

# Master's thesis as part of research-based teacher education in Finland:

## Case study of two programs

*Katriina Maaranen<sup>1</sup>\*, Gunilla Eklund<sup>2</sup> & Jessica Aspfors<sup>3</sup>*

*University of Helsinki & University of Eastern Finland<sup>1</sup>, University of Agder<sup>2</sup>, Åbo Akademi University & Nord University<sup>3</sup>*

This article aims to describe and discuss the master's thesis\*\* within Finnish research-based teacher education through two cases: the master's thesis in primary school teacher education at Åbo Akademi University, and at the University of Helsinki. The description of the two cases shows that the master's thesis and related processes are for the most part similar, although there are few national regulations and guidelines for master's theses in Finland. In relation to Healey and Jenkins' (2009) model of undergraduate research and inquiry, the Finnish master's thesis can be characterised as research based. Students are active in the master's thesis process, conducting their own research projects and developing their research skills. Similarly, the master's thesis can be positioned as research-engaged in the conceptual model by Yildirim et al. (this issue). The primary focus is on empirical (academic) research rather than on developmental and practice-based (professional) research. While Finnish research-based teacher education has been recognised internationally, there are still critical voices. These voices encourage further reflection on the role of the master's thesis in educational studies in teacher education, closer consideration of the theory-practice relationship, and greater emphasis on the metacognitive aspects that the master's thesis process should offer.

**Keywords:** teacher education, research-based approach, master's thesis, Finland

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\* Corresponding author: [katriina.maaranen@uef.fi](mailto:katriina.maaranen@uef.fi)

\*\*Final thesis student teachers write in teacher education master's programmes.

## **Introduction**

Teacher education in Finland favours a strong research-based approach and has been university-based for decades (e.g., Koski et al., 2023). Although research-based teacher education is well established in the Finnish context, there are still ongoing discussions and challenges concerning the master's thesis (e.g., Hökkä & Eteläpelto, 2014). Previous research on newly qualified teachers shows, for example, that the education provides a stable foundation to build on (Aspfors & Eklund, 2017), but teachers still experience challenges and constraints during their first years of work (e.g., Harju & Niemi, 2019; Heikonen et al., 2016; Eteläpelto et al., 2015). A common view is that the time and effort students put into writing their master's thesis could be better spent learning more hands-on professional skills (Aspfors & Eklund, 2017).

However, based on previous research, it is evident that learning research skills in a practical context can help student teachers bridge the theory-practice gap (Leech et al., 2007) and facilitate agency (Heikkilä et al., 2020). Yet, as Heikkilä et al.'s (ibid.) study shows, this integration can be challenging, even in a supportive environment. Connecting theory and practice seems to be an eternal dilemma in teacher education and has been a topic of discussion in Finland for decades (e.g., Säntti et al., 2017).

The role of the master's thesis in Finnish primary school teacher education has received little scholarly attention, highlighting the need for further research. The only existing studies appear to be those by Aspfors and Eklund (2017), Eklund (2019), Eklund et al. (2019), Jusslin and Eklund (2022), Maaranen and Krokfors (2007, 2008), and Maaranen (2009, 2010). One master's thesis from the University of Lapland investigated primary school teacher education students' perceptions of the significance of the master's thesis (Mäenpää, 2014). In addition to these studies, one scientific article has been published on Finnish educational doctoral theses (Atjonen et al., 2020). This study showed that most dissertations used interview data that were either categorised or thematised – approaches that were also the most common data and analysis methods found in Eklund's (2019) study of master's theses.

Eklund (2019) studied master's theses written in 2016 and 2017 by primary school student teachers at a teacher education department in Finland. The study found that students primarily chose topics and perspectives based on their own personal interests. The theses followed a conventional structure: all were empirical in nature, with a theoretical background forming the framework, often presented in a highly descriptive manner. Qualitative methodology was predominant, and interviews were the most popular data collection method. None of the theses took the form of an intervention study or investigated learning effects or students' experiences in terms of learning outcomes. In most cases, the results were closely related to the overall aim and research questions, albeit in a somewhat uncreative way. Only a few theses took an action research approach aimed at developing and changing pedagogical processes and teaching, and these were usually carried out in settings outside the compulsory teacher education programme. The students appeared constrained by the established conventions of academic writing. Consequently, they did not really dare to include their own reflections based on the theories and findings discussed in the thesis. They could also have emphasised their own engagement with, and thoughts on, the research project to a greater extent. In line with the aims of research-based teacher education, students

should develop a research-oriented approach to their future practice and profession (Hansén et al., 2015; Niemi & Nevgi, 2014). However, the results of the study showed that, in order to achieve this, more emphasis should be placed on research projects situated within the teacher profession.

Relatively little has been written about the master's thesis in Finland, which is surprising given the country's long-standing tradition of research-based teacher education. Against this background, and as part of the *NOAD* special issue on final thesis in the Nordic countries, the present article aims to describe and discuss the master's thesis within Finnish research-based teacher education through two cases at two universities, Åbo Akademi University and the University of Helsinki. Gaining a deeper understanding of the final thesis in teacher education can broaden our perspective and provide a basis for its continued development, making it more relevant and useful for teachers' work and the wider school community. By focusing on recent research and practice in Finland related to the master's thesis, the article contributes to the broader literature on Finnish research-based teacher education and aligns with the theme of this special issue. More specifically, the article examines national and university-level regulations and guidelines in order to describe the thesis process holistically at the two institutions. It begins with the general regulations, moves on to the form and content of the thesis itself, and concludes with the assessment and publication of the thesis. In addition, it describes the support structures surrounding the process, such as research courses and seminars related to thesis work.

### **Finnish teacher education and research-based approach**

Primary school teacher education in Finland has been university-based for many decades, with its roots in the 1970s (e.g. Mikkilä-Erdmann, et al., 2019; Tirri, 2014; Malinen et al., 2012). As a result of societal developments and new perspectives on individuals' educational needs, the education system underwent significant changes during that decade. The comprehensive school system was introduced, which also led to a reform of teacher education aimed at aligning teacher training with the new system. Pedagogical teacher training units were established, taking over the responsibility for teacher education that had previously been provided in seminars. Alongside this organisational change, there was a substantial reform of the content of teacher education. In 1973, new degrees were planned in the field of education, including teacher education. The starting point was to equip the teaching profession with stronger pedagogical competence and better preparedness to meet the rising educational standards in society (Myrskog, 1993).

The degree reform did not occur immediately, despite the transfer of teacher education to universities in 1974. New degree regulations were developed over the following years, and in 1978, the Regulation on Educational Degrees and Studies (1978/530) was introduced to regulate both the organisational and content-related aspects of university-based teacher education. The intention behind the new teacher education programme was not only to link it to research, but primarily to make it comparable to other academic degrees at universities. In 1979, teacher education was reformed and the programme was linked to the master's degree examination for all teachers in the school system. This change was in line

with the reform of university education throughout the country, which aimed to make university studies more professionally oriented (Myrskog, 1993).

Education (general didactics) became the main discipline for training primary school teachers, with a research-based approach implemented to provide a solid foundation for the professional qualification process (Tirri, 2014; Uusiautti, & Määttä, 2013; Välijärvi & Heikkinen, 2012). In line with the Bologna Process, teacher education underwent further development and change in 2005. The emphasis on research and science was increased, and the research-based approach was strengthened and consolidated (Jakku-Sihvonen et al., 2012). The Teacher Education Development Programme 2022 (Ministry of Education and Culture, 2022) also emphasises the development of teachers' research-based competence as one of its three main objectives.

The aim of the research-based approach is to develop professional and reflective teachers who can base their teaching on research principles and successfully apply these principles to address practical challenges in the profession (Tirri, 2014; Toom et al., 2010). Various typologies and models have been developed to describe aspects of higher academic education, many of which can be applied to research-based teacher education. For example, Healey and Jenkins' (2009) model of undergraduate research and inquiry has often been used as a framework for describing research in teacher education. The model is structured around two axes: the vertical axis extends from teacher-focused to student-focused activities, while the horizontal axis extends from an emphasis on research content to an emphasis on research processes and problems. It identifies four dimensions – research-led, research-oriented, research-based and research-tutored – each describing a different form of research engagement.

Another conceptual model for analysing final thesis orientations has been proposed by Yildirim et al. (this issue), focusing on clarifying “research,” “inquiry” and “practice” orientations, ranging from being research engaged to research informed. All categories in Healey and Jenkins' (2009) model, except for the research-based one, could be classified as inquiry-based within this framework. Yildirim et al. (this issue) also introduces a development and practice orientation in his model to highlight forms of research more closely aligned with professional development (see Figure 1).

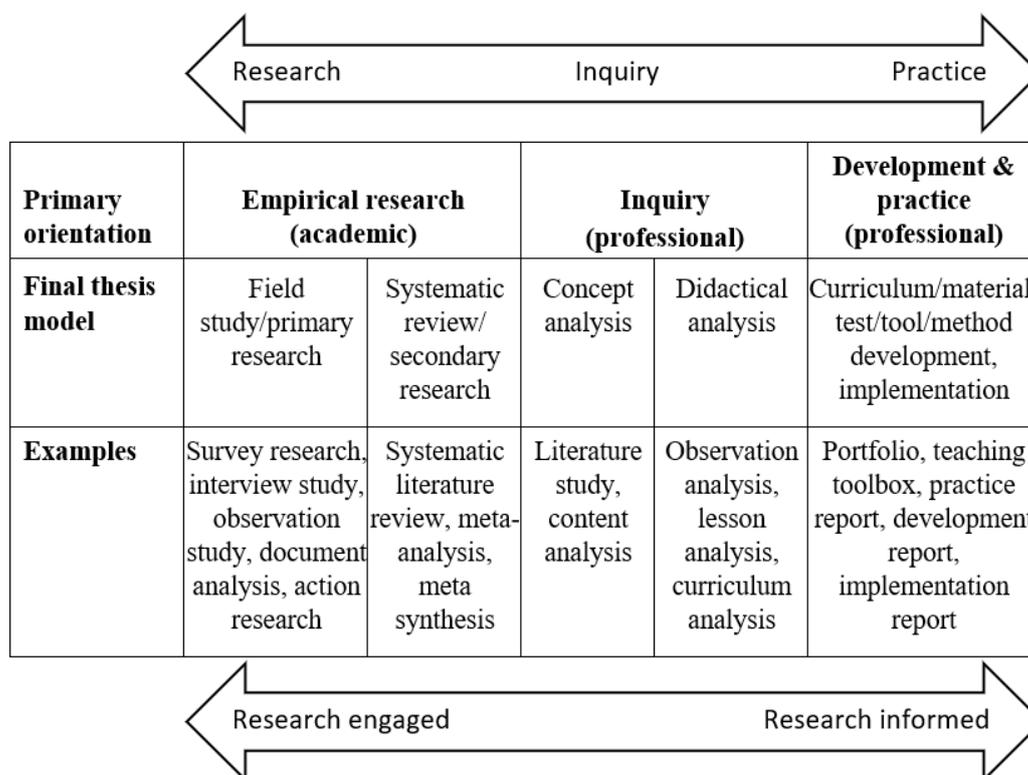


Figure 1. A framework to represent various final thesis orientations in teacher education (Yildirim et al., this issue)

According to Aspfors and Eklund (2017), research-based teacher education can be characterised more specifically by both implicit and explicit dimensions. The implicit dimension is intended to develop students' ability to critically scrutinise and systematically reflect on their daily work. The explicit dimension refers to concrete research activities, in which students independently carry out investigations for academic theses and participate in courses on research methodology and other activities (Eklund et al., 2019). In the Finnish context, the implicit dimension means that research is integrated into all courses, teacher educators are research qualified, and all teaching is based on research (Hökkä & Eteläpelto, 2014; Tryggvason, 2009). The goal is for students to develop critical thinking and to reflect on central issues related to teaching and learning in their future profession (Afdal, 2012; Kansanen, 2014). In line with the explicit dimension, students acquire formal research skills and conduct research projects as part of their education. Specific research activities form an integral part of the programme (Kynäslähti et al., 2006), and students complete both a bachelor's and a master's thesis, supported by coursework in research methodology.

### **Final thesis policies within Finnish teacher education**

There is no national policy or set of guidelines mandating how teacher education should be organised or what it should include. The Finnish Teacher Education Forum has developed general guidelines, but they are recommendations rather than directives. The eight

universities offering teacher education in Finland are all autonomous. However, legislation defines teacher qualification requirements and follows the Bologna Process in organising teacher education. Accordingly, teacher education consists of a bachelor's degree (180 ECTS) and a master's degree (120 ECTS), with the latter being the required qualification for teaching. Teacher training schools are closely connected to universities, where most practice periods take place. This system enables close cooperation between campus-based studies and school-based practice (Toom et al., 2010). After completing the master's degree, students are eligible to pursue postgraduate studies in education (Hansén et al., 2015; Maaranen, 2010).

The master's thesis is the final piece of work undertaken by student teachers. While the guidelines for the thesis are broadly similar across Finnish universities, some institutional variation exists. The thesis is typically completed within one academic year, accounts for about 30 ECTS credits, and requires approximately 1,000 hours of work. To prepare students for the thesis work, teacher education programmes include courses in research methodology, aimed at developing their understanding of different research methods and their ability to apply them in practice. These courses usually cover both quantitative and qualitative research methodologies, including their underlying philosophical assumptions. Students also learn about current trends in educational research; at present, different qualitative approaches and methodologies are popular. Students thus gain an overview of research methodologies, and with the help of these tools, it is assumed that they will be able to conduct their own research project and write a master's thesis (Byman et al., 2020).

The master's thesis follows the structure of a formal research report, typically including an introduction, theoretical background, research questions, methodology, data and analysis, results, and conclusions. It is most often an empirical study, using either qualitative or quantitative data collection methods, but it can also take the form of an academic literature review. Students carry out independent studies by selecting appropriate research methods and developing research skills such as data collection, systematic analytical thinking, interpretation, and evaluation. At some universities, the master's thesis is independent work, whereas at others it may be conducted in pairs. The idea behind writing in pairs is supported by research on collaborative learning, which is in line with today's focus on sociocultural learning (Säljö, 2014). Theses are generally between 50 and 80 pages in length. Students choose their own topics within the field of education, although in some cases they may join a research group and conduct their thesis as part of a research project. In such cases, the topic derives from the project. Examples of thesis topics include subject didactics and teaching, health and wellbeing, as well as school-related activities and tasks (Eklund, 2019).

The thesis is supervised by a main supervisor, although other experts in the field can assist in the process. The supervisor should have a PhD and be research qualified, in line with the requirements for teaching at Finnish universities (e.g. Maaranen et al., 2019; Tirri, 2014). In addition to individual supervision, students participate in seminars together with their peers. Students engage with each other's master's thesis projects: they read each other's work, provide feedback and act as opponents in final seminars, during which they present their final theses. The main supervisor often leads these seminars or is at least engaged in them to support the students' research process. The opportunity for collaborative learning and sharing experiences during these seminars is valuable. This has been confirmed by previous research showing the benefits of a collaborative approach to supporting thesis writing

(Jusslin & Hilli, 2023). However, in line with our own experience as supervisors, it can be challenging to engage students during seminars and encourage them to recognise the benefits of supporting and helping each other.

### **Master's thesis in primary school teacher education**

Finland is an officially bilingual country, with Finnish and Swedish having equal status, as guaranteed by language legislation since 1922. The majority of the population speak Finnish as their first language, while around 290,000 people (5%) speak Swedish. Of the eight universities offering teacher education, two have Swedish-speaking programmes. For this study, we have chosen two primary school teacher education programmes, one representing a small Swedish-speaking programme (Åbo Akademi University) and the other representing a large Finnish-speaking programme (University of Helsinki). The two cases were also selected based on the fact that they are located in areas where these two languages are prominent.

### **General regulations and guidelines**

Both universities have general and specific regulations and guidelines for master's theses. At Åbo Akademi University, these are set out in the Degree Regulations (Åbo Akademi University Instruction on Degrees and Studies, 2022) and in the Examination and Assessment Instructions (Åbo Akademi University, 2019). Specific information about the master's thesis and instructions for a successful writing process are also available on the Åbo Akademi University website (Forsknings- och utbildningsservice, lärandestödet, 2022). In addition to the university regulations, faculty and subject-specific instructions apply, such as those for the primary teacher education programme (Åbo Akademi, 2025). The University of Helsinki has guidelines for degrees and studies, which provide general directions for bachelor's and master's thesis work (Guidelines for degrees and studies at the University of Helsinki, Rector's Decision [HY/3220/00.00.06.00/2021](#) and [memorandum](#)). The Faculty of Educational Sciences has implemented more specific directions in the form of a study guide, which includes the aims and objectives of the thesis work. These directions apply to all specialisations, including the primary teacher education programme. The assessment guidelines are provided by the Faculty Council (2019) and supplemented with an assessment matrix issued by the master's programme steering board.

An agreement can be made between the student and the supervisor regarding the process of writing a master's thesis. At Åbo Akademi University, such an agreement was introduced in 2017 for all thesis work at both bachelor's and master's level (Åbo Akademi University, Examination and Assessment Instructions, §33, 2019). Among other things, the agreement specifies the delegation of responsibilities, obligations and rights, as well as the planned timetable for the thesis work. By contrast, at the University of Helsinki, a supervision agreement is not mandatory but is offered as an option.

In Finland, master's thesis supervisors are generally expected to hold a doctoral degree. At Åbo Akademi University, every student is assigned a supervisor by the head of subject (Åbo Akademi University, Examination and Assessment Instructions, 2019). The supervisor must have at least a higher university degree, but in line with national recommendations, a doctoral degree is considered the standard qualification for supervising master's

theses. At the University of Helsinki, students attend a master's seminar led by a supervisor of their own choosing. Supervisors are most often professors or senior university lecturers and therefore hold doctoral degrees. Students may also request a second supervisor if they wish. However, the faculty recommends a maximum of two supervisors per student, a guideline that also applies at Åbo Akademi University. At both universities, the supervisor's role is to guide the student through the thesis process, providing personal supervision and feedback throughout the writing and development of the work.

At Åbo Akademi University, the master's thesis in Educational Sciences may be written individually or in pairs (Åbo Akademi University, Examination and Assessment Instructions, 2019), whereas at the Faculty of Educational Sciences at the University of Helsinki, it is generally written individually. While the guidelines for degrees and studies allow for the possibility of pair work at the University of Helsinki, the final decision is made by individual faculties in their curricula (Guidelines for degrees and studies at the University of Helsinki, Rector's Decision [HY/3220/00.00.06.00/2021](#) and [memorandum](#)). In the case of Åbo Akademi University, if students decide to write the thesis in pairs, the supervisor must approve the arrangement, and each student's responsibility for different parts of the thesis is typically documented in the introduction.

### **Form of the thesis**

In Finland, all higher university degrees include a research-based component, and the master's thesis in Educational Science carries 30 ECTS credits. This applies to both universities discussed here. Although the credit value is only 30 ECTS, the effort and time required to complete the thesis may extend beyond one academic year. In the primary teacher education programme at Åbo Akademi University, the master's thesis is divided into three courses of 10 ECTS each to make it easier for students to accumulate credits progressively throughout the thesis process. At both universities, students must attend a thesis seminar (5 ECTS) for two semesters (i.e. one academic year), during which the thesis should be completed.

At Åbo Akademi University, students may choose to write either a monograph or an article-based thesis (Åbo Akademi University, Examination and Assessment Instructions, 2019). If they wish to publish part of their master's thesis in an academic journal, students may request confidentiality for that part. In such cases, the article manuscript is only available at the Åbo Akademi University Library, and the entire thesis is made public later. Students at the University of Helsinki are also currently allowed to write either a monograph or an article-based thesis. At both universities, the monograph is clearly the more popular choice, and should be about 50–70 pages long. At the University of Helsinki, specific guidelines state that an article-based master's thesis must include a summary section that elaborates on a particular aspect of the research in more detail than is possible in the article manuscript. The article manuscript is then appended to the summary section.

The guidelines for the structure of the thesis are nearly identical at both universities. The thesis may take the form of an empirical study or a literature study, and students may either collect their own data or participate in an ongoing research project. At Åbo Akademi University, there are no specific instructions regarding the form of the thesis, only models and suggestions for structuring an academic thesis in general. However, at the University of Helsinki, a template is offered to students, although it is not mandatory to use it. Students

write and implement an academic research plan, use different sources of information and evaluate them critically, develop and apply new knowledge independently, develop a thesis in line with principles of academic writing, and master basic skills for academic discussion. Students plan, conduct, and report their own research both orally and in writing. They also act as opponents, comment on their fellow students' theses, and participate in discussion. Students develop an independent academic thesis together with their supervisor, and the thesis is reviewed in a seminar. Students follow the APA guidelines and receive instructions for structuring and writing the thesis. The General Data Protection Regulation (GDPR) requires students to process personal data with care in their theses. Similarly, they need to check whether their thesis project requires ethical review before data collection begins.

As noted earlier, Åbo Akademi University is a Swedish-speaking university, whereas the University of Helsinki is both Finnish- and Swedish-speaking. Consequently, there are some differences between the universities regarding language-related issues. At Åbo Akademi University, all theses leading to a higher education degree are written in Swedish, Danish, or Norwegian (Åbo Akademi University, Examination and Assessment Instructions, 2019). The thesis must include an abstract written in the same language as the thesis itself. With the supervisor's permission, the thesis may also be written in English and, with the permission of the dean, in another foreign language. The Language Centre offers voluntary language support for students who request feedback or help with the linguistic aspect of their master's thesis. This support aims to help students identify and address linguistic issues during the writing process. In addition to this support, all master's thesis students at Åbo Akademi University receive compulsory language feedback as part of the thesis process. The pedagogical idea behind this is that when students receive feedback on their language during the writing process, it will enhance their awareness of their strengths and weaknesses, particularly during the final writing stage. The thesis must be approved from a language perspective, since this removes the need for language revision. At the Faculty of Educational Sciences at the University of Helsinki, students may write their thesis in Finnish, Swedish or English. However, the abstract must be written both in English and in the language of the student's secondary education, as the abstract also serves as a maturity test for the master's degree. The purpose of the maturity test is to demonstrate not only the student's academic understanding of the topic, but also their command of academic language. Most students write their thesis in their mother tongue.

### **Content of the thesis**

At Åbo Akademi University, the supervisor may suggest a topic for the thesis, although students are encouraged to propose their own (Forsknings- och utbildningsservice, lärandestödet, 2022). The supervisor determines whether the topic is feasible and agrees with the student on the content of the assignment. At the Faculty of Educational Sciences at the University of Helsinki, students may choose any topic they wish, provided it falls within the field of education. Supervisors may also invite students to participate in a research project, in which case the topic may be assigned. A supervisor may also provide the student with a dataset, while the student selects the topic. In both universities, the supervisor's task is to guide students in selecting a realistic topic that is manageable within the available timeframe.

In recent decades, qualitative research has been particularly popular at both universities. In the 1990s, the phenomenographic approach became established in teacher education at Åbo Akademi University (Uljens, 1989), and many doctoral and master's theses were written in line with this methodology. This emphasis on qualitative research has continued. As Eklund's (2019) analysis of master's theses written in 2016 and 2017 shows, the dominant approaches were hermeneutic (31%) and phenomenographic (23%), while only 18% of theses adopted a positivistic approach. As a consequence of this qualitative orientation, various qualitative data collection methods have frequently been used in master's theses. In the same analysis, interviews were the most common data collection method (66%), followed by observation (23%) and questionnaires (23%) as the second and third most used methods. Preliminary findings from an analysis of master's theses written in 2021 and 2022 show a similar trend (Eklund et al., 2025).

In accordance with the university guidelines for master's theses at Åbo Akademi University, (Forsknings- och utbildningsservice, lärandestödet, 2022), there are no explicit instructions requiring students to present implications based on their study. However, the learning goals for the master's thesis in primary teacher education (Åbo Akademi, 2025) state that students should be able to reflect on the significance of academic work for the development of the teaching profession. Consequently, students are encouraged to present implications based on their academic work. When it comes to the Faculty of Educational Sciences at the University of Helsinki, the master's thesis template does not explicitly state anything about implications either. However, students are expected to *discuss the general and specific meanings of their research as well as try to see the significance from a broader point of view*. Furthermore, students are required to publish a blog post or vlog in which they pinpoint the most relevant findings of their thesis (<https://blogs.helsinki.fi/graduparaati/>). As part of the master's studies in primary teacher education at Åbo Akademi University (2025), students participate in a compulsory course module titled *Popularisation of the master's thesis*. Based on their thesis, students create popular scientific video pitches aimed at reaching schools and the school community (<https://www.abo.fi/popmag/>). Working individually and in groups, and using different digital tools, students communicate their research to educational audiences.

## Assessment and publication

The assessment and examination process for the thesis is quite similar at both universities. At Åbo Akademi University (Examination and Assessment Instructions, §18 & §33, 2019), the master's thesis is evaluated based on the faculty assessment matrix, which outlines the prescribed assessment criteria and grading grounds. There are prescribed assessment grounds for each assessment criterion across the complete grade range (1–5). The six assessment criteria are: 1. Research field, references, and literature, 2. Choice of topic, problem, aim, and limitations, 3. Research methods, 4. Results, discussion, and conclusions, 5. Formality, structure, language and illustrative elements, and 6. Independence in the work. The final grade ranges from 1 to 5, with 5 being the highest. At the University of Helsinki, the master's thesis is also assessed on a scale of 0 to 5 (Guidelines for degrees and studies at the University of Helsinki). The Faculty Council of Educational Sciences has defined seven assessment components, each graded on the same scale: 1. Topic and aim of the study, 2. Knowledge of the field and use of theoretical literature, 3. Data, data collection and analysis,

4. Results and reporting of the results, 5. Conclusions and discussion, 6. Structure, clarity, and finalisation of the thesis, 7. Independent work during the process. At both universities, the master's programme in Educational Sciences appoints a second evaluator in addition to the student's main supervisor, who serves as the first evaluator. Both evaluators must hold at least a higher university degree, and they are given three weeks to complete the assessment. The thesis also undergoes a formal plagiarism check and evaluation. In addition, at Åbo Akademi University, a language review is also conducted.

Master's theses are public documents, and public access to them is based on the Act on the Openness of Government Activities (621/1999). This means that universities must make theses available to anyone upon request, including their abstracts. Since 2018, all master's theses at Åbo Akademi University have been submitted, checked and archived entirely electronically. They are available digitally via the university's publications repository, accessible through the Doria portal (<https://www.doria.fi/>). At the University of Helsinki, students must upload their thesis to the E-thesis system (<https://ethesis.helsinki.fi/en/>). In both cases, if a student does not want their thesis to be publicly available online, they may opt to restrict online access but make their thesis available for reading at the university library. In rare cases, students may also request a one-year embargo on publication. However, the abstract of the thesis is always public.

### **Research courses and seminars**

All teacher education programmes in Finland include extensive studies in research methodology. At both universities, students take courses in both qualitative and quantitative methods. At both the bachelor's and master's levels, Åbo Akademi University offers courses in qualitative and quantitative methods (5 ECTS each), for a total of 20 ECTS. At the Faculty of Educational Sciences at the University of Helsinki, the curriculum includes several courses on research methods. At bachelor's level, students begin with an introductory course entitled *Towards inquiry orientation* (5 ECTS), followed by courses in qualitative methods (5 ECTS) and quantitative methods (5 ECTS). At master's level, they continue with a more general research methodology course called *Topical issues in educational research* (5 ECTS), after which they attend advanced courses in both qualitative and quantitative methods (5 ECTS each). In addition to the individual thesis work, students at both universities participate in seminars (5 ECTS), during which they present their own work (e.g. research plan, thesis manuscript and/or other texts) and serve as opponents for fellow students. The structure and content of these seminars may vary between faculties and subjects.

### **Discussion**

The aim of this article was to describe and discuss the master's thesis within Finnish research-based teacher education, using two cases from different universities. The description shows that the regulations and guidelines at the two universities are largely similar. Focusing on only two of the eight Finnish universities offering teacher education can be considered a limitation. However, as all teacher education programmes follow the guidelines of the national development programme (Jakku-Sihvonen et al., 2012) and, more recently, the

recommendations of the National Teacher Education Development Forum (Lavonen, 2021), teacher education studies are generally consistent across the country.

Nevertheless, some minor differences can be identified, such as the mandatory use of a supervision agreement, the possibility of writing the thesis in pairs, and the emphasis on language revision. A major difference between the two cases is the transfer of knowledge from the thesis to school practice. At the University of Helsinki, student teachers are required to post a blog or a vlog in which they highlight the most relevant findings. In contrast, student teachers at Åbo Akademi University participate in a compulsory course module, *Popularisation of the master's thesis*, as part of their Master's seminars. Based on their thesis, they create video pitches in a popularised format aimed at communicating their research to the school community and a general audience. In line with course evaluations, students often experience difficulties in shifting from what can be considered a scientific to a popular science approach. While they recognise the purpose and relevance of the task, they find it challenging to translate their educational knowledge into an applicable form (Henriksson et al., 2021). The results thus demonstrate the need to continuously integrate research and practice into research-based teacher education and to disseminate knowledge to the field of practice.

Considering that there are few national regulations and guidelines for the master's thesis, the overall similarities between the cases are interesting. A decades-long tradition of research-based teacher education seems to have resulted in a consensus regarding the process, as well as the form and content, of the master's thesis. This is reflected in the rather conventional structure of the thesis, and in the lack of creative and innovative ways of conducting research projects and writing the report. However, there are examples of approaching the master's thesis differently, such as action research projects (Bendtsen et al., 2019), but these are demanding and time-consuming. Universities in Finland face pressure to produce degrees within the required time frame (2 years for the BA + 3 years for the MA), which does not encourage thesis supervisors or students to experiment with novel ways of conducting the master's thesis.

As previous research has shown, there are several models describing different aspects of research-based teacher education. When positioning the Finnish master's thesis within Healey and Jenkins' (2009) model of undergraduate research and inquiry, it belongs in the upper-right quadrant, designated as the research-based dimension (see also Aspfors et al., 2021). Students are active in the master's thesis process, and the focus is on their own research activities. The emphasis is on research problems and ways to solve them. Students carry out their own research project and develop their research skills. In the same way, the Finnish master's thesis can be positioned as research-engaged, in line with the conceptual model by Yildirim et al. (this issue). The primary orientation is towards empirical research (academic) rather than towards development and practice (professional). This means that students engage in primary research as well as systematic literature reviews. Thus, the master's thesis is academic and conventional in nature. However, the fact that student teachers at Åbo Akademi University participate in the course module *Popularisation of the master's thesis* shows that it is possible to connect the practical and professional dimensions (Yildirim et al., this issue) with the academic product. Students' master's theses also connect to the explicit dimension, namely specific research activities in which students independently carry out investigations for academic theses and participate in courses in research methodology and other activities (Aspfors & Eklund, 2017).

While Finnish research-based teacher education has been acknowledged and even praised internationally (e.g. Darling-Hammond, 2017; Sahlberg, 2015; Tryggvason, 2009), there are also critical voices. For example, Säntti et al. (2023) raise serious questions about whether the research-based nature of Finnish teacher education is more rhetoric than reality. Furthermore, Säntti et al. (2017) argue: “there is no substantial empirical research on the significance of the research-based agenda in Finnish education: there is only circumstantial evidence such as the good learning results of Finnish pupils, and the appreciation and attraction of teaching as a career” (p. 17). In an empirical study, Koski et al. (2023) found that although most schoolteachers appreciated the research-based approach of teacher education, they did not engage with educational research. This led the researchers to question whether the application-of-theory model is problematic in educational science (Koski et al., 2023).

The critique directed at research-based teacher education also prompts us to reflect on the role of the master’s thesis within educational studies in teacher education. It is important that nothing is taken for granted or accepted without being examined through a critical lens. This encourages a closer consideration of the relationship between theory and practice, as well as the metacognitive aspects that the master’s thesis process should offer. As Koski et al. (2023) aptly put it: “teacher education, as with any academic professional education, is at its best when it encourages autonomous educational thinking and provides theoretical and practical instruments for dealing with professional matters” (p. 13).

### About the Authors

**Katriina Maaranen** is a Professor of Education at the University of Eastern Finland, and an Adjunct Professor at the University of Helsinki. Her research focuses are teacher education, reflection, professional development and teachers’ professional work.  0000-0003-3771-9759

**Gunilla Eklund** is Professor of Education at the University of Agder in Norway. Her research focuses on research-based teacher education and teacher professional development, with particular interest in the dissemination of research-based knowledge from teacher education to schools and society.  0000-0003-1876-1441

**Jessica Aspfors** is a Professor of Education at Nord University, Norway, and a Senior Lecturer (Docent) at Åbo Akademi University, Finland. Her research focuses on research-based teacher education, induction and mentoring of newly qualified teachers, and teachers’ professional learning.  0000-0002-1865-6302

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