

Teacher Education in Finland: Current Models and New Developments

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1. INTRODUCTION

1.1. Brief Historical Background

Finnish teacher education has two traditional lines of development. The first and older line concerns the education of teachers for secondary education, and the second line refers to the education of teachers for elementary schools. Closely linked to this second line is the education and training of kindergarten teachers. Today teacher education is a many-faceted field involving various groups of teachers including those working in day-care centers, vocational institutions, and adult education.

The landmark in Finnish teacher education was the establishment, in 1852, of the first professorial chair of education at the University of Helsinki. The Professor of Pedagogy was also expected to lecture on teaching methods and to advise students on teaching skills. The task of the professor was to develop teacher education, particularly for secondary school teachers.

Students who were aspiring secondary school teachers (subject teachers) studied their subjects in subject departments and undertook their practice teaching in teacher training schools. The Professor of Education was responsible for supervising this practical part of studies in the training school. His duties included issues of further teacher training. The role of teachers in the development of school systems was also considered important. The position of the Professor of Education was exceptionally close to teacher education and to schools in general (Iisalo, 1979, pp. 33-38). Education was an auxiliary subject, and thus its status was different from that of other subjects. Iisalo emphasizes, however, that it had an immediate influence on practical matters concerning the role of the Professor, a unique feature in Europe at that time (Iisalo, 1979, p. 38). Although this characteristic became less important later on, the strong position of teacher education has left its mark, and the present situation can perhaps be partly interpreted in this light.

Earlier, in 1807-1827, a so-called *seminarium pedagogicum* had been active at the University. Although short-lived, it was designed for the needs of teacher education. Naturally, university lectures were held for prospective teachers, but they were not systematic and depended on the interests of the lecturers.

The first teacher-training college for the education of elementary school teachers was founded in Jyväskylä in 1863. Its curriculum was designed according to Swiss and German models, and the influence of Rousseau, Pestalozzi, and Diesterweg was particularly noticeable. A close contact between the theory and practice of education was a distinctive feature, and practical subjects, such as handicrafts, had their place in the curriculum.

Based on the model of the Jyväskylä College, many teacher training colleges were founded. Following many intermediate stages, a major reform was brought about by the 1971 Teacher Education Act.

In 1974, teacher education for comprehensive schools and upper senior high schools was reassigned to the universities. At the same time, faculties of education were established in every university with departments of education and departments of teacher education.

The departments of education are older departments, which concentrate on educational research in general and on the problems of educational administration and planning. The departments of teacher education are recent establishments, and their responsibilities cover both teacher education and research on teaching and teacher education. With the reform of the entire higher education system in 1979, the degree earned in teacher education became no different from all other university subject degrees. Following this reform, all classroom teachers (grades 1 to 6) now complete a Master's degree, majoring in education. Subject teachers (grades 7 to 12) major in their teaching subject. Starting in 1995, kindergarten teachers are also educated in universities, and graduates are subject to a Bachelor's Degree level examination. A unique feature of Finnish teacher education is that both primary and secondary school teachers must earn a Master's Degree and that their academic status is the same.

1.2. Basic Features of the Finnish Education System

The Finnish education system consists of comprehensive schooling (nine years for the whole age cohort starting at the age of 7), secondary education (three years of general education in an upper secondary school or two to six years of vocational education), higher education, and adult education. Elective pre-school education is offered to 5-to-6-year old children.

Classroom teachers handle the lower level of comprehensive schools, grades 1 to 6, and are responsible for the whole age group. They teach all subjects, guiding the whole personal development of their pupils. Subject teachers teach in the upper levels of comprehensive schools, grades 7 to 9, or in upper secondary schools, and they usually teach one or two subjects. More than half of the pupils go on to upper secondary schooling after completing comprehensive schooling (three years for pupils aged 16 to 18), which ends with the matriculation examination which is required for pursuing university studies. Somewhat fewer than 40 percent of pupils enroll directly into different types and levels of vocational education, some of which also open paths to university studies. Nevertheless, a large number of

matriculated students pursue vocational education following upper secondary school (Ministry of Education, 1999.)

1.3. Student Selection for Teacher Education

The work of a teacher has always been popular among young women, even if less so among young men. The competition is severe, and only some 15 percent of the applicants are accepted. The recruitment situation for classroom and subject teacher applicants is different in the sense that those who want to become classroom teachers study education as their major subject and begin their studies in a teacher education programme. Prospective subject teachers apply to be admitted to studies in the respective subject in another faculty and choose teacher education later, usually after two years.

The selection of classroom teachers takes place in two phases. A number of semi-finalists equaling some three to four times the number of available places is selected from among the applicants on the basis of their results on the matriculation examination and their accumulated school marks. Additional points can be earned by candidates who are experienced in working with children. As a rule, the second phase has three different components, beginning with an examination based on certain textbooks. It then continues with a task whereby social interaction and communication skills are observed and then with a personal interview regarding the reasons why candidates chose to apply to be teachers.

The selection procedure for subject teachers is, in principle, the same as for classroom teachers. After about two years of study in the university departments offering their main subjects, students apply for the teacher education programme in the department of teacher education. They then participate in given teaching situations and take part in a personal interview. The students continue their studies in their own departments and at the same time undertake studies in education, usually for two additional years (35 credits in education).

The status of the teaching profession in Finland has been quite high, and teacher education has been a popular study programme in the universities. During the period when teachers seminaries and colleges were still in operation, the status of teachers was particularly high. After the transfer of teacher education to the universities, it retained its popularity among students. Only in the cases of a few subjects are there constant problems in enrolling sufficient numbers of students in teacher education programmes. Mathematics and physics, in particular, are such subjects. Another problem is the low application rate of men for the teaching profession, almost at all levels and in all subjects, as compared to the application level of women. The low teacher salaries seem to be the most common explanation for this discrepancy.

The high academic level of teacher education also makes it possible for graduates to apply for other forms of employment in society. Many men

teachers do not last very long as school teachers. During a period of market depression, when there are few alternatives, teachers will resume teaching. This scenario was characteristic of the early 1990s. When the economic trend is favourable, schools are in want of teachers. At the beginning of the 2000s, there seems to be a slight flight from the schools once again. Although a fairly high number of students are applying for teacher education, the problem seems to be one of how to keep teachers in the schools in the future.

2. OVERVIEW OF TEACHER EDUCATION IN FINLAND

2.1. *General Characteristics*

All eight Finnish universities have teacher education programmes mainly for classroom teachers and for subject teachers, and also, today, for kindergarten teachers (Tella, 1996). Special education teacher programmes are concentrated in certain larger universities as are also the programmes for teachers of educational guidance. Home economics, handicrafts (textile and technology), and physical education teachers are also offered programmes in certain universities, whereas music and art teachers have their own institutes. All comprehensive school teachers must earn a Master's degree of 160 credits (four to five years in duration). Kindergarten teachers are offered a three-year programme of 120 credits in universities. There is also a Swedish-language university devoted to the needs of the Swedish-speaking population (about 6 percent) of Finland. It is responsible for the education of Swedish-speaking school teachers. These schools and teacher education programmes are organized according to the same principles governing the Finnish-speaking community. The education of teachers occupied in vocational and adult education is organized in universities, vocational teachers colleges, and independent institutes.

The general core of Finnish teacher education is represented by pedagogical studies worth thirty-five credits, which are required of all teachers. Kindergarten teachers are the exception to the rule. Thus, the same pedagogical studies are accepted in all kinds of teaching jobs in the comprehensive and upper secondary schools, as well as in vocational institutions and in adult education. If, for example, a subject teacher wishes to move into a classroom teacher's position, he or she would have to complement his or her studies with subjects that were distinct from what he or she had been teaching at the lower level (grades 1-6), whereas the teacher's pedagogical studies would be recognized and would not need to be repeated. Similarly, if a classroom teacher wished to move to the upper level (classes 7-9) of a comprehensive school, he or she would have to complement his or her studies in the very subject that he or she intended to teach; whereas, his or her pedagogical studies would be recognized for the new job. With kindergarten teachers, the situation is different, their requirement being only a Bachelor's degree (120 credits). A kindergarten teacher would also have to complement his or her pedagogical studies. In

addition, he or she would have to earn a Master's degree (160 credits) if he or she wished to move to a comprehensive school.

2.2. Main Principles

Teacher education is academic and takes place in universities.

The content of knowledge for pedagogy must be sufficiently broad so that teachers will be able to guide the development of their pupils as extensively as possible. The main subdiscipline is didactics, both general and subject-matter related. Educational psychology and educational sociology also play important roles.

The intention is to link theory and practice in a sufficiently close relationship that a teacher may be able to resolve everyday teaching problems on the basis of his or her theoretical knowledge.

Pedagogical studies and content knowledge studies must be brought close together.

The role of the teacher in the broader societal context is emphasized.

All teachers are qualified for post-graduate studies.

Comprehensive and upper secondary school teachers receive university education and training at Master's Degree level comprising 160 credits (four-and-a-half to five-and-a-half years).

All pedagogical studies for both categories are in every respect organized by the departments of teacher education within universities and their faculties of education.

The schools in which a major part of student pedagogical practice is conducted are linked organically with the departments of education. The remaining part of student practice is undertaken in regular schools around the country.

After graduation from a university, students are licensed as teachers and may apply for teaching positions in schools.

Regarding in-service teacher education, the idea is to support the individual professional development of the teachers. Principal responsibility lies with the municipalities which organize courses with state support. A debate has been going on about possibilities and alternatives for the system of in-service teacher education.

2.3. The Idea of Research-Based Teacher Education

The basic aim of every teacher education programme is to educate competent teachers and to develop the necessary professional qualities to ensure lifelong teaching careers for teachers. Behind this aim is the belief that initial teacher education is of paramount importance and that any defects appearing in the programme will have consequences that will be extremely difficult to correct later on. The need for in-service teacher education is inevitable, but the basis for professional competence is imparted during the period of initial teacher education.

This idea implies that certain principles must be respected in order to achieve the aims and goals inherent in the idea. First of all, a teacher education programme should be elaborated systematically. Thus, it should have some basic beliefs to guide it and an organizing theme or themes serving as principles for the selection of the content of the programme (Galluzzo and Pankratz, 1990). In addition to an explicit programme, implicit thoughts and conditional factors should guide the system and provide space for the programme within this context (Doyle, 1990, pp. 3-4).

Finnish teacher education aims at achieving a balanced development of the personality of each teacher, a process in which his or her pedagogical thinking plays an essential role (Kansanen *et al.*, 2000). This overall purpose is based on the study of education as a main subject that is composed of three large content areas: the theory of education, pedagogical content knowledge, and subject didactics and practice. These components are in reciprocal interaction, and the main organizing theme, from the beginning of the programme to the end, is a research-based approach. This approach is integrated into every separate course within the programme. Systematic courses on the methods of research are introduced at the very beginning of studies. The research-based approach culminates in a Master's thesis, which every student must write. Classroom teachers write their theses in the field of education, while subject teachers choose a topic within their respective majors. In any case, the academic level of teacher education is the same for all teachers from elementary to upper secondary school.

Zeichner (1983) presented a classification of the possible teacher education programmes, dividing them into four paradigms: behaviourist, traditional-craft, personalistic, and enquiry-oriented. The Finnish research-based approach is fairly similar to the enquiry-oriented paradigm. All the parts of a teacher education programme must be justified by a systematic totality and must focus on the thinking processes that a teacher might characterize as the criteria used in doing research. As Rudduck (1985, p. 288) stated, "Research, [is] a perspective that goes across the curriculum of teacher education courses...."

Although an all-around understanding of research methods is desirable, the nature of a teacher's work is much like the activities of a practitioner-researcher. Reflection is a way to gain knowledge about one's own doings and about the interactions that occur in the teaching-studying-learning process. Bengtsson (1995) adds dialogue with colleagues and research as other possibilities. When engaging in reflection, a certain distance is needed in order to be able to ponder one's own decisions and their role in practice. In this process, teachers may utilize their knowledge about research-based thinking skills that also include the ability to read articles in professional journals and research reports.

The aim of research-based teacher education is to impart the ability to make educational decisions based on rational argumentation in addition to everyday or intuitional argumentation. The skill to think along the lines of research principles presupposes a general understanding of all-around

research methods, as well as a positive attitude towards research. However, developing the teacher into a researcher is a much more demanding goal. In the teacher-as-researcher movement, the teacher conducts research either independently or in collaboration with a senior researcher. The actual objective is to write and to publish a report.

Research-based thinking, however, aims at the use of research competencies in one's own teaching and in making one's own educational decisions. It is natural that much of the research described in this way should resemble action research and would be in line with qualitative research. However, by restricting the process to action research overlooks a great deal of the work of a teacher. A philosophical approach in conceptual analyses and requirements needed in evaluation are important requirements for teaching. The readiness and the skill to read professional journals belong to the methodical competencies of research-based teaching.

In the development of research-based thinking for everyday teaching, the principle of the continuous interaction of research studies and practice is realized as of the very beginning of the programme. The final goal is the writing of a Master's thesis at the end of studies, but the writing of several minor systematic papers is required throughout the period of studies. The idea of a spiral curriculum is applied, and courses of basic importance are vertically integrated into the studies. In every phase of studies, courses on research methods are integrated with other studies.

2.4. The Role of Pedagogical Practice in Research-Based Teacher Education

Hytönen (1995) has outlined some integrative principles by which to combine the essential elements of a teacher education programme. The basic idea is to integrate theoretical aspects with practice during studies. Research-based thinking is viewed as the connecting factor in this process.

The first principle is to begin practice teaching as early as possible. Although many students may have had teaching experience gained before they began their teacher education studies, it is important for them to visit practice schools and to become familiar with the routines and activities of these institutions.

Secondly, the interaction between practice and studies of educational theory is emphasized throughout the entire period of studies. The totality of educational theory, pedagogical content knowledge, and practice form the ideal goal in this respect. Thus, stated concretely, some practice teaching takes place during every study year and during every study period as part of a given teacher education programme.

Every study period has its aims and characteristics. Many practice periods follow each other, and every period is integrated into the totality of the teacher education programme. Practice teaching is organized in special practice schools as well as in regular schools. At the start, the students observe pupils of different ages, their roles as group members, and their ways of interacting in the instruction process in different classes and grades.

Gradually, the content of practice teaching is extended to different subject matters, teaching methods, and to all aspects of teaching. The ultimate goal of the teacher education programme is to develop an autonomous teacher personality. All the practice periods are planned in order to realize this goal.

Practice teaching proceeds from small units to larger combinations. The special characteristics of different practice teaching periods are taken into consideration. The requirements of class teachers and subject teachers vary in several important ways. Class teachers have many different subjects to deal with, and the total development of each student is of special importance to them. Subject teachers are stronger in content knowledge competence, but their students will need special attention as determined by the age groups to which they belong. The larger perspectives of a teacher's work, in the form of co-operation with the parents and family of his or her pupils, are of importance. Also, the co-operation of all teacher educators is essential.

Every teaching practice period is combined with detailed theoretical studies that relate to its topic. The aim is for student-teachers to obtain increasing knowledge by which to support their teaching practice. Thus, they will read relevant texts and discuss the subjects with each other and with their instructors.

Practice teaching in university practice schools and in the normal community schools is organized in sequences. The university practice schools also function as normal comprehensive schools, following the same curriculum as in other schools. However, special competency requirements are expected of the teachers who are expected to be experienced supervisors. The field schools represent the everyday practice of schools in general.

The main principle of the programme is the integration of the various aspects of the teacher education programme through research-based thinking and argumentation. However, this principle as such is not sufficient. How research is defined and what is meant by a research-based approach are also essential. An extensive and liberal interpretation of research is applied.

3. THE EDUCATION AND TRAINING OF CLASSROOM TEACHERS

Comprehensive school teachers for the lower stage (grades 1 to 6) receive nearly all of their education and training in university departments of teacher education. The main subject for classroom teachers is education, which, altogether, consists of about seventy-five credits. The rest of the programme consists of studies in the different subjects to be taught in primary schools and their respective didactic studies (thirty-five credits), specialization in one or two of the primary school subjects (thirty to thirty-five credits), and finally, general studies, studies in languages, and optional studies.

The degree structure of the classroom teacher education programme may be outlined as follows:

Table 1. Degree structure of the classroom teacher education programme

Educational studies (main subject)	75 credits
(Teacher's pedagogical studies	35 credits
Subject didactic studies	35 credits
Minor subject studies	35 credits
Language and communication studies	12 credits
Optional studies	3 credits
TOTAL = Master's degree	160 credits

3.1. Educational Studies

The main subject, as stated above, for aspiring classroom teachers is education – the systematic study of education with an emphasis on teaching, research, and didactics. The relationship of theory and practice is essential at all levels. The curriculum is thought of as a spiral with the constant interaction of theoretical and practical aspects, assisted by the knowledge of research methods and content.

This basic structure of teacher education in the Finnish universities is the same in all of them even though local adaptations may lead to some diversity. The credit points presented below are averages, and the examples are taken mainly from the University of Helsinki. Every department of teacher education has its strong points and characteristics.

The examinations, however, have the same status. In Finnish academic course programmes, each field of study or discipline consists of three hierarchical levels: general studies, fifteen credits (*approbatur*), subject-related studies, thirty-five credits (*cum laude approbatur*), and advanced studies, fifty-five credits (*laudatur*). General studies in the field of education deal with an introduction to the development of educational ideas, with their philosophical, historical, and societal aspects, and with an introduction to the methodology of research, both through quantitative and qualitative approaches. The basis of research-based thinking is imparted through general studies of education. At this level, courses in the philosophy of education, educational psychology, the sociology of education, and foundations of the instructional process (didactics) are central courses. Courses in information and communication technology are also included.

3.2. Basic Studies in Education

The main courses consist of lectures, small group discussions, and recommended speciality literature. At the end of each course, an examination helps to evaluate the results. The overall aims and contents deal with the historical development of educational and school activities. Theoretical and conceptual analyses are emphasized, and in small group discussions, some classic literature in the field is studied in order to gain a deeper understanding of the subject matter. Students are also expected to learn about the history of psychological thought and to evaluate the meaning of different models and schools. The central themes at this level are action

social control, the formation of a personal outlook, and the meaning of the teaching-studying-learning process and its controlling factors. Educational policy-making and social factors form the larger societal and curricular boundaries linked to institutional schooling.

In the field of pedagogy, students become acquainted with the basic issues of the planning of teaching. Classroom-oriented small-scale research is conducted, and certain practical observation exercises are undertaken in practice schools. Basic didactic concepts, the evaluation of didactic research and its application, and basic forms of educational practices are reproduced. In group discussions, the formulation of teaching objectives and their operation, as well as basic teaching procedures, are central topics. Reflection is concentrated on the totality of the instructional process including all the factors influencing this totality.

3.3. Intermediate Studies in Education

At this level, students acquire a deeper understanding of didactics. The central courses concentrate on the theoretical aspects of teaching, professional development, evaluation of teaching, and the psychological assessment of pupils. The module that follows consists of further studies of research methods with a course of advanced statistics as well as of qualitative and quantitative research methods. These courses are linked to courses in pedagogy and, particularly, with practice and with different styles of student teaching.

Classroom teachers are responsible for early childhood education. Therefore, the teaching of reading and writing is an important part of their study programmes. Special education and pupil counseling courses are also integrated into the programme.

Proseminar work, in which the theoretical and practical aspects of the programme are brought together, forms an integrated part of the intermediate studies of education. The students, either individually or in pairs, prepare a project and outline a research plan. The aim is to develop and practice research skills in order to acquire personal knowledge of the teaching-studying-learning process and to use it in their own practice. Students present their research plans in seminars, discuss them together, criticize, and evaluate plan relevance. The plan is achieved, and a written report is presented in the seminar. The students also learn about information and communications technology in practical teaching and in research work.

Proseminar work is closely linked to student practice and teaching. Students visit the university training school at the very start of their studies and gradually become acquainted with the pupils and teaching activities at the lower level of the comprehensive school. During their intermediate studies, students take part in what is called an orientation practice internship. They work alone or in pairs in normal schools or in field schools for about two weeks. They observe teaching as co-teachers and practice teaching themselves. They become acquainted with the contents of the local

curriculum and the assessment methods used in the schools in which they work. As a reflective tool, they assemble a portfolio. Students are asked to formulate aims to be followed during their practice periods and to record their experiences in order to analyze the results. An important part of the portfolio writing is material on the psychological assessment of pupils. Ideas and insights are also presented. A written summary of this orientation phase of the practice period is also required. The material thus generated may be utilized in research projects in the department.

The different parts of intermediate studies are also integrated through a book examination. Each student reads three to four speciality books and answers questions asked by a supervisor who assesses the answers. The reading of certain major specialized books helps students obtain a deeper theoretical insight into what they have previously learned.

3.4. Advanced Studies in Education

Advanced studies in education consist of three parts: a study project, an examination on advanced specialist literature, and practice studies. Although the intermediate and advanced studies are separated so as to appear in clearly different parts of the study programme, quite a few of the two levels of studies may be parallel and take place during the same periods.

The study project is meant to deepen and to integrate the practical and theoretical aspects of the programme. Students should become thoroughly acquainted with an issue of their own selection which is central to teaching activities. The project work is undertaken in two seminars. During the first seminar, the issues of the study are presented, the theoretical background, identified, and the bibliographic search, completed. Each participant presents a paper with a research plan outlining his or her problems and data collection methods. The papers are discussed in the seminars. During the second seminar, each student is expected to present some of the preliminary findings of his or her research. The presentations are again discussed, and the use of computer programmes and the preparation of the paper are important activities. At this stage, the students have already collected their data. Each student is able to present a version of his or her final report. The seminar groups are supervised by professors of education or by PhD-degree lecturers. As a rule, a group assistant is also present to help with practical matters, such as the formulation of a questionnaire and of interview questions, the undertaking of data processing for computer analysis, the writing of the final paper, etc.

The study project calls for the writing of an independent scientific report (about 80 to 120 pages long) – a Master's Degree thesis. A maturity essay on a topic concerning the thesis research follows the reports. The appropriate thesis and the essay are graded according to a seven-point scale.

The Master's thesis is written individually; however, data collection, the literature search, data analyses, etc., may be carried out in pairs or in groups. Students also select their themes freely, according to their respective

interests. Most of the topics deal with school problems, pupil learning, teacher's work, school-based curriculum planning, etc. Some students can join research projects being developed by their departments. Most students choose a personal theme and proceed independently in close contact with their supervisors. If possible, the theme of one's own research is chosen from personal experiences in practice teaching. Having written an acceptable Master's Degree thesis, passed an examination, and accumulated 160 credits, a student will have reached the skill level needed for him or her to enroll in doctoral studies in education.

The courses on advanced research methods are closely linked to project work. The advanced knowledge of both quantitative and qualitative methods is studied. Emphasis has been increasingly placed on the qualitative side, and most of the students apply various qualitative techniques in their project work. Qualitative content analysis, grounded theory, phenomenographic techniques, case studies, and action research have become popular with the constructive turn in the field. Quantitative methods with factor analysis, regression analysis, and other multivariates are still employed by some students. Research for a Master's Degree thesis includes knowledge of information and communications technology equipment.

For the advanced literature examination, students must study four books of current interest. These may be selected from a long list, most of the books listed thereon being well-known internationally. Participation in courses offered by professors in the department during the semester may be substituted for two of the books.

3.5. Practice Studies

Practice usually consists of successive internships from the beginning to the advanced study levels. Although the organization of practice studies is predominantly the same in different universities, such studies may be applied and adapted to use according to local conditions. Following introductory practice at the beginning of studies, there is, first, basic practice, then field school practice, and, finally, teaching practice. Distant teaching periods are also an alternative way to complete certain parts of the practice periods. Its more extensive use may, however, become common in the near future. The structure of teaching practice studies may vary considerably from university to university, up to fifteen credits on average.

During basic practice, students become acquainted with the teaching of different subjects, the basic forms of teaching, and of the evaluation of teaching and learning. Students plan, teach, and evaluate lessons in different subjects. The basic practice is completed in the university training school, and the supervising class teachers are also responsible for portfolio work. A compiled portfolio may also contain teaching material that a given student may have produced along with his or her account of practice and his or her own work evaluation. On the whole, the portfolio concentrates on an analysis of the teaching of various subjects. Students also observe the teaching of

their classmates and convey their assessments in their portfolios. The practice period includes much discussion about student teaching and the student portfolios. All practice studies are integrated with other studies, and basic practice teaching relates mainly to didactics and to courses in subject didactics.

The field school practice teaching and the final practice teaching are study periods that may be combined when the students are widening their views regarding teaching as a profession and different ways of working as a teacher. The aim is for the students to seek their own ways of working as classroom teachers. They work together with their supervising teachers and with increasing responsibility in the same class, over a relatively long period. This practice internship is often combined with field trips to particular educational institutions. Students also become acquainted with the issues of special education. During these final practice periods, they are expected to employ research-based thinking skills and to identify possible themes for their respective theses if they do not continue their Proseminar work. The whole study project is linked to these practice studies.

3.6. Subject Didactics Studies

Subject didactic studies include multidisciplinary studies in the subjects taught at the comprehensive school level. These studies make up thirty-five credits. The intended goal is for the students to acquire sufficient skills in the given subjects and the related basic didactic skills so as to be able to work as classroom teachers. Studies of the mother tongue (Finnish) and of mathematics are compulsory for all students. Skills and art subjects (arts, crafts including textile crafts and technical work, music, and physical education) are grouped into compulsory and optional courses. The so-called introductory subjects (history, natural sciences, biology, geography, religion, and ethics) are also divided into compulsory and optional sections. The emphasis in subject didactics studies is placed on learning to teach the subject. In principle, classroom teachers must be able to teach all the subjects that are included in the comprehensive school curriculum. This requirement still holds in small schools, particularly in the countryside. In larger schools, the teachers may specialize in a few subjects and thus exploit their strengths. Subject didactic studies are partly organized in departments of teacher education, and partly in the subject departments in other faculties.

3.7. Minor Subject Studies

There are two ways to study the minor subjects. Students can either choose two subjects or modules, each one of fifteen credits, or one thirty-five-credit module. In addition to the traditional subjects, some compilations or integrated subject modules are available, e.g., early years education, the arts, the didactics of physical education, music, crafts, as well as information and media education, etc.

3.8. *Language and Communication Studies*

Language and communication studies are basically divided into courses in the mother tongue and in foreign languages. Mother tongue courses include verbal communication, Finnish speech and culture, classroom communication, and didactics of speech education. Written communication courses concern the acquisition of the skills needed to produce academic reports.

The goal of the foreign language studies is to impart to students the capacity to read foreign literature. Many textbooks are in English as are most of the scientific articles in the international journals that are needed for doing research, especially in undertaking the study project. Students may also choose to read and study German. Most students, today, however, prefer English. The study of French and Spanish is also possible.

A special topic is the study of the second national language, Swedish. For Swedish-speaking students, this language is obviously Finnish. The second national language is a compulsory subject in the comprehensive school curriculum. In real life, the second national language is actually a foreign language, for nearly all students, despite the fact that it has a formal status in Finnish society.

3.9. *Optional Studies*

The programme includes some optional studies (worth about five credits). The student may choose courses from other departments of the faculty of education or from programmes in the other faculties. Although the degree requires 160 credits, it is quite common for students to accumulate additional ones according to their own interests. These extra courses may be included on the teacher's certificate as additional studies.

3.10. *Concluding Remarks Regarding the Education and Training of Classroom Teachers*

The award of a Master's degree with 160 credits in the classroom teacher education programme certifies the holder as being qualified to work as a teacher in the Finnish school system. The common core of a teacher's pedagogical studies is included in the educational studies that the certificate holders have completed. Moreover, the Nordic countries have established a mutual convention whereby teacher education examinations are valid in all the Nordic countries, with some minor additional required studies that vary according to national and local circumstances. All classroom teachers may also continue their studies in the doctoral studies programmes offered by their faculties.

4. THE EDUCATION AND TRAINING OF SUBJECT TEACHERS

Subject teachers are responsible for grades 7-9 (pupils aged 12 to 15) in comprehensive schools and for grade 10-12 (pupils aged 16 to 18) in upper

secondary school. The programme consists of four to five study years in the main subject and, usually, the study of one or two other subjects. During the second year of university studies, students decide whether or not to pursue a teaching career. Those who choose to become teachers begin their studies in education, usually, during their third year of university studies. Those students who decide to become teachers after having completed their Master's degrees pursue a second line of studies. Teacher's pedagogical studies may also be taken as additional studies in the department of teacher education.

The level of studies in teacher education is thus similar in both categories, leading to a Master's degree, but the main subject varies. For a classroom teacher, it is mostly education. It might also be educational psychology. For subject teachers, the main subject studied is the subject to be taught. For this subject, advanced studies (at least fifty-five credits) are required. In addition, thirty-five credits are required in another school subject. Many students also prepare a third subject for examination. The structure of the examination for a subject will vary depending upon the type of teaching post for which the given student is competing.

A subject teacher's pedagogical studies include thirty-five credits in education that run in parallel to their subject studies (e.g., mathematics and chemistry, history, etc.). Generally, the department of teacher education organizes courses in pedagogical studies in collaboration with the departments offering instruction in the various subjects in other faculties. There are, however, some exceptions. Teacher education for home economics, textile and technological crafts, special education, educational guidance, and, to some extent, for music is also organized in the faculties of education. In this way, the examination after the accumulation of 160 credits is taken in the subject faculty. Teacher education for music, arts, and physical education usually takes place in separate departments or institutes.

The structure of pedagogical studies for subject teachers varies among different universities, as each one may have its own profile and local ways of doing things. At the University of Helsinki, the degree structure is as follows:

Table 2. The degree structure for subject teachers at the University of Helsinki

Introductory studies to teaching	2 credits
Philosophical and historical bases of teaching and learning	9 credits
Theoretical and practical basis of subject didactics	15 credits
Research methodology and research on subject didactics	7 credits
Social basis of education	2 credits
TOTAL = A subject teacher's pedagogical studies	35 credits

4.1. Introductory Studies to Teaching

Introductory studies to teaching are divided into two parts: an introduction to general didactics and an introduction to subject didactics. Both sets of courses consist of lessons, group work, discussions, and recommended

speciality literature. The studies in subject didactics are organized according to the subjects that the students are studying. For studies in subject didactics, the departments of teacher education employ professors of research in subject didactics. However, not each and every school subject is represented. Related subjects are usually combined. The University of Helsinki employs a research professor in the didactics of the mother tongue, mathematics (mathematics, physics, chemistry, and information technology), foreign languages, biology and geography, social studies, and religion and ethics. The didactics of home economics and textile crafts are taught by another research professor in the respective subject didactics. The second group of subjects is linked to the neighbouring department in the same faculty. In addition to professors, several lecturers are responsible for subject didactics. Expertise in subject didactics may also be found in the respective subject departments.

4.2. Courses in the Philosophical and Historical Bases of Teaching and Learning

These courses belong to basic studies in education. They are offered to all students in the education faculties. The main topics covered are the psychological and social foundations of education, the basics of special education, the philosophical and historical foundations of education, interaction skills, and the didactics of adult education. Because of the great number of students participating in these studies, many courses may be taken by attending lectures or by reading the compulsory literature. Courses on interaction skills and adult education are, however, structured for small groups and include exercises and discussions.

4.3. Theoretical and Practical Bases of Subject Didactics

This module consists of studies in subject didactics, portfolio work, and practice. Questions of the curriculum planning for a subject the students are going to teach in a school, international trends in the development of the didactics of a special subject, and the position of the subject and its relation to other subjects are central topics in these studies. Through portfolio work, students learn how to reflect on their own development and progress through the programme. Setting aims and goals for studies and evaluating achievement are expected to help student teachers in the future planning of studies. The lecturers and the teachers in the university training school supervise the portfolio work that is also graded at the completion of the course.

Practice studies (about 12 credits) concentrate on student teaching and include courses on the planning and the evaluation of teaching. Practice is divided into basic practice and advanced practice. In the basic practice part, students become equally acquainted with teaching in training schools and in field schools. They follow life in these schools and gradually participate in their activities. In addition to participation in lessons, student teaching plays

an important role in all professional duties linked to it. Special attention is paid to evaluation skills and reflection. Reflection on teaching is emphasized, the idea being that student teachers be able to link the various study periods to their professional practice. The role of supervision is central, and the responsibilities in this domain become gradually more extensive so as to include all possible aspects of a teacher's work. During the advanced practice stage, the student teacher becomes increasingly independent, and the discussions with supervisors are expected to become deep and detailed. Both the university training schools and certain field schools participate in practice teaching studies.

4.4. Research Methodology and Research on Subject Didactics

Most students will have already been introduced to research methods in their own subject studies. There they will have learned and will also have applied, to some degree, several of the methods used in doing research in their subjects. Student teachers in the natural sciences will have knowledge about quantitative methods. The same will be true of students in other subjects according to their subject studies. For this reason, students will be able to choose those methods courses that they need in order to obtain an all-around understanding of educational research. The empirical qualitative methods, in particular, are not well known among the subject student teachers. In addition, such methods as qualitative content analyses with various variations, and such research procedures as case studies and action research, triangulation, and philosophical background building are central in enabling student teachers to become good researchers in respective fields. In practice, the students must write their proseminar theses in a completely different way from that in which they write their Master's theses in their main subjects.

Research on subject didactics is conducted in proseminar groups. These groups are organized according to the principal subjects of students. Over a period of two semesters, students work in groups, present their research plans, assess the plans of other students, participate in seminar discussions, have discussions with their research supervisors, and, finally, present a paper on a chosen problem. Most of the proseminar theses are empirical by nature and are undertaken with certain qualitative research methods. The supervisors are mostly professors of research on subject didactics.

The goal of research-based teacher education for future subject teachers is to impart reflective teaching which will help the new teachers solve problems with which they may be faced in practice, through autonomous thinking and logical argumentation. The reading of professional journals and of research reports of current interest is recommended. The conducting of professional research is not within the reach of most teachers, but the use of research-based argumentation in everyday practice is.

4.5. Concluding Remarks Regarding the Education and Training of Subject Teachers

As a rule, a subject teacher's degree corresponds to 180 credits, given that most subject teachers must specialize in two or sometimes a large number of subjects. The number depends on the types of teaching positions they envision taking up in schools. After completing the subject teacher's education and training programme, they may further their education by enrolling in advanced studies in education – by pursuing a doctoral degree in education (PhD) in particular.

5. THE EDUCATION AND TRAINING OF KINDERGARTEN TEACHERS

After the kindergarten teacher studies programme was transferred to the universities in 1995, it consisted of an earned Bachelor's degree of 120 credits. The study programme is planned in close liaison with classroom teacher studies, and many basic courses are the same. The result, in practice, is that the intermediate studies in education with an emphasis on early education (35 credits) make it possible for kindergarten teachers to continue their studies for a Master's degree in education as the main subject. A module that is parallel to general educational studies is that of multi-field early education studies (35 credits). During practice, students are also engaged in proseminar work, particularly the writing of a thesis. The general structure of studies for kindergarten teachers may be presented as follows:

Table 3. General structure of a kindergarten teacher studies programme

Educational studies, emphasis on early education	35 credits
Multi-field early education studies	35 credits
Psychological, societal, and practice studies	27 credits
Minor subject studies	15 credits
Language and communication studies	8 credits
TOTAL = Bachelor's Degree	120 credits

After completing their studies, kindergarten teachers may continue studying for a Master's degree. Advanced studies in education would then be required with a specialization in early education. By enrolling in advanced studies in education, kindergarten teachers may continue in doctoral (PhD) studies. If they wish to work as classroom teachers, kindergarten teachers must complement their pedagogical studies for kindergarten teachers with pedagogical studies for classroom teachers.

6. SOME REMARKS ABOUT TEACHER TRAINING FOR VOCATIONAL AND ADULT EDUCATION

The education and training of vocational teachers is organized in vocational teacher education colleges, which are linked to polytechnic institutions. Study programmes vary by field; however, the common core is the study of

pedagogy. If vocational teachers want to work as classroom teachers or subject teachers in a comprehensive school, they must complete their subject studies. Their pedagogical studies are recognized.

The instruction of adult education teachers generally takes place within various subject teacher education programmes. The teacher's pedagogical studies are, nevertheless, at the core of the competencies to be gained. Those who intend to teach in an adult education institute may take up pedagogical studies in their faculty years in a subject teacher programme. In the field of education, there are many special and local possibilities for vocational and adult education teachers, according to prior education and the work experience of candidates.

7. IN-SERVICE TEACHER EDUCATION

Many kinds of in-service teacher education are offered by universities and various institutes in the field. Teachers' trade unions as well as many subject teachers' associations regularly organize such courses. Systematic in-service teacher education, however, does not exist. Teachers in comprehensive and upper secondary schools have some yearly mandatory in-service training days, but no long-term courses available for all teachers exist. Traditionally, teachers have been eager to participate, on a volunteer basis, in courses offered by summer universities and the Open University. Regular in-service teacher education in the Finnish teacher education system is badly needed.

The offerings for in-service teacher education in continuing education institutes is rich, and there are many participants in the courses; the problem, however, is that only a small part of the teaching staff can participate in them. A special examination called the Professional Development (PD) Examination (40 credits) has also been available for quite some time. It is designed for teachers wishing to heighten their professional competencies. It has not succeeded in becoming officially established, and its status has remained vague.

In-service teacher education has to be planned in the near future. Finding the funds for it is a dilemma. On the other hand, some universities have been offering study programmes designed for school principals, and the future of these programmes seems promising.

Life long learning is an everyday practice in any teacher's work. The majority of Finnish teachers have been freely studying and developing their professional skills, being highly motivated to do so. The selection of courses has taken place according to market principles, a reality that does have its negative side. The need for in-service teacher training is a major problem for the local authorities. A solution, perhaps at national level, is required.

8. CONCLUSIONS

8.1. *Current Trends in Finnish Teacher Education*

THE NEED FOR INCREASED TEACHER MOBILITY

There is an obvious interest in increasing the mobility of teachers within the school system. The idea is that, if studies in education are identical, at least with respect to the amount of credits, then teachers should be able to move within the system as a function of their insights into the subject matter taught. Pedagogical studies are organized according to this principle. Classroom teachers, subject teachers, most vocational teachers, and adult education teachers have a common core in their course programme. The number of credits is the same (thirty-five). The content of every programme may, however, vary according to the age of the pupils and the subject base. Such a flexible system guarantees mobility from one teacher's position to another.

Although pedagogical studies for teachers are common, they are not sufficient. Expertise in the subject taught is also required. Moving from one position to another is, on the other hand, much easier than before since pedagogical studies are always recognized.

EXTENDED TEACHER COMPETENCIES

Changing positions within a comprehensive school has been easier than it was in the past. Generally speaking, classroom teachers teach all subjects in grades 1 to 6; subject teachers teach in grades 7 to 9. If classroom teachers want to teach higher level classes, they can become competent in a subject by enrolling in intermediate studies (*cum laude approbatur*) in the subject (thirty-five credits). Classroom teachers may keep their teaching positions but also pursue further studies in the very subjects in which they have acquired extended competencies. A classroom teacher may, for instance, have pursued intermediate studies in mathematics. It is then possible for him or her to hold a classroom teacher's position while taking additional courses in higher mathematics. The salary earned will be correspondingly higher. In practice, this kind of extended competency is easily realizable because during minor studies, a student teacher may choose only one subject and thus take the intermediate studies in it.

Changing positions is also possible for subject teachers. Specific subject studies in the classroom teacher programme include pedagogical studies (thirty-five credits). These multidisciplinary studies are needed for a position in the lower stage. The problem is that these studies are not financially affordable during the normal course of studies. They become affordable in the institutes of continuing education when special funding is provided. However, their being made available is uncommon, the expenses involved being high. The situation is also different in practice. If the subject teachers want to change positions, they must move entirely to the lower stage and assume a position as a classroom teacher. It is still possible for them to teach

certain classes at the upper level, if they wish to do so. If subject teachers only want to teach some subjects in the lower stage without taking a position as a full-time classroom teacher, it is always possible to do so, especially in grades 5 to 6, if the opportunity arises.

DOCTORAL STUDIES FOR TEACHERS

Finnish teachers who are holders of a Master's degree have the right to further their studies and to take a PhD examination. Those who wish to continue their studies in education can do so in the faculties of education, either at the department of teacher education or at the department of education. Doctoral studies consist of 160 credits; 20 credits for the main subject and 20 credits for a minor subject. These additional studies must be at advanced level. The remainder of the credits are earned by writing a doctoral dissertation.

A personal study programme is designed. The programme will take about four to five years to complete, depending on the concentration of studies. Funding is a problem, for doctoral student positions are few and scholarships may be difficult to obtain. There are, nevertheless, many applicants every semester. The possible educational fields are general education, educational psychology, special education, and adult education. Recently, specialization in themes on early education or in certain subject didactics have become possible.

For classroom teachers, doctoral studies in education are easy to begin, for the candidates will already hold a Master's Degree in education and will thus be continuing in the field. A problem may arise from a need for funding. However, it is possible for such teachers to study while teaching.

In the case of subject teachers, the situation is different. If they want to continue their studies in education, they must complete their education studies at the advanced level (about 20 credits). After completion, they need to change their main subject to an education subject and thus be eligible to write their dissertations in education. Minor studies, in any case, have already been completed as part of the Master's Degree programmes. The earlier main subject becomes the minor in doctoral studies.

The numbers of doctoral students have been reasonable, and every university has a doctoral studies programme of its own, a graduate school at faculty level. At national level, graduate schools exist that are funded by the Finnish Academy. The field of education has a graduate school of its own. Several thematic divisions are represented.

DECENTRALIZATION OF PLANNING – CENTRALIZATION OF EVALUATION

The trend in curricular development has been towards decentralization. The last move in this respect in Finland was the introduction of school-developed curricula. Thus, the National Board of Education only sets the framework of the curriculum, leaving room for communities and individual schools to make their own choices. Today, practically every school has developed its

own curriculum with its special alternatives and distinctive features. Upper secondary schools, in particular, have taken advantage of this practice and have tried to build appealing programme profiles in order to attract good-quality pupils. So far, the comprehensive schools have not followed this trend; however, even here some profiling occurs.

At first sight, it might appear that individual schools would receive even more opportunities to act on their own, as compared to the earlier situation when curricula were identical at community level. But a negative side has appeared. Decentralization is occurring simultaneously with the centralization of evaluation. At the moment, national evaluation systems are being developed for different subjects and types of schools. The evaluation of student results is an effective tool for the controlling and steering of education in schools, one that is probably more effective than curriculum planning. To steer towards goals is possible, but to steer with goals is difficult. Thus, it will be difficult to increase the opportunities for teachers to act within the school-developed curricula, if evaluation is to be nationally developed.

Furthermore, when school-developed curricula are introduced, they will most likely limit the degree of freedom of the individual teacher, as compared with the situation of the national curriculum. The school will become the operational unit, while earlier, this role was that of the teacher. It is to be feared that the role of teachers will diminish if the school becomes the unit responsible for teaching.

Writing the curriculum for their own schools is, nevertheless, a challenge for the teachers concerned. In principle, however, teachers have always done this kind of work. Planning one's own teaching is ostensibly one of the basic skills of a teacher. School-based curriculum planning also requires external co-operation on the part of parents and pupils. Along with independent and autonomous decision-making, other teachers in the school become close partners, and collaboration becomes an everyday practice. Curriculum planning, a long process, gradually becomes continuous. This kind of work may also be considered a kind of in-service teacher education. When teachers act as partners, the adoption of new working principles and methods becomes more feasible than before. Peer review/coaching may be combined with curriculum planning, and the process of curriculum planning becomes a process of school development.

8.2. International Assessment of Finnish Teacher Education

In the 1990s, the Ministry of Education of Finland conducted two large teacher education evaluation projects with international experts (Buchberger *et al.*, 1994; Jussila and Saari, 2000). In addition, various evaluation projects were conducted in various subfields of teacher education. The results were not unexpected, and the ensuing recommendations soon led to various reforms. Some of the problems seem to be long lasting and depend for their solutions on the solution of more general problems in society as a whole.

In general, more co-operation is suggested. First, more contacts are required within the faculty of education and among the departments in the faculty. A greater part of both the classroom teacher education programme and the subject teacher education programme may be organized jointly. A practical problem is the large numbers of students that can easily lead to unsatisfactory arrangements. This kind of co-operation, however, is becoming increasingly common. Second, closer co-operation is needed among the faculties of education and the subject departments. This need has frequently been the object of attention. Lack of co-operation has been caused by unresolved practical problems, competition for resources, and differences of opinion regarding the status of one's own discipline (*cf.* Jussila and Saari, 2000, p. 23). Recommendations have been made to establish and strengthen co-operative bodies. In the area of research, co-operation could be increased in the field of project studies, and subject teachers might also choose subject didactics themes for their Masters' theses, while professors on both sides could act as supervisors in such projects. The selection of students for teacher education studies has also been the object of experimentation that has had promising results.

Extensive teacher education is an idea for reform that has made successful progress. Opportunities to choose among various posts in comprehensive schools are already at work. The same might be said about the relations between secondary education and adult education.

Finnish schools are becoming increasingly multicultural. In addition to the national minorities of Swedish-speaking people and the Sami (Lapp) population, there are increasing numbers of immigrants. Consequently, multicultural aspects of education should be emphasized in theory and practice. Understanding different cultures is an everyday requirement in Finnish schools.

8.3. Information Technology and Media Education

All students are expected to have acquired basic skills in information technology when starting their university studies. They are expected to be competent in word processing and e-mail programmes. In practice, every student is given an e-mail address and a great deal of information. Discussions regarding the teacher education programme take place by e-mail. The teaching of information technology applications in the instructional process is integrated into practically all courses. The courses on research methods, in particular, concentrate on the application of various analytical programmes.

In some universities, students may also choose the didactics of information technology as their minor subject (fifteen credits). In all courses and at all levels, information technology and its didactics are closely linked to research. Distance education plays an important role in these activities, and both ordinary teaching and teacher education take place with the help of

distance education (Meisalo, 1996). Most likely, in the near future, the role and importance of distance education will increase.

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