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The Bologna Process and the Teacher Education Curriculum

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1. What does the Bologna process mean in teacher education?

Teacher education has been organised in many diverse ways in European countries. The length and quality of programs vary, and institutional contexts can be very different when comparing them within and between countries. The status of teachers and teacher education can also be very different in Europe. A common problem is the fact that the attractiveness of the teaching profession is very low, and teachers are not very committed to their profession. They want to move to better and more challenging careers. Finland is an exception to this as the teaching profession is among the most popular higher education options.

The situation today is very contradictory in Europe. The value of education and teachers are recognised in all knowledge-based societies, but the realities of schools and teacher education are often very far from the ideals of official documents and speeches. Most European countries face the situation that they will need new teachers after a huge retirement boom. More than 1 million new teachers need be recruited in primary and secondary education in order to meet replacement needs during the period 2000-2015 (Commission, 2004). At the same time, education has become extremely important to individuals' well-being as well as the welfare of society. Without high quality teachers and schools, young people are in danger of being excluded. The real challenge is how to make the teaching profession a career that has a future.

The Bologna process can open new perspectives on teacher education. It can unify huge varieties of different programs by setting common quality criteria. The European commission invited a focus group to draft these principles in 2004 (Memorandum, 2005), and based on those recommendations and other teacher education working groups' work, the European commission published the Communication "Improving the Quality of Teacher Education" in August 2007 (Commission, 2007). According to this document, teaching is a **well-qualified** profession (p. 12): "All teachers are graduates from higher education institutions". The recommendations reinforce the following things (pp. 14-15):

> "To ensure that there is adequate capacity within Higher Education to provide for the quantity and quality of Teacher Education required, and to promote the professionalisation of teaching, teacher education programmes should be available in the Master and Doctorate (as well as the Bachelor) cycles of higher education."

The Bologna process can unify the very diverse field of teacher education by making it more transparent with common structures and credit systems. However, even more important than structural issues is the quality of teacher education. Teacher education is seen as a part of the European Higher Education Area, and it includes a demand that the status of teacher education should be equivalent to other sectors of higher education. This entails that it meets high-level academic standards at all higher education components: ***research, teaching and interaction with society.*** New knowledge and practices should be produced in all these areas. These three components are not separate and have many overlapping elements. If teacher education has deficiencies in some of these components, it has very difficult to fulfil the requirements that are related to the European Higher Education Area.

To fulfill the higher education mission for all three components, a necessary prerequisite is that teacher education rests on research-based foundations with the following basic conditions:

- Teachers need a profound knowledge of the most recent advances of research in the subjects they teach. In addition, they need to be familiar with the latest research on how something can be taught and learnt. Interdisciplinary research on subject content knowledge and pedagogical content knowledge provides the foundation for developing teaching methods that can be adapted to suit different learners.

- Teacher education in itself should also be an object of study and research. This research should provide knowledge about the effectiveness and quality of teacher education implemented by various means and in different cultural contexts.

- The aim is that teachers internalise a research-orientated attitude towards their work. This means that teachers learn to take an analytical and open-minded approach to their work, that they draw conclusions based on their observations and experiences, and that they develop their teaching and learning environments in a systematic way.

Why are these prerequisites important? I will reflect and elaborate on these arguments in the following analysis and give reasons for why the teacher education curriculum should have research-based as well as research-informed orientation. I use these two concepts as complementary to each other. A research-based orientation means that teacher education is grounded on continuous research-based inquiry in academic disciplines, which gives a basis for the improvement of the curriculum in teacher education. Research-informed means that research-based knowledge is used in teaching when selecting materials and methods for different learners, both in teacher education and later in schools. Teachers need critical scientific literacy. Prospective teachers learn how knowledge is constructed, and they know what different sources of evidence they need in their work.

When constructing a curriculum for teacher education, the Bologna process can provide important structural outlines and sketch the main highlights for all three degree cycles. But as important or even more important is that teacher education has philosophical and conceptual grounds on which the curriculum is based. The curriculum cannot be only a list of the aims of the Bologna process. The teacher education curriculum must be grounded on concepts of the teaching profession and knowledge creation. The demands of the teaching profession are high and set specific requirements for the quality of the teacher education curriculum.

In the following chapters, teacher education is elaborated from the viewpoints of the teaching profession's function in society, knowledge creation in knowledge-based societies and teachers' capacity to work as reflective practitioners promoting evidence-based approach in their work.

2. The core of the teaching profession is in its moral nature

Each society has identified certain important task areas that require special competence. A society gives these tasks to a qualified group of individuals, i.e. to professionals. The members of the profession are responsible for the duties of the task area and the further development of the profession. The main criteria of the profession are that its representatives have a high level, usually a tertiary level, of education, and it has a moral code that they must fulfil in exercising their profession. Because of their high responsibilities and special competences, the representatives of the profession also have the right and obligation to develop their task area in society.

While the Lisbon strategy highlights education and teachers' work, the main emphasis is on the economy and competitiveness. We have to keep in mind that these cannot be the only bases for teacher education. Economic success can be the consequence of high quality education, and very often it does have this outcome because of people's competences. However, we must recall Immanuel Kant's ideas about education (Kant, 1923). A human being is never an instrument or tool for some purposes to other human beings, he or she is an absolute value as him/herself. This means that we cannot ground our education only on economic purposes. We have to respect children's and other learners' growth and support their development even though it does not result in any direct economic success. This means that we must provide equal opportunities to all children and assure that they really can use these opportunities.

Nimrod Aloni (2002) identifies the principles of humanistic education that he sees as the most important basis of teachers' work. The aim of education is to help people to become capable of in three fundamental domains of life:

- as individuals who realise and develop their potential,
- as involved and responsible citizens, and
- as human beings who enrich and perfect themselves through active engagement with the collective achievements of human culture.

As teachers are key actors in enabling their students to reach their full human potential, they exercise a strong influence on communities and societies (e.g. Aloni, 2002, pp. 176-183). Teachers are representatives of an ethical profession and have an important role in fulfilling the promises of democracy, social justice and human rights. Therefore, according to Carr and Hartnett (1996), teacher development should be based on the following premise:

> Teacher development must be connected with more general social and political theories about such issues as democracy, social justice, equality and legitimacy. It has to demonstrate the implications of a principled view of democracy not just for educational systems but also for the way in which educational institutions should be run. It also has to relate these ideas to curricula, pedagogy and assessment.

Teachers need cultural knowledge and intercultural understanding in their profession. They also need to understand the factors that create social cohesion and exclusion in a society and how the teaching profession plays an integral part in these processes. They have to be aware of opportunities and ways to work together with other partners and stakeholders in formal and non-formal educational contexts in order to provide learning opportunities to learners at various age levels. They also need to be aware of

value contradictions in society and educational institutions, and they should be prepared to deal with moral and value-based issues.

There has been much discussion on what is the real core and nature of the teaching profession. Is it an autonomous expertise profession, or is it more a craft that does not have a very independent status? The latter means that teachers are more or less political tools and tightly connected with actual societal aims. The former sets teachers' work with other professions which have high responsibility and also the freedom to develop the profession.

John Smyth (1995, p.1) has described the manifestations of a low and unprofessional status for teachers. Common to each of them is the pressure to see the teacher as an unautonomous instrument of political ends. Typical features is marginalizing teachers and treating them implicitly, as if they cannot be trusted and are in need of surveillance through the use of "performance indicators".

The other conception of the teaching profession wants to enhance the teachers' status in a society stressing new professionalism (e.g. Hargreaves, A, 1994; Hargreaves, D.H., 1994; 2000). This approach considers teachers as change agents in society and emphasises that teachers' work is interactive cooperation with other professionals and stakeholders. Teaching is seen as a genuine profession that should have a recognised status in society. In the critical theory, teachers are seen as part of society and are encouraged to assume an emancipator role in their profession (Carr & Kemmis, 1986; Liston & Zeichner, 1987). To grow as professionals, teachers need to develop a critical and participatory culture in the profession.

If teachers are educated in a Higher Education Area, they are representatives of education, with academic competence. As public intellectuals, teachers have the right and the obligation to articulate the educational needs and challenges of the society they serve. They also have to be active in public debates and decisions affecting the development of schools and education. There must be an interaction between national and local authorities and teachers, either individually or collectively. As professionals, teachers cannot be only implementers of decisions, but also partners in their development.

The teacher education curriculum should provide teachers with studies that guide them to considering themselves as accountable professional actors, who have rights and obligations to contribute to the

development of education. Their task is to facilitate different learners to learn better. Teachers have a strong societal function, and this perspective should be integrated into the TE curricula.

3. From knowledge reception to knowledge producing - promoting active and collaborative learning

The concept of knowledge has changed from earlier static, transmitted contents to more dynamic construction processes. We now understand knowledge to be ever renewable and to be construed jointly together with other learners. Teachers need a deep understanding of the academic contents they teach, but they also need the understanding of how different learners can learn to learn the knowledge of different disciplines, often also from a multidisciplinary perspective.

Teachers need metaknowledge of learning processes (e.g. Niemi, 2002; Winne, 1996) they have to know what learning is from different theoretical viewpoints and how learners can be supported to find strategies to handle their own learning and become active learners. They also need metaknowledge of collaborative learning processes. This involves knowing how knowledge can be construed in cooperation with others and knowing what the social components of learning processes are.

The latest research on learning considers learning as an active individual process, but there is increasing evidence that learning is also a process based on sharing and participation with different partners in a community (Slavin, 1997; Scardamalia & Bereiter, 2002; Nonaka & Takeuchi, 1995). Knowledge is not an individual possession, but socially shared, and emerges from participation in sociocultural activities. Learning also requires social skills.

Teachers have the important task of opening pathways to different learners into cultural achievements and richness. Teachers have to be familiar with the most recent knowledge and research about the subject matter. They also have to know how the subject matter can be transformed in relevant ways to benefit different learners and how it can help learners create foundations on which they can build lifelong learning. This means that teachers need the latest research results and pedagogical knowledge. They should have a thorough understanding of human growth and development, and they need knowledge of the methods and strategies that can be used to teach different learners. In addition, teachers have to be familiar with the curricula and learning environments in educational institutions.

They also have to know about learning in non-formal educational settings, such as in open learning and labour market contexts. Teachers should have the latest knowledge of educational technology, and they need to be able to apply ICT in their work.

4. Generic skills or focused professionalism?

As professionals, teachers need many practical skills that will enable them to mediate academic subject knowledge, values and attitudes to individuals or groups. This kind of knowledge can be described as procedural knowledge. The academic contents and practical skills must not be seen as separate or exclusive; they are always complementary in the teaching profession.

There are tensions in many countries towards how teaching practice is integrated and implemented in teacher education programs. Teachers need the confidence to work with learners in real situations, and student teachers often ask for very practical advice for their teaching practice. The recent research of expertise has revealed that there are different phases in the development into expertise (Dreyfys & Dreyfus 1986). Student teachers also need different kinds of support in different phases of their development.

Many researchers have also stressed that expertise is the integration of different kinds of knowledge. Davenport and Prusak (1998) have found that an expert needs codified knowledge that is well-organised and literally transferable. In addition, the development of expertise needs role models, observing experts, tacit knowledge, a social network and even good stories of successful practice. Davenport and Prusak (1998) point out that experts' knowledge is deep personal knowledge which has been tested in practical situations

According to Schön (1991), experts always face problems in situations that are unique and consist of uncertainties, value conflicts and other tensions because of complexity. They work in complex situations and therefore need various kinds of evidence. This sets special requirements on their knowledge base. Experts' knowledge is rational knowledge, but this is not sufficient. They also need principles, rules and models, and to know how to apply scientific theories and techniques to complex problems.

Working as an expert means that the expert has the knowledge and practical abilities to work in complex situations. In addition, they need confidence in two complementary ways (Isopahkala-Brunet, 2004). They need the self-confidence to carry out their expertise in demanding unique situations. They also need to implement their expertise in such a way that their customers, stakeholders and colleagues trust them. In the teaching profession this means that students and parents and even society can trust teachers' expertise.

Even though teachers need many specific skills, they also need a comprehensive idea or vision of what their work as an educational expert means. Teachers need to understand the complexity of educational processes and face evidence that is coming from different sources. They need research-based and research-informed knowledge, but they also need to be open to acquiring and assessing local evidence. Scardamalia and Bereiter (2003) have examined the behaviour of experts. The feature that really distinguishes experts from others is their approach to new problems. The pattern recognition and learned procedures that lead to intuitive problem solving are only the beginning. The expert invests in what Bereiter and Scardamalia call progressive problem solving, that is, tackling problems. That increases expertise rather than reducing problems to previously learned routines.

5. Promoting research- and evidence-based practice

In knowledge-based societies, research and evidence-based policy and practice have became an urgent requirement. Decisions and development should be based on the best available knowledge. The OECD and the European Union have promoted this approach in different sectors of society, calling different disciplines to give their contribution. The European Commission (Commission, 2007; Niemi, 2007) has set an expert group to prepare a communication from the European Commission on the relationship between research, policy and practice in the field of education and training.

According to the communiqué, there are several challenges in education and training. Because of the complexity of educational phenomena, evidence is coming from different sources. Evidence can be based on research reports and studies or thematic reviews of research. We can also have evidence through national and local evaluations and other systematic data gatherings. Evidence can also grow from the observations and experiences of experts and practitioners in their own fields (e.g. Issitt & Spence, 2005). Hammersley (2004) argues that this evidence does not necessarily emerge from systematic investigation but can still be important.

Teachers' competence must include a readiness to analyse the situation like a researcher and to make conclusions and decisions to act or to change something in a given situation. This means that the teacher needs a critical mind and the ability to reflect. Reflection can be in action or on action. Because many decisions have to be done very fast, in action, teachers must have a deep internalised body of knowledge and a moral code which build the grounds for changing situations.

Niemi (2007) has analysed conditions for promoting evidence-based practice in education and training. No information source or action in itself can promote evidence-based action. The main factors can be summarised by the following components: (1) research competence and research capacity building starting at the pre-service level of teacher education, (2) working conditions which promote evidence-based practice, (3) the quality of evidence and research, (4) effective delivery of and easy access to evidence, (5) an evaluation culture, which gives space for contextual factors and practitioners' knowledge, and (6) collaborative professional networking.

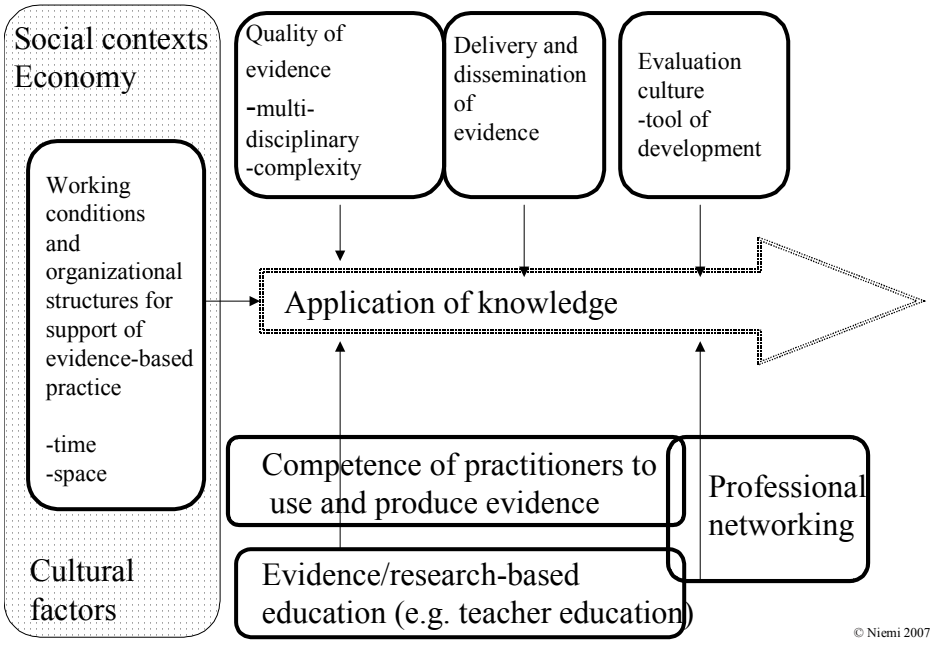

Figure 1. Conditions of the evidence-based orientation in practitioners' work

When promoting evidence-based practice, it is not enough that teachers are provided with information about research, offering it as a top-down process. They need the competence to acquire different

kinds of evidence which informs their practice and decisions. It seems that without research, methodological studies and experiences of research processes, it is very difficult to internalise an evidence-based orientation.

It is not easy to form a common picture of how teacher education programs coach prospective teachers to use research and evidence-based approaches in their practice. Eurydice gives information. Eurydice has recently done a survey (2007) which gave more information about 20 national units. In several countries, the research component is established centrally as a part of the initial teacher education.

If the teaching profession aims to have a high professional status, teacher education must prepare teachers to work using an evidence-based approach in their work. This is possible only if they have the competence to use different kinds of evidence, including the evidence that research provides. They must have also the capacity to carry out action research in their classrooms and schools. The pre-service teacher education curriculum provides a foundation, but without research-oriented in-service training, teachers' potentiality to renew and develop their own profession will stagnate. There are good examples of how in-service training has supported teachers' work in local schools, and these activities are tightly connected with research projects (Bokro 2004; Husso & Korpinen & Asunta 2006).

6. Research-based teacher education – the case of Finnish teacher education

The Bologna process in Finland

Finland has reformed the degree structure according to the Bologna process. The two-cycle degree (3 + 2) system was adopted by Finnish universities in August 2005. The doctoral degrees are four years as full-time studies and in educational sciences consist of 60-80 ECTS as course work supporting and very often closely integrated with the doctoral thesis. The Bologna process has also been implemented in the field of educational sciences and teacher education (Jakku-Sihvonen & Niemi, 2006). The process was seen more as a phase of a joint national analysis and quality process of the teacher education curriculum than as a fundamental structural change. The implementation was very interactive and was a joint process with autonomous universities and the Ministry of Education. Many national networks and projects worked together since 2003 to develop and implement the new degree programmes in Finland. All teacher education curricula were analysed using academic curriculum core analysis methods. A rather good consensus has also been reached concerning the core contents of the curriculum, although

each university has the autonomy to develop its own curriculum based on its current research profile. The project has its own websites at http://www.helsinki.fi/vokke/english.htm (in English).

Research-based teacher education

Finland is an example of research-based teacher education. The responsibility for providing education for prospective teachers at primary and secondary schools rests on the universities. In 1979, the basic qualification for secondary and elementary school teachers was defined as a Master's degree in the form of programmes requiring four to five years to complete. The purpose of this modification was to unify the core aspects of elementary and secondary school education, and to develop an academically high standard of education for prospective teachers. Teacher education for the secondary school level was also reformed by expanding the scope of pedagogical studies. (Niemi & Jakku-Sihvonen, 2006.)

The Finnish education system (see Appendix 1) has received attention from all over the world because it came out on top in the first two PISA surveys. Finnish 15-year-olds have been number one in terms of skills in mathematics, scientific knowledge, the reading of literature and problem solving, and only a very few students fall within the lowest PISA categories. Likewise, differences between schools are small. A major reason for high learning outcomes can be seen as a result of a purposeful educational policy and a high standard of teachers. According to researchers (Välijärvi, 2004; Simola, 2005; Laukkanen 2006; Niemi & Jakku-Sihvonen, 2006), the educational policy has purposefully aimed at equity in education and has promoted the common comprehensive school model. In the process, many important decisions have been made. One of those has been the decision that primary school teacher education was also raised to the MA level.

Teacher education has proven to be a very attractive option for talented students. Competition for teacher education is stiff because only around 15% of applicants are accepted (Kansanen 2003, 86 – 87). Thus, it is fair to say that teaching work is popular. Lately, we have seen that a career as a teacher in Finland is the most popular choice amongst those leaving upper secondary education.

Professors and supervisors of Finnish teacher education have the responsibility to guide students in the research-oriented aspects of their education. The main object of this guidance is not the completion of the Master's thesis itself, but actually to further the process by which students come to see themselves as actively studying and working subjects. In this aspect of the degree programme, the processes of

active working and thinking are integrated in various complex and sometimes unexpected ways. The aim of the guiding process is to help students discover and tap their own intellectual resources and to make them better able to utilise the resources of the study group with which the student works (Niemi and Jakku-Sihvonen 2006, p. 37).

The main elements of teacher education curriculum consist of studies in

- Academic disciplines. These can be whatever disciplines are taught in schools or educational institutions or in science of education. Academic studies can be a major or minors depending on the qualification being sought.
- Research studies consist of methodological studies, a BA thesis and a MA thesis.
- Pedagogical studies (min. 60 ECTS) are obligatory for all teachers. They also include teaching practice.
- Communication, language and ICT studies are also obligatory.
- The preparation of a personal study plan is a new element in university studies in Finland. Its main function is to guide students to develop their own effective programmes and career plans, and to tutor them in achieving their goals.
- Optional studies may cover a variety of different courses through which students seek to profile their studies and qualifications.

Pedagogical studies

The traditional distinction between class teachers and subject teachers will be retained, but the structures of the respective degree programmes will allow them to take very flexible routes to include both in the same programme or to permit a later qualification in either direction. The pedagogical studies (60 ECTS) are obligatory for qualification as a teacher and are approximately the same for both primary and secondary teachers. According to legislation, pedagogical studies must be studies in the science of education with an emphasis on didactics. Pedagogical studies can be part of the degree studies, or they can be taken separately after completion of the Master's degree. These studies will also include courses in the psychology and sociology of education. Some modules in the history of education and philosophy of education will also be included. The goal of pedagogical studies is to create opportunities to learn pedagogical interaction, how to develop one's own teaching skills and how to learn to plan, teach and evaluate teaching in terms of the curriculum, the school community and the

age and learning capacity of the pupils. Students should also learn how to cooperate with other teachers, parents and other stakeholders and representatives of the welfare society (www.helsinki.fi/vokke).

An important aim of pedagogically oriented studies is also to educate teachers who are able to study and develop their own research-based practices. For this reason, the modules on behavioural research methods are also obligatory for subject teachers. The structures of primary and secondary school teachers' education are described in Appendices 2 and 3.

The critical scientific literacy of teachers and their ability to use research methods are considered to be crucial. Accordingly, Finland's teacher education programmes require studies of both qualitative and quantitative research traditions. The aim of these studies is to train students to find and analyse problems they may expect to face in their future work. Research studies provide students with an opportunity to complete an authentic project in which students must formulate a problem in an educational field, be able to search independently for information and data related to the problem, elaborate on them in the context of recent research in the area and synthesise the results in the form of a written thesis. They learn to study actively and to internalise the attitude of researchers as they do their work.

Teaching practice

Teachers' pedagogical studies also include guided teaching practice (approx. 20 ECTS). The aim of guided practical studies is to support students in their efforts to acquire professional skills in researching, developing and evaluating teaching and learning processes. In addition, students should be able to reflect critically on their own practices
and social skills in teaching and learning situations. During guided practical studies, students should meet pupils and students from various social backgrounds and psychological orientations and have opportunities to teach them according to the curriculum.

Teaching practice is integrated with all levels of teacher education time. It is supervised by university teachers, university training school teachers or local school teachers depending on the phase of practice (Jyrhämä 2006) (Figure 2).

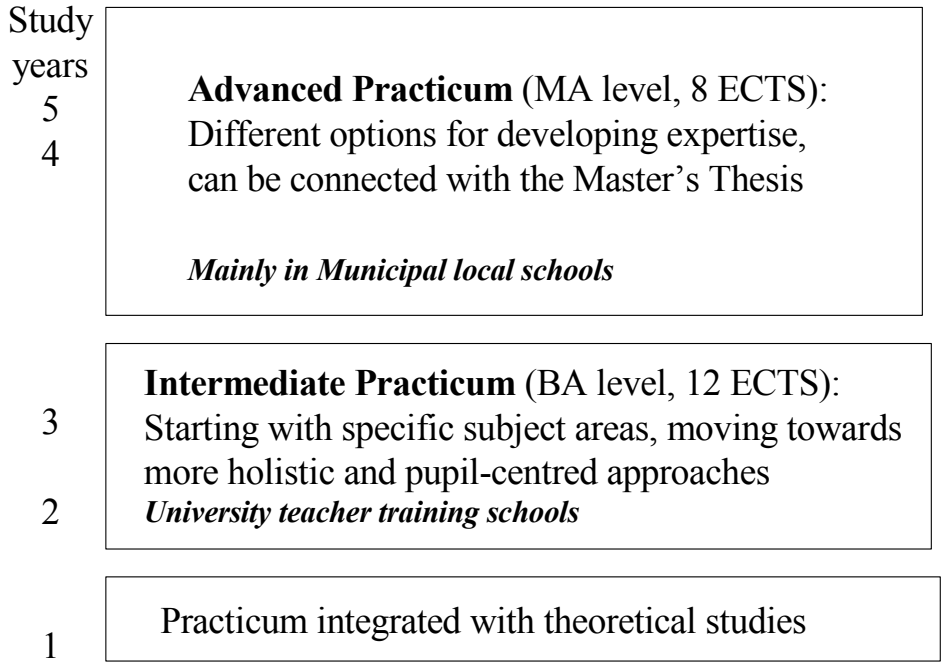

Figure 2. Teaching practice in Finnish teacher education curricula.

The main principle is that practice should start as early as possible and support student teachers' growth towards expertise. In the beginning it guides student teachers to observe school life and the pupils from an educational perspective, then it focuses on specific subject areas and pupils' learning processes. Finally it supports student teachers as they take holistic responsibility in their teaching and schools. This period can be tightly connected with their research studies and Master's thesis.

Class teacher education (Appendix 2)

Class teachers' educational studies include pedagogical studies (60 ECTS), plus a minimum of 60 ECTS of other studies in the science of education. An essential part of these studies is the Master's thesis (20-40 ECTS including seminars and individual guidance, in most universities 40 ECTS). Various research methodologies are studied in seminars. Thematically, the Master's thesis deals with problems linked to general didactics, psychology of education, sociology of education or subject-matter didactics. Theoretical studies consist of obligatory and optional modules. The curricula for class teachers leads to a Master's degree in the science of education and will open opportunities for doctoral studies in this field. The curriculum requires class teachers to complete a major in the science of education. Class

teachers will complete obligatory general studies in subjects taught in Finnish comprehensive schools (60 ECTS).

Secondary school teacher education (Appendix 3)
The Master's degree programme of subject teachers includes one major subject (at least 120 ECTS) plus a Master's thesis in their own academic discipline. In addition, they must complete one or two minor subjects comprising at least 25 - 60 ECTS each depending on the school level at which they want to teach.. Subject teachers receive instruction in methodology and research in their subjects as a part of subject studies.

Finland has invested in pre-service teacher education. The Ministry of Education has launched several national and international evaluations for the continuous improvement of teacher education. Evaluations have revealed weaknesses, and these have been taken into consideration in the developmental process. One of those critical points has been in-service and induction training (Jokinen & Välijärvi 2006). Induction is practically lacking, and in-service training should be more systematic, continuous and research oriented. These are now under strategic plan and hopefully in better condition in coming years.

7. Conclusion - Teachers as representatives of a high-level profession

Teachers must be seen as representatives of a high-level profession if society wants them to be powerful actors who are able to advance important goals in Europe. These goals must be larger than only economic. They must be also cultural, social and moral. The urgent and important task of societies in Europe is to bring teacher education to such a high standard that it really can compete for highly talented young candidates, including those who want to become teachers later in life. However, the teacher education curriculum cannot be too tightly connected with national, political and economic aims. Teachers should internalise the moral nature of their profession.

The teacher education curriculum should comprise the following components: (1) the latest scientific knowledge of subject matters and studies how to transfer this knowledge into pedagogical content knowledge; (2) a research-based knowledge of pedagogy; (3) research-informed professional skills and the competences required to guide and support different learners; (4) an understanding of the social and cultural dimension of education, which allows teachers to respond to the needs of individual

learners in an inclusive way; and (5) studies which open student teachers' awareness of the teachers' role as representatives of a moral profession and as public intellectuals in educational issues. Teacher education must provide teachers with solid scientifically based knowledge and help teachers to achieve the capacity to expand and deepen their professional wisdom through their own inquiring in professional practice and through critical reflection. The integration of scientific knowledge and professional practice is necessary for teachers' capacity to act and achieve confidence in their profession.

Teacher education must support teachers' career-long professional growth, and there should be a continuum of pre-, induction and in-service education. However, we must see that teacher education alone cannot solve all of the educational challenges in society. The organizational and administrative structures of schools and teachers' working conditions and salary policies play a remarkable role in advancing or preventing evidence-based practice. The challenge for Europe is how to get different educational actors and organizations, including teacher education institutions with their curricula, to cooperate in a more effective way.

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APPENDIX 1. The Finnish educational system in a nutshell

Educational System Chart

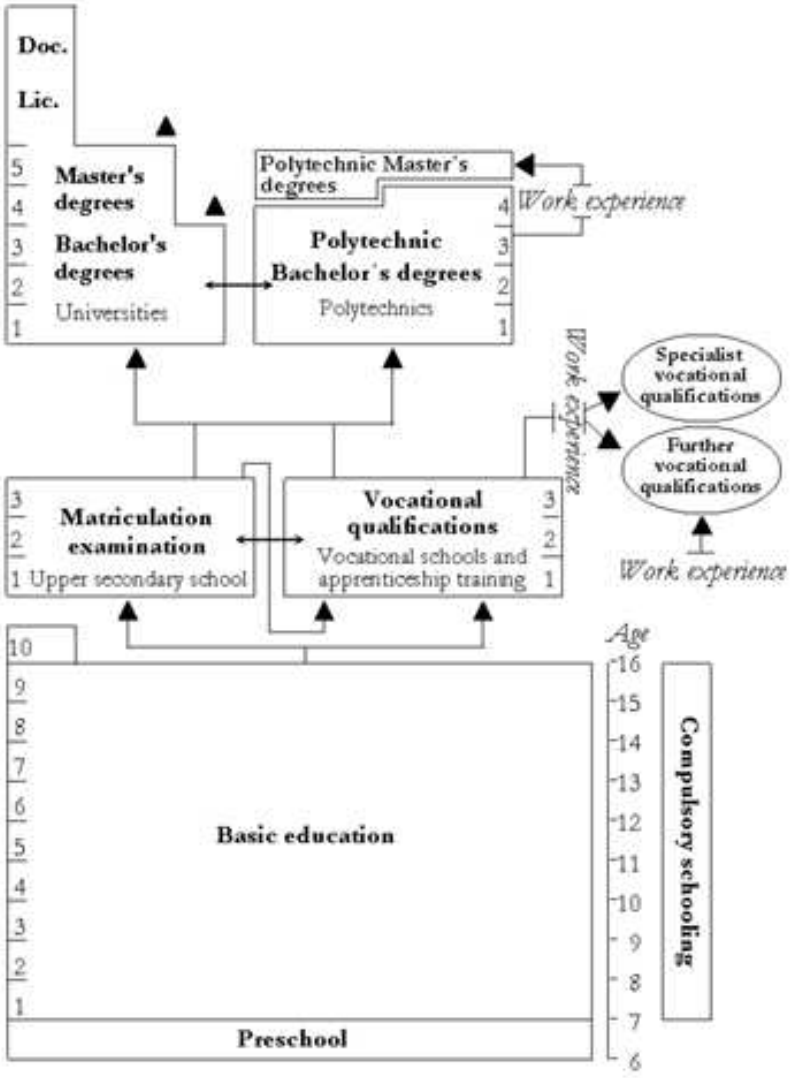

Figure 1. The Finnish Educational System (National Board of Education, 2007, www.oph.fi)

Education is a public service. General education, vocational education and higher education are free of charge. Basic education, upper secondary education and vocational education are financed by the state and local authorities. General education and vocational education are provided by local authorities. Universities are autonomous and financed by the government.

Providers of education and schools set up their own curricula on the basis of the national core curriculum. In basic education, students also receive all study material and one meal from the school. Transportation is arranged by the education provider for distances of 5 km and over. At vocational and upper secondary schools, the student has to pay for the material and school meals. For the Swedish speaking population (about 6%), there are separate schools as well as administrative services.

Appendix 2

Table 1. Main components of the teacher education programs for primary school teachers

Primary school teacher education program	Bachelor's Degree 180 ECTS	Master's Degree 120 ETCS	TOTAL 300 ETCS
Class teachers' pedagogical studies (as a part of a major in education) - basics of teaching methods and evaluation - support of different kinds of learners - latest research results and research methods of teaching and learning - cooperation with different partners and stakeholders	25 (Including supervised teaching practice)	35 (Including a minimum of 15 ETCS supervised teaching practice)	60
Other studies in a major in education - research methods - scientific writing - optional studies	35 (including BA thesis, 6-10)	45 (including MA thesis, 20-40)	80
Subject matter studies for comprehensive school teachers	60		60
Academic studies in a different discipline - a minor	25	0-35	25-60
Language and communication studies, including ICT Practice in working life Preparation and updating a personal study plan Optional studies	35	5 – 40	40-75

Appendix 3

Table 2. Main components of the teacher education programs for secondary school teachers.

Secondary school teacher education programme	Bachelor's Degree 180 ECTS	Master's Degree 120 ETCS	TOTAL 300 ETCS
Subject teachers' pedagogical studies (minor) - basics of teaching methods and evaluation - support of different kind of learners - latest research results and research methods of teaching and learning - cooperation with different partners and stakeholders	25-30 (Including supervised teaching practice)	30-35 (Including a minimum of 15 ETCS supervised teaching practice)	60
Academic studies in different disciplines - a major	60 (including BA thesis, 6-10)	60-90 (including MA thesis, 20-40)	120 – 150
Academic studies in different disciplines - 1-2 minors	25-60	0-30	25-90
Language and communication studies, including ICT Practice in working life Preparation and updating a personal study plan Optional studies	35 - 40	0-30	35-70