now their admission is not preventing other applicants to become accepted to PSTE.

Furthermore, the curriculums of universities should be developed. According to the results of our study, we recommend that PSTE is developed through increasing long-term collaboration and contact with schools to increase the interplay between theory and practice. Even though some students may express wishes for more practical study contents, the aim of Finnish PSTE is to educate independent, research-oriented teachers who continuously develop their teacher skills to overcome new challenges.

Limitations and future research

There are some limitations to our study. First, in the survey, the total amount of teaching experience was not recorded, and this limited us in terms of conducting some analyses. However, the demographic data of participants, such as age, gender and the amount of teaching experience during PSTE studies, did not indicate under- or over-representation to explain the influence on retention. Second, the novice teachers were not randomly selected for interviews, but were chosen according to their expressed willingness, and third, only 47% of the graduates responded to the survey. These limitations might have slightly affected the results of our study, and thus, consideration should be taken in drawing conclusions based on them.

This study confirms the need for more research into international trends in teachers leaving their careers. When the reasons causing retention challenges of the teaching profession become known, societies are able to take action to make teachers' careers more valued among the young. Research with a longitudinal setting, using larger sample size and comparing the PSTE graduates of different Finnish (and foreign) universities would clarify the situation in more depth. In addition, research on how teacher education students' conception of a PS teacher's profession develops during studies is needed, to find ways to help the students to develop a realistic picture of a PS teacher's profession.

To conclude, our findings show that selection processes for entry to teacher education need to be developed to differentiate the applicants who are academically and motivationally able to graduate, and at the same time willing to work as teachers and capable of meeting the everyday challenges in schoolwork. At present, the teaching profession demands versatile non-academic skills (e.g. emotional intelligence and acceptance of diversity) (Virtanen, Metsäpelto, Lappalainen & Laine, submitted). The academically strongest applicants may be disappointed with the fact that not all pupils learn as easily as they did. The results of our study indicate that PSTE students' and novice teachers' idealistic versus realistic view on the teaching profession could be at the root of novice teachers' retention challenges. Thus, importance for further studies and development of TE selection processes cannot be denied.

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Appendix A: Sub-scales and items of the instrument

	Sub-scales and items (5-point Likert scale)	Mean (SD)	Media n	Cronbach's alpha
<i>Job satisfaction</i>	If I was to choose a career today, I would choose the teaching profession. I have thought of leaving the teaching profession. (Item reversed for analysis) I am satisfied with my general working conditions. I like the teaching profession in general.	4.22 (1.14)	4.50	.83
<i>Teacher efficacy</i>	I can use different methods for student assessment. I can carry out various and alternative activities in my classroom. I can help families to support their children's learning. I can create suitable activities for each pupil group.	4.48 (.88)	4.50	.79
<i>PSTE satisfaction</i>	My degree has prepared me sufficiently for the teaching profession. Teacher education was of high quality. I am satisfied with the degree I have completed. I can put my expertise gained at university to good use in my work.	4.29 (.81)	4.50	.82
<i>Job stress</i>	I feel stressed trying to keep the class under control. I feel stressed supporting pupils with special needs. I feel stressed when pupils disturb interactions in the classroom.	4.31 (1.15)	4.33	.85
<i>Ability to control a class</i>	I can intervene in disturbing behaviour in my class. I am able to make pupils follow the rules of the class. I can calm down a pupil who causes a disturbance and makes noise.	4.63 (.81)	4.67	.79

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