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Master's Thesis as Part of Research-Based Teacher Education: A Finnish Case

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Abstract

The aim of the current case study is to investigate the master's theses written in 2016 and 2017 by primary school student teachers at a teacher education department in Finland. 111 theses were analyzed focusing on four distinct aspects of the thesis: topic, perspective, research approach and data collection method. The aim is further to discuss how to develop the master's thesis within teacher education in order to promote teachers' professional development. According to the findings, students wrote master's theses of high scientific quality, although an explicit reflection on the relevance and transfer of the knowledge they had gained from the master's thesis to their professional practice did not seem so obvious. The master's thesis is an important part of research-based teacher education and should be developed to encourage students to adopt a research approach in their future work and enhance their profession in this direction.

Keywords: Finnish teacher education, teacher researcher, master's education, master's thesis, research-based

Introduction

The interest in teacher education has increased during the last decade, both in a Nordic and an international context. When examining teacher education there are different organisational models as well as variations in goals, content, and structure (Zeichner, 2014). From a Finnish point of view, the importance of research-based teacher education is often stressed; this is strongly supported by scholarship which understands a research approach as a means for achieving quality teacher education and for promoting teachers' professional competence (Munthe & Rogne, 2015).

However, the idea of research-based teacher education is still quite unclear internationally as are the fundamental concepts related to the approach (Burn & Mutton, 2015; Cochran-Smith et al., 2016). Menter (2015) has identified different views of teaching that underlie the distinctive approaches of teacher education programmes and represent a spectrum of professionalism (Elliot, 2015). For example, the US and the UK represent a more restricted view of teacher professionalism (Beauchamp, Clarke, Hulme & Murray, 2014; Gilroy, 2014; Munthe & Rogne 2015; Tatto 2015; Zeichner,

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2014), while teacher education in Finland is characterised by a more extensive view.

Finland's forty-year-old tradition of research-based teacher education aims to qualify reflective, professional teachers who can base their teaching on research principles and successfully use these principles to address the profession's practical challenges (Krokfors et al., 2011; Tirri, 2014; Toom et al., 2010). The teaching profession is characterised by high professional autonomy and teachers have gained trust, status and respect in Finnish society. Good PISA results have received attention from the media, and research-based teacher education has been an inspiration for educational reforms in other countries, such as the latest Norwegian teacher education reform that took place in 2017. Teacher education in Finland is highly appreciated and newly qualified teachers find that they have a stable foundation to build on (Aspfors & Eklund, 2017). The research-based approach characterises teacher education in both an implicit and explicit way (Niemi & Nevgi, 2014); a central explicit part of the programme is that students write a master's thesis in education (about 30-40 ECTS). The aim of the master's thesis is to develop and deepen a scientific approach, and to promote the teacher's professional development.

According to previous research, however, there seems to be a weak relation between the research-based approach in teacher education and teachers' professional work (Aspfors, 2012; Hansen, Forsman, Aspfors & Bendtsen, 2012; Hökkä & Eteläpelto, 2014; Malinen, Väisänen & Savolainen, 2012; Toom & Husu, 2012). Teachers find it difficult to apply research-based knowledge to the practice of their day-to-day work, and there is an ongoing discussion concerning the research-based approach and its implications for praxis (Hansen, Eklund & Sjöberg, 2015; Husu & Toom, 2016; Kozina, 2013). The challenge is thus how to balance research-oriented activities, including the master's thesis, in a way that promotes teachers' professional development (Sjölö, 2014). As part of a larger longitudinal and comparative research project, this study aims to investigate the master's theses written between 2016 and 2017 by primary school student teachers at a teacher education department in Finland (Jakhelln, Eklund, Aspfors, Bjørndal, & Stølen, 2018). More specifically, the study focuses on four distinct aspects of the thesis: topic, perspective, and research approach and data collection method. Based on the findings, the aim is to discuss how to develop the master's thesis in order to promote teachers' professional development.

Finnish teacher education

As noted, primary school teacher education in Finland has a strong research-based approach and has been university based for decades (Jakku-Sihvonen & Niemi, 2006; Malinen et al., 2012; Niemi & Jakku-Sihvonen, 2011). In the 1970s, teacher education became a part of the university, and in 1979 the programme was renewed and linked to a masters' degree examination for all teachers in the school system. The main discipline for those training to be primary school teachers became education (general

didactics), and a research-oriented approach was implemented, which intended to lay a stable foundation for students' professional qualification. (Tirri, 2014; Uusiautti, & Määttä, 2013; Välijärvi & Heikkinen, 2012) In 2005, teacher education was reformed and changed in accordance with the Bologna process. As a result of the reform, research and science were emphasised even more (Jakku-Sihvonen et al., 2012). Teacher education now consists of a two-cycle degree system, i.e. undergraduate studies leading to a bachelor's degree (180 ECTS) and graduate studies resulting in a master's degree (120 ECTS). The education is typically carried out in five years and a master's degree is required for teacher qualification. While students often specialise in one or two subjects, if they choose to study one subject intensively they can be certified to teach that subject in a secondary school (Hansén & Eklund, 2014; Niemi & Jakku-Sihvonen, 2011). Practice-oriented activities (20 ECTS) are mainly organised in a teacher training school and take place in ordinary field schools only to some extent. Teacher training schools are closely connected to teacher education, and ideally this system allows for a good balance between theory and practice (Toom et al., 2010).

A research-based approach

The aim of the research-based approach is to qualify professional and reflective teachers who can base their teaching on research principles and successfully use these principles to address practical challenges in the profession (Hansén & Eklund 2014; Krokfors et al., 2011; Tirri, 2014; Toom et al., 2010). On a communal level, the objective is to open up space for collective thinking and reflection, to develop a common professional language and to enable teachers to find strategies for mutual development and change in the profession (Afdal, 2012; Niemi, 2012). On an individual level, the approach promotes teachers' didactic decisions and abilities, develops their critical thinking and supports their intellectual and personal development. Consequently, the goal is to encourage teachers to adopt a research approach in their daily work and to enhance their profession in this direction (Hansén et al., 2015; Niemi & Nevgi, 2014).

The research-based approach characterises teacher education in both implicit and explicit ways. Implicitly, educators are research qualified and their teaching is based on research in education and its related disciplines. (Hökkä & Eteläpelto, 2014; Krokfors et al., 2011; Tryggvason, 2009). Students are encouraged to develop reflection and critical thinking on aspects related to the essence of teaching and their profession (Afdal, 2012; Jakku-Sihvonen & Niemi, 2006; Kansanen, 2014). Explicitly, specific research activities form an obvious part of the teacher education programme (Kynäslähti et al., 2006). Students write both a bachelor's thesis that accounts for 6–10 ECTS, and a master's thesis that accounts for 30–35 ECTS. Thus, the master's thesis requires about 1,000 hours of work. Students also have courses in research methodology, which aims to develop an overall competence in the sense that teachers also gain a general understanding of research methods and are able to apply one or more methods to their own

everyday practice. Both quantitative and qualitative research methodologies, including their underlying philosophical assumptions are covered in the programme. However, qualitative research methodology has strengthened its position over time and is the dominant approach today. Students participate in the same research method courses and specialise later when doing their own theses. They carry out independent studies by using scholarly methods for their bachelor's and master's theses, which means that they become familiar with scientific tools, such as methods for gathering data, systematic analytical thinking, interpretation and evaluation. After completing their master's degrees, students can also apply for further postgraduate study in education (Hansén et al., 2015; Maaranen, 2010).

Student teachers' views of master's thesis

Some studies have been carried out focusing on student teachers' views of research-based teacher education and the role of master's thesis. In 2011, Niemi explored how 545 student teachers experienced the learning outcomes of teacher education. The results showed that most students appreciated the research-based approach and found it important, although some of them believed that research-based studies should be developed so they could better see its relevance to the teaching profession (Eklund, 2014). In another study by Jyrhämä et al. (2008), it was clear that student teachers realised that the research-based approach was valuable in terms of methodological studies and the master's degree level of education. However, they expected a more research-based approach in the supervision of student teaching and in the completion of the thesis. Similarly, Maaranen (2010) found that most students had a positive attitude towards inquiry and reflection in research-based teacher education. They further envisioned teacher research as a way to improve their professional development.

Although research-based teacher education with a master's thesis has received much credit, it has also been debated and criticised (Hansen et al., 2012; Hökkä & Eteläpelto, 2014). According to previous research, newly qualified teachers perceive that they have a stable foundation to build on (Aspfors & Eklund, 2017), but a weak competence in relevant areas when entering the profession (Aspfors & Bondas, 2013; Eteläpelto, Vähäsantanen & Hökkä, 2015; Fantilli & McDougall, 2009; Gaikhorst, Beishuizen, Roosenboom & Volman, 2017; Toom & Husu, 2012). Accordingly, more emphasis should be placed on the qualification of teachers carrying out research in their own profession instead of focusing on conventional studies and theses (Heikkinen, Jokinen & Tynjälä, 2012).

Methodology

The aim of this study is to investigate the master's theses written in 2016 and 2017 by primary school student teachers at a teacher education department in Finland. More specifically, the study focuses on four distinct aspects of the thesis; topic, perspective,

research approach, and data collection method.

Participants and data collection

The participants were 72 primary school student teachers (53 females; 19 males), and 53 (42 females; 11 males) who had completed their master's thesis in Education at Åbo Akademi University in Finland in 2016 and 2017 respectively. Eight of the master's theses in 2016 and six of the theses in 2017 were written by two students, which means that a total number of 64 master's theses in 2016 and 47 in 2017 were written by the student teachers. In general, a master's thesis contains 80–100 A4 pages, which means that the total material in the study was about 10,000 pages.

Data analysis

The theses were analysed inductively, and qualitative content analysis was used as the data analysis method (Boeije, 2010; Schreier, 2014). In the first phase, the researcher became familiar with the theses by reading the abstracts and other parts to identify the four aspects chosen to be analysed: topic, perspective, research approach and the data collection method. Each aspect was then analysed separately; key points were summarised and initial potential themes were found. The next phase in the analysis involved the systematic coding of each aspect, and the researcher assigned new inductive categories containing units of meaning. The researcher further reviewed all the categories, defined their specific dimensions, looked for connections between them and paid attention to any patterns in the whole dataset. Next, categories were labelled to capture the different dimensions of each aspect in order to describe the master's theses written by the students (Willing, 2013). As a result of the analysis, four different category systems were identified. Relating the results to previous studies on research-based teacher education made the inductive analysis more reliable (Creswell, 2013). The theses were identified by number and gender (F/M) and general ethical standards approved by the scientific community were followed in the study (Finnish Advisory Board on Research Integrity, 2017).

Results

When analysing the master's theses, four aspects were focused upon: the topic, perspective, research approach and data collection method. The inductive analysis brought specific categories of each identified aspect to light. The results are presented below with illustrative quotes from the theses. The quotes in Swedish were translated by the author.

What Topics do Student Teachers Investigate in Their Master's Theses?

Students can largely decide what topic they would like to investigate, and they can come up with their own topic or choose to participate in a research project led by the

supervisor. In analysing the 111 theses topics (2016: 64 theses, 2017: 47 theses), a total number of seven categories could be defined (Table 1).

Table 1.
Topics of Master's Theses (n=111).

Topic	2016	%	2017	%	Total	%
Didactics and teaching	24	38	19	40	43	39
School-related activities and tasks	20	31	8	17	28	25
Health and wellbeing	7	11	4	9	11	10
School organization	8	12	3	6	11	10
Teacher competence & professionalism	3	5	5	11	8	7
New curriculum	1	2	6	13	7	6
Educational activities outside school	1	2	2	4	3	3
In sum: 111	64		47		111	

Most theses (n=43, 39%) had a didactical aim, focusing on didactics and teaching in different school subjects and for specific groups. The teacher's perspective was in focus and their didactics and teaching in subjects such as physical education, mathematics, history, civics, religion, Swedish, Finnish, English, music and handicrafts: *The aim is to provide knowledge of primary school teachers' use of methods and their views on the subject of religion (M-11)*. In 25% of the theses (n=28), school-related activities, projects and events were studied as well as topics like genus, physical activity, assessment, parental collaboration and bullying: *The aim is to investigate how secondary schools are working to prevent and stop bullying, as well as how secondary school pupils experience it (F&M-31)*. Eleven theses (10%) explored issues concerning pupils' and teachers' health and wellbeing and dealt with topics such as physical and psychological wellbeing, health, self-esteem, appearance, body image and self-harming behaviour: *The aim is to investigate how young people understand girls' psychological wellbeing (F-63)*. Eleven theses (10%) focused on various school organizational topics, such as minority schools, three-step support, the transition from preschool to primary school and the organisation of immigrant education: *The aim is to elucidate how learning environments are designed in the 21st century (F-48)*. Teacher competence and professionalism were further studied in eight theses (7%): *The aim is to examine the experiences of newly qualified teachers in their first year in the profession (F-34)*, while topics relating to the national core curriculum (2014) were in focus in seven theses (6%): *The aim is to investigate primary school teachers' experiences with the integration of pupils from immigrant backgrounds (F-9)*. Finally, in three theses (3%) educational activities outside school such as Jujutsu and soccer training were examined.

What perspectives do student teachers investigate in their master's theses?

When analysing the various perspectives in the theses, 126 perspectives could be identified and grouped into seven categories (Table 2). This means that in fifteen of the theses more than one perspective was investigated.

Table 2.

Perspectives of Master's Theses (n=111).

Perspective	2016	%	2017	%	Total	%
Teachers' perspective	35	55	24	51	59	53
Pupils' perspective	26	41	16	34	42	38
Other pedagogical perspective	5	8	2	4	7	6
Principals' & psychologists' perspective	4	6	2	4	6	5
Researchers' own perspective	0	0	5	11	5	5
Parents' perspective	2	3	5	4	4	4
Student teachers' perspective	2	3	1	2	3	3
In sum: 126	74		52		126	

Two perspectives, the teachers' and the pupils', dominated overall in the theses. In 53% of the theses (n=59), the teacher's perspective was in focus and especially the primary school teacher's perspective. Student teachers investigated how teachers work in different school subjects, how they handle various situations in the profession, and how they experience the profession: *The aim is to investigate newly qualified teachers' experiences in their first year in the profession.* (F-34). Some of the theses focused on other teachers' perspective—subject teachers, preschool teachers or special education teachers—although these were minor. In 42 theses (38%) the pupils' perspective was in focus, particularly pupils in primary school (grades 1–6) but also in secondary school (grades 7–9). Most theses examined pupils' conceptions and experiences of different pedagogical phenomena, for example, sustainable development, environmental problems, entrepreneurship, genus, outdoor education, physical activity, motivation, health and bullying: *The aim is to investigate pupils' conceptions about appearance in grade 9, exploring factors that influence body image as well as possible differences between boys and girls* (F-1). In some theses, the point of departure was the perspective of the principal, psychologist, researcher, parent, or student teacher. However, compared to the two dominant perspectives, the other five were represented marginally. For example, the researcher's own perspective in terms of action research was obvious in only five theses (5%), and the parent's perspective was the starting point in only four theses (4%): *The aim is to investigate parents' opinions of religious components in the school culture* (F-6).

What research approach do student teachers use in their master's theses?

In collaboration with their supervisor, the student teachers can choose if they want

to write a theoretical study based on previous theory and research in the field or an empirical study focusing on data collection and analysis. Every thesis written in 2016 (n=64) and 2017 (n=47) was empirical in nature. A total number of eight different research approaches could be identified in the theses (Table 3). In addition, the approach was not defined in six of the theses (5%).

Table 3.

Research Approaches in Master's Theses (n=111).

Approach	2016	%	2017	%	Total	%
Hermeneutic	23	36	11	23	34	31
Phenomenography	16	25	10	21	26	23
Positivistic approach	10	16	10	21	20	18
Phenomenology	6	9	4	9	10	9
Case study, ethnography	8	13	0	0	8	7
Narrative, discursive approach	3	5	5	11	8	7
Action research	1	2	5	11	6	5
Critical theory	1	2	0	0	1	1
In sum: 126	68		45		113	

A majority of the theses were hermeneutic (n=34, 31%) and phenomenographic (n=26, 23%) in character; since more than half of the theses (n=60, 54%) were related to these two approaches, they dominated in the teacher education programme. A positivistic approach formed the basis of 20 theses (18%) and a quantitative design was used; *A positivistic approach was the point of departure in my quantitative study* (F-4). Other approaches used by some students were phenomenology (n=10, 9%), case studies and ethnography (n=8, 7%), narrative and discursive approach (n=8, 7%), as well as action research (n=6, 5%). Finally, one thesis was related to critical theory. In the analysis it also became clear that some theses were related to more than one approach, as for example a *Hermeneutic and phenomenological approach* (M-39), while no approach was defined in six theses. Some differences could be detected between the theses written in 2016 and 2017. For example, case studies were used as a research approach only in 2016, while all action research theses except for one were written in 2017.

What data collection methods do student teachers use in their master's theses?

The analysis of the data collection methods used in the theses revealed five different methods; in 20% of the theses (n=22) a multimethod was used (Table 4).

Table 4.

Data Collection Methods in Master's Theses (n=111).

Method	2016	%	2017	%	Total	%
Interviews	45	70	28	60	73	66
Observation	15	23	11	23	26	23
Questionnaires, measurements	13	20	12	26	25	23
Texts, essays, drawings	7	11	5	11	12	11
Diaries	0	0	5	11	5	4
In sum: 141	80		61		141	

The primary data collection method used in the theses was interviews. In more than 60% of the theses interviews were used to collect empirical data (n=73, 66%), either as a single method or together with other methods such as observation, questionnaires, drawings or diaries: *I used a questionnaire with 38 pupils in grade 6 in a Swedish-speaking school and interviewed one female and one male primary school teacher* (F-18). Interviews were the primary data collection method in both 2016 and 2017, although somewhat fewer students used interviews in 2017 (60%) than in 2016 (70%). Observation (n=26, 23%) and questionnaires (n=25, 23%) were also employed by the students quite often as the second and third most used method (but preferred in different orders in 2016 and 2017). There was, however, a difference between the methods utilised since questionnaires were often used as a single method, while observation in most cases was combined with other methods, primarily interviews: *I used questionnaires as a data collection method with 39 teachers and 272 Swedish-speaking pupils in Finland.* (F-41). Observation was further used in every action research project (n=6) in combination with other methods: *I used video observations of five trainings in basketball, interviews with 19 pupils per team after each training and self-reflective diaries after every single lesson* (M-10). The questionnaires usually consisted of both multiple-choice questions and open questions. In 12 theses (11%), different kinds of texts were studied, and students analysed textbooks, essays, drawings, photographs etc.: *I analysed two textbooks in history* (F-44); a total number of 70 pupils in grade 9 wrote essays (F-1). In every action research project (n=5, 4%) carried out in 2017, diaries were used as a research method in combination with other methods.

Discussion

The aim of this article was to investigate the master's theses written in 2016 and 2017 by primary school student teachers at a teacher education department in Finland. More specifically, the analysis focused on four different aspects of the thesis; topic, perspective, research approach and data collection method. In the following, the crucial findings will be presented and related to previous research. Based on the findings, the aim is to further discuss how to develop the master's thesis so teachers' professional development can be promoted. The article concludes by discussing methodo-

logical challenges and implications for improving the master's thesis in research-based teacher education.

The research-based approach characterises teacher education in Finland both implicitly and explicitly (Niemi & Nevgi, 2014). Explicitly, the students participate in courses in research methods and carry out independent studies using scholarly methods to produce bachelor's and master's theses (Kynäslahti et al., 2006). While research-based teacher education with a master's thesis has been given much credit, it has also been discussed critically (Hansen et al., 2012; Hökkä & Eteläpelto, 2014). According to the critics, qualifying teachers to carry out research in their own profession should be given more emphasis than writing conventional scientific theses (Aspfors & Eklund, 2017; Heikkinen et al., 2012).

In the results, it was clear that students chose topics and perspectives for their theses based primarily on their own personal interests. Topics in relation to their choice of subsidiary subjects were often investigated. For example, if students were interested in sports, they chose a topic closely related to physical education (Hansén & Eklund, 2014; Niemi & Jakku-Sihvonen, 2011). A connection to the teaching profession was evident in the way the teacher's perspective was often the focus of the theses. Students investigated primary school teachers' views about and experience with didactics, teaching in different school subjects and working with special needs groups. The last topic is essential since, according to previous research, newly qualified teachers feel they do not have enough competence in special education when entering the profession (Aspfors & Bondas, 2013; Fantilli & McDougall, 2009; Gaikhorst et al., 2017; Toom & Husu, 2012). Additionally, some theses investigated didactical topics and challenges in the teaching profession as well as teachers' competence to handle relevant areas like digitalisation and multiculturalism (National Core Curriculum, 2014). However, despite students' significant interest in didactics and teaching, no single thesis had the character of an intervention study that tested the efficacy of certain teaching methods. Likewise, no thesis explicitly investigated learning effects or students' learning experiences in terms of specific learning outcomes.

The student teachers' interest in pupils was very clear in the studies (Aspfors & Eklund, 2017). They investigated pupils' conceptions and experiences of different phenomena in an effort to deepen their own understanding of the pupils. Student teachers were also largely engaged with topics concerning health and wellbeing, such as mental health. The last topic, mental health, is very common among young people in Finland today and is widely discussed in the media (National Institute for Health and Welfare, 2017). Thus, these student teachers envisioned the master's thesis as an opportunity to expand their understanding of a current issue and chose a personal and trendy thesis topic (Eteläpelto et al., 2015). According to previous research, newly qualified teachers often experienced that they had insufficient competence in dealing with parents; they criticised teacher education for not giving them enough insights into this area.

(Aspfors, 2012; Aspfors & Bondas, 2013). Nevertheless, contact with parents was only examined in a few theses, which is somewhat surprising.

Every thesis in the study was empirical in nature and their structure was quite similar and conventional. A theoretical background formed the framework of the thesis and often defined the theoretical landscape in a very descriptive way. A qualitative methodology was dominant, with a hermeneutic and phenomenographic approach, and interviews were the most popular data collection method. Some theses were also based on a positivistic approach with questionnaires used as a data collection method. According to previous research, students had a positive attitude towards research-based studies and the master's thesis within teacher education, although they found a weak relation between thesis work and their teaching profession (Eklund, 2014; Jyrhämä et al., 2008; Maaranen, 2010; Niemi, 2011). Similarly, studies show that teachers found that the master's theses did not provide them with enough practical tools before entering the reality of the workplace (Hansen et al., 2015; Husu, & Toom, 2016; Kozina, 2013). Therefore, an action research project carried out in teacher's daily work would offer a good alternative for students to relate the master's thesis to their profession and to develop them as teachers. However, only a few theses had an action research approach that aimed to develop and change pedagogical processes and teaching—and these were usually carried out in settings outside the compulsory teacher education programme.

In most theses, the main outcomes were correctly related to the overall aim and research questions albeit in a rather uncreative way. Because students devoted a large amount of time and effort to their thesis work, they could have emphasised their own engagement and thoughts about the research project to a higher extent. However, it seems that students were somewhat stuck in the established way of writing a scientific thesis and do not really dare to express own reflections based on the theories and results dealt with in the thesis (See, for example, the discussion in Heikkinen et al., 2012). This means that the challenge for the supervisor was not only to guide students throughout the research project, but also to teach them more scientific argumentation in order to enhance students' thinking (Jyrhämä et al., 2008).

In line with the goal of research-based teacher education, teachers should be encouraged to adopt a research approach in their daily work and to enhance their profession in this direction (Hansen et al., 2015; Niemi & Nevgi, 2014). The results of this study made clear that more emphasis should be placed on research projects carried out in the teacher profession, instead of focusing on conventional studies and theses (Heikkinen et al., 2012). The relation between the master's thesis and teacher's work was somewhat weak, as previous studies have also found (Aspfors, 2012; Hansen, Forsman, Aspfors & Bendtsen, 2012; Hökkä & Eteläpelto, 2014; Malinen et al., 2012; Toom & Husu, 2012). According to the findings, students primarily view the master's thesis as an opportunity to deepen their knowledge of a topic they find personally inter-

esting—not necessarily a topic that is highly relevant for their future professional competence. Thus, they do not really see the opportunity to investigate topics and choose methods in the thesis that will equip them for their profession and develop them as teachers. Even though student teachers write master's theses of high scientific quality, an explicit reflection on the relevance and transfer of the knowledge they gain from the master's thesis to their professional practice does not seem so obvious. Because teachers feel that they lack competence in relevant areas when entering the profession (Aspfors & Bondas, 2013; Eteläpelto, Vähäsantanen & Hökkä, 2015; Fantilli & McDougall, 2009; Gaikhorst et al., 2017; Toom & Husu, 2012), these results are pertinent to the discussion of how to develop the master's thesis in order to promote teachers' professional development.

Limitations

The data collected for the study have their limitations because the study is quite small and bound to a specific context. A total number of 111 master's theses were investigated, all written in 2016 and 2017 at one teacher education department. However, the theses can be seen as representative of the chosen group because every thesis ($n=111$, 100%) written by primary school student teachers in 2016 and 2017 was carefully analysed. The researcher works at the same teacher education department and was responsible for supervising five theses, two theses in 2016 (F&F-6; F&F-64) and three in 2017 (F-22; F&F-30; F-40). However, no ethical dilemmas occurred because all the theses were finished and graded before the researcher started the project. The analysis of the theses was comprehensive; the text material comprised about 10,000 pages and the total number of aspects obtained were 491 (Table 1-4). The aim of the study was to obtain deeper insight into master's theses written at a teacher education department in Finland and to gain a better understanding of the master's thesis in teacher education. Despite the limitations, the collected data and analysis contribute significant insights into this phenomenon, which is in accordance with the aim of qualitative studies in general (Larsson, 2012).

Implications and Conclusions

The aim of the study was to investigate the master's thesis written in research-based teacher education. In Finnish primary teacher education, the master's thesis has its role and importance. Student teachers appreciate the research-based approach and the master's thesis since it gives them status as professional teachers and respect in the scientific community. However, according to previous research and supported by this study, the relation between the master's theses written during the teacher education programme and the teaching profession is conceived as weak. Although research is an important tool for professional teachers, more emphasis should be placed on the qualification of teachers carrying out research in their own profession. Thus, in order

to develop the master's thesis with the goal to promote teachers' professional development, some implications should be taken into consideration.

An action research approach is seen by some researchers as an opportunity to increase student teachers' understanding of the relevance of a scientific thesis in a practical context. In this study, it was also evident that some theses were written with this approach. However, the action research approach cannot simply be undertaken, but has to be adopted by the teacher educational programme and the student teachers' studies and workload in general. New models have to be developed that aim to offer students optional modules or courses consisting of both teaching practice and research in close interaction. The importance of the master's thesis for a wider educational and social context should also be elucidated. This can be accomplished, for example, by encouraging students to participate in developmental school projects and action research related activities in collaboration with teachers in the field. In order to get students involved in these kinds of projects and activities, they should not be separated but integrated into the educational programme as a whole. In conclusion, while the master's thesis is an important part of research-based teacher education, we still have to develop the process in order to encourage students to adopt a research approach in their future work and enhance their profession in this direction.

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