

In the front of the Bologna process Thirty years of research-based teacher education in Finland

V ospredju bolonjskega procesa. Trideset let na raziskovanju utemeljenega izobraževanja učiteljev na Finskem

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Abstract

Teacher education in Finland moved to a two-tier degree system on 1 August 2005. The combination of a three-year Bachelor's degree and a two-year Master's degree in appropriate subjects will qualify teachers to teach in primary and secondary schools. The groundwork for Finnish academic teacher education was laid in the late 1970's. Since then, typical features of teacher education in Finland have been a research-based orientation, continuous national and international evaluations, and the requirement that regardless of specialisation or future assignment, all teachers must complete a basic core curriculum. Teacher education has proven to be a very attractive option for talented students. The Bologna process is seen more as a phase of a joint national analysis and evaluation of the teacher education curriculum than as a fundamental structural change. Many national networks and projects have worked together to develop and implement the new degrees programmes in Finland.

Key words

teacher education in Finland; implications of the Bologna Declaration; two-tier degree system; teachers' qualifications in primary and secondary schools

Povzetek

Izobraževanje učiteljev na Finskem je prešlo na novi dvostopenjski sistem 1. avgusta 2005. Kombinacija triletnje stopnje Bachelor's in dvoletne stopnje Master's na ustreznih predmetnih področjih bo kvalificirala učitelje za poučevanje v osnovnih in srednjih šolah. Podlage finskega akademskega izobraževanja učiteljev so bile položene v poznih sedemdesetih letih. Od takrat so značilne poteze izobraževanja učiteljev na Finskem na raziskovanju utemeljena usmeritev, stalne nacionalne in mednarodne evalvacije ter zahteva, da morajo vsi učitelji, ne glede na specialnost bodočih delovnih nalog,

dokončati osnovni jedrni kurikulum. Izobraževanje učiteljev se je izkazalo kot zelo privlačna izbira za talentirane študente. Bolonjski proces je tako videti bolj kot faza v skupni nacionalni analizi in evalvaciji kurikula za izobraževanje učiteljev kot temeljita strukturna sprememba. Mnoge nacionalne mreže in projekti si skupaj prizadevajo, da bi razvile ter implementirale nove stopenjske programe na Finskem.

Ključne besede

izobraževanje učiteljev na Finskem; implikacije Bolonjske deklaracije; dvostopenjski sistem; kvalifikacije učiteljev v osnovnih in srednjih šolah

1 The basic framework of teacher education in Finland before the Bologna process

In Finland, responsibility for providing education to prospective teachers at primary and secondary schools was transferred to universities in 1971. Subject-teacher education at the secondary school level was also reformed by expanding the scope of pedagogical studies. The purpose of this modification was to unify core aspects of primary and secondary school education and to develop an academically high standard of education for prospective teachers. In the late 1970's, university education for both primary and secondary teachers was planned in the form of programmes requiring 4 to 5 years to complete. The comprehensive school consists of a primary level (1-6) and a lower secondary level (grades 7-9). The upper secondary school covers three years and is streamed into programmes that are either of a more vocational or theoretical nature. The basic qualification for both primary and secondary school teachers is defined as the Master's degree. Teacher education for teachers in comprehensive schools and upper secondary schools, as well as for those teachers who teach general subjects in adult education and vocational education, is provided at eight Finnish universities around the country. In addition, vocational teacher education is also provided by separate institutions of vocational higher education in close co-operation with polytechnics.

The basic principles of teacher education have emphasized teachers' work in a broad pedagogical and societal framework (Committee report, 1975):

1. All teacher education for comprehensive and upper secondary schools should be academic and carried out in universities.
2. Teacher education should be unified for different teacher categories.
3. The initial education of future teachers must give a common and broad qualification to all teachers and this common background can then be flexibly complemented by in-service education.

4. Pedagogical studies should be developed in such a way that teachers are prepared to be educators in the broad sense of this concept and can attend to their pupils' socio-emotional growth. Teachers should have a pedagogical, optimistic attitude to their work that is grounded in the latest research. Theoretical and practical studies as well as subject academic matter and pedagogical studies should be more successfully integrated.
5. Teacher education should consist of societal and educational policy studies.

Over a period of time during the 1970's and 1980's, a fairly strict core curriculum was set by the Ministry of Education. It unified teacher education in all universities and raised the common standards. It also made teacher education somewhat inflexible to react to local and contextual needs. In the 1990's, in the context of the general decentralization of governance, the universities were given more freedom to profile their programmes. Teacher education was placed in a better position to take local needs and the strengths of individual universities into account. It also became possible to link teacher education with each university's own strategic aims. (Tella, 1996.)

According to decrees issued in 1979 and 1995, all prospective teachers have to complete Master degree. In terms of the new Bologna process, this degree is equivalent of the second cycle degree in the European higher education area. Primary teachers, called also class teachers, have had science of education as their major, and this degree requires completion of a Master's thesis. The topics of the thesis may be highly school-related, and very often they are action research projects. The secondary school teachers, called also subject teachers, completed a major in their academic teaching subjects and a minor in pedagogy. The educational studies of subject teachers have been completed either as a one-year block or concurrently with their academic studies in their major field.

2 Systematic evaluation in teacher education

Finnish teacher education has been evaluated many times over the past 15 years. The following evaluations are among the most important:

- 1989 National committee for developing teacher education
- 1993-94 National and international evaluation of educational sciences and teacher education. (The Committee Report, 1994; Buchberger, et al. 1994; Niemi & Kohonen, 1994)
- 1995-1998 Research project "Effectiveness of Teacher Education" as part of a large national research programme entitled "Effectiveness of Education". (Niemi, 1996; Niemi & Kemmis, 1999)
- 1998 National evaluation of ICT in teacher education. (Niemi, 1999a)

- 1998-99 National evaluation of teacher education. (Jussila & Saari, 1999)
- 1999 Evaluation of the quality of research in the Department of Teacher Education of the University of Helsinki. (Hämäläinen, 2000)
- 2001-2002 Evaluation of the quality of education and degree programme of the Faculty of Education at the University of Helsinki. (Lahtinen, 2003)

These evaluations have proven useful in efforts to develop teacher education, and some issues are still under discussion. The results of these evaluations have highlighted many strengths of teacher training in Finland. Class teacher education is one of the most popular study options available to students at Finnish universities. Teacher education has been successful in attracting very talented and diligent students. The competition has made teacher training very selective, and only 10-15% of the applicants are accepted into the degree programmes. Secondary teacher training has not been as attractive, and there will be a lack of teachers in certain subjects in the coming years. Teacher education programmes in Finland have not had to face serious problems caused by attrition or dropping out. Young teachers see their profession as life-long learning and they have a very positive attitude towards developing their skills and expertise (Niemi & Tirri, 1995).

The evaluation projects have also shown that the research component plays an essential role in teacher education. Despite the difficulties of implementing the reform during the 1980's, experience has shown that the integration of research studies with other components of teacher training research methods and the writing of a Master's thesis are among the best features of primary school teacher education in Finland (Niemi & Kohonen, 1995).

Although teacher education has been successful in many respects, several problems remain that need to be taken seriously. Many evaluations have pointed out that inadequate co-operation between some partners decreases the quality of teacher education. Co-operation should be much better organised, more oriented towards common purposes, and more intensive. These needs are apparent in areas of co-operation between academic disciplines and educational departments, normal schools (called also university practising schools) and teacher education departments, local schools and university schools, and between teacher education institutions and local communities. Another area of concern is the quality of learning. Doubts have been expressed that teachers are adequately trained to teach various different learner groups in an increasingly diverse and complex society. Learning in a multicultural information society, where social exclusion is a real threat, places new and increased demands on teacher competencies. Year after year, strong criticism has also been directed toward the student teachers' own learning culture, which often seems to be more receptive than active except in connection with teaching practice and the writing

of the Master's thesis. The general result of the evaluations has been that the more demanding the studies were in terms of quality of learning, the more useful they were in the eyes of the student teachers (Niemi & Kohonen, 1995; Niemi 200b; Niemi, 2002).

3 The Bologna process in the Finnish universities

Teacher education, as all university education, in Finland will move to the two-tier degree system of the Bologna process on 1 August 2005. The combination of a three-year Bachelor's degree and a two-year Master's degree in appropriate subjects and pedagogy will qualify teachers to teach in primary and secondary schools. The thirty-year tradition of educating both class teachers and subject teachers in Finnish universities will continue. The basic qualification to teaching profession will still be the Master's degree.

We see the Bologna process more as a phase of a joint national analysis and evaluation of the teacher education curriculum than as a fundamental structural change. Most of the work connected with this process has been done at the university level but at the same time many national networks and projects have worked together to develop the new degrees programmes in Finland. Each university has implemented the reform independently using a variety of administrative entities and structures. The University of Helsinki has established an internal support group to facilitate the process, and this group has worked in interaction with several working groups of the faculties and with cross-disciplinary networks and committees. The central administration and the whole university community have also been involved in the process. The different partners and their relationships are illustrated in Figure 1.

The national discipline-based co-ordination groups have also played an important role in the process. The Ministry of Education has funded (2003-2007) these networks in nearly 20 disciplines. The major groups are in mathematics and sciences, humanities, social sciences, educational sciences and teacher education, technical sciences, law, economics, psychology, medicine, and health sciences.

Each discipline has engaged in a fundamental analysis of the main contents of the new degrees, currently referred to as an academic curriculum core analysis (Figure 2). This method has been developed into a tool for use especially for the planning and development of academic degrees. The method facilitates the determination of the hierarchies and relationships between the skills and knowledge of a particular subject and helps to ensure that these are in proper proportion to the terms of the curriculum and the time available for learning.

4 National development of teacher education in the Bologna process

The main task of the national network for Educational Sciences and Teacher Education (Vokke project 2005) has been to coordinate the implementation of the two-tier degree programmes and to activate interaction and knowledge sharing between teacher education units. It has organized seminars and sub-networks where representatives of the universities have had opportunities to discuss, argue and reach a consensus concerning the common national components and structures of teacher education. It has created a joint forum to analyse and develop the teacher education curriculum taking new challenges in the Finnish society and global world into account. The teacher education network has also had active contacts with to the mathematics and science group as well as with the humanities group. As a consequence of the co-operation, all universities will share a common structure of teacher education. A rather good consensus has also been reached concerning the core contents of the curriculum, although each university will have 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).

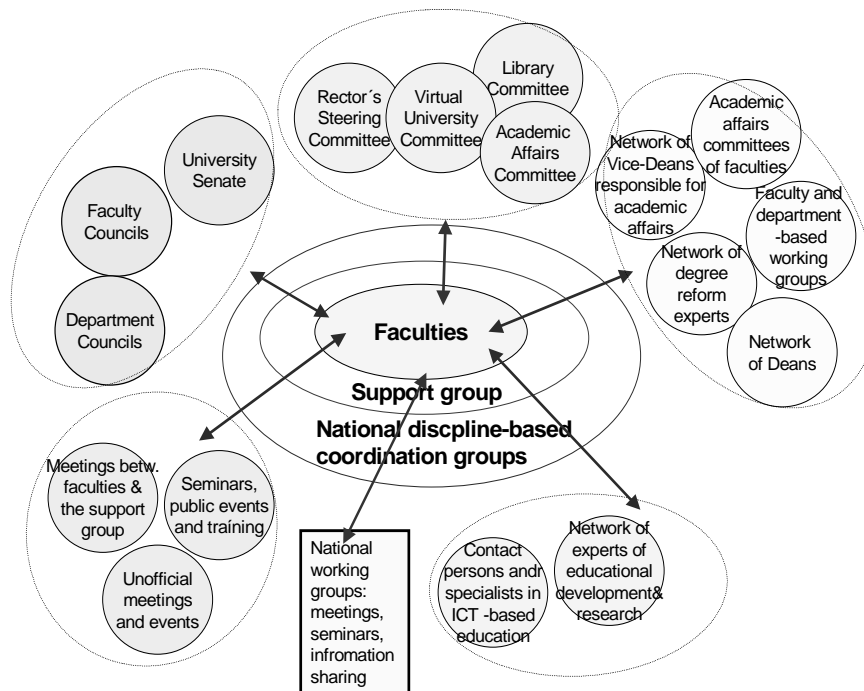


Figure 1. The partners of the internal Bologna process at the University of Helsinki.

Course	MUST KNOW	SHOULD KNOW	NICE TO KNOW
	The core subject matter that the student must master in view of future studies. Understanding these topics ensures the acquisition of more profound and broader skills and knowledge	Supplementary information that introduces a wider range of theoretical details and provides insight into less frequently needed applications	Special information that deepens the mastery of a specific field
FROM THE POINT OF VIEW OF ACADEMIC KNOWLEDGE			
FROM THE POINT OF VIEW OF PROFESSIONAL KNOWLEDGE			

Figure 2. The Format of an academic curriculum core analysis.
(Karjalainen & Jaakkola, 1999)

5 The new structure and curriculum of teacher education in Finland

The main elements of teacher education consist of studies in

- Academic disciplines. These can be whatever disciplines are taught in schools or educational institutions or 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 an MA thesis
- Pedagogical studies (min. 60 ECTS) are obligatory for all teachers. They include also 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 permit 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. The 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, to learn how to develop one's own teaching skills, and to learn how 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)

In Finland, class teachers and subject teachers must participate in school governance. This means that a basic knowledge of school administration and the ability to cooperate are very important. The acquisition of skills for school improvement, evaluation and management will be included among the goals of the teacher education programmes. The ability of teachers to co-operate with other teachers, headmasters, other experts in the education system, families and other stakeholders has been seen as an essential part of teacher competence.

Teachers' pedagogical studies include also 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.

An important aim of pedagogically oriented studies is also to educate teachers who are able to study and develop their own researched-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 *Tables 1 and 2*.

For decades, the Finnish orientation toward teacher education has committed itself to the development of a research-based professional culture. 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.

Professors 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 the student is working with. (Nummenmaa, 2004, 117).

Class teacher education

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 curriculum for class teachers is leading to a Master's degree in the science of education and will open opportunities for doctoral studies in this field.

The new curriculum will require class teachers to complete a major in the science of education. Class teachers will complete obligatory general studies in subjects taught in the Finnish comprehensive schools (60 ECTS).

Subject teacher education

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 two minor subjects comprising at least 60 ECTS each. Subject teachers receive instruction in methodology and research in their subjects as a part of subject studies.

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

Primary school teacher education program	Bachelor's Degree 180 ECTS	Master's Degree 120 ECTS	TOTAL 300 ECTS
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 – co-operation 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

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

Secondary school teacher education program	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 – co-operation with different partners and stakeholders	25-30 (Including supervised teaching practice)	30-35 (Including a minimum of 15 ETCS supervised teaching practice)	60
<i>Academic studies in different disciplines</i> – major	60 (including BA Thesis, 6-10)	60-90 (including MA Thesis, 20-40)	120 – 150
<i>Academic studies in different disciplines</i> – 1-2 minors	25-60	0-30	25-90
<i>Language and communication studies, including ICT</i> Practice in working life Preparation and updating a personal study plan Optional studies	35-40	0-30	35-70

6 The main principles of curriculum construction

Numerous reforms towards a more decentralized educational system were carried out in Finnish educational governance during the 1990's. Teachers are now expected to be able to take an active role in evaluating and improving schools and their learning environments. They are also expected to refresh their professional skills, to cooperate with parents and other stakeholders, and to be active citizens. (Teacher Development Education Programme, 2001) In this section, we attempt to summarize the main principles that will be important in future Finnish teacher education in connection with the Bologna process. The framework of Finnish teacher education has been designed for national contexts

while, at the same time, taking the global perspective into account (Niemi, 1999b; Niemi 1999c; Räsänen, 1999).

A research-based approach as a main guideline

At the beginning of the reform process, the representatives of the various faculties of education agreed to the principle that teacher education must equip teachers with research-based knowledge and with skills and methods for developing teaching, cooperating at school and communicating with parents and other stakeholders. The following principles have been accepted as guidelines for the research-based teacher education in Finland. These principles have also been proposed by the European Union Focus Group, which has had a task to prepare common frameworks and quality criteria for teacher education in Europe (Memorandum, 2004).

- 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.

High quality academic subject matter knowledge and pedagogical knowledge

One of the most important roles of teachers is to open pathways to cultural richness and understanding. Teachers have to be familiar with the most recent knowledge and research about the subject matters. They also have to know how subject matters can be transformed in relevant ways to benefit different learners and how it can help learners create foundations on which they can build their lifelong learning. This means that teachers need the latest research results and knowledge in pedagogy. 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 on 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.

In updating the core contents of the Finnish teacher education, consideration was given to the reforms in national educational governance and the new orientation toward transferable skills and the educational demands of a multicultural knowledge society. In all educational systems at all levels, today's teachers and teacher educators are being required to act as responsible educators in a multicultural society. The need to understanding different subcultures, religions and values is causing new and difficult demands to teachers and teacher education. Intercultural learning is important for every individual in every culture in a world that we now call 'global' (Kaikkonen, 1996; Watts & Smolicz 1977; Räsänen 1999). Teachers also must have a good knowledge of history and cultural roots for promoting intercultural understanding. Teacher education curricula and programmes should give students opportunities to learn how to take responsibility for ethical choices (e.g. Aloni, 2002, pp. 176-182; Atjonen, 2004,139; Oser, 1994). This is a topic that is worth studying for its own sake for the purpose of developing a scientifically sound foundation for a course or module in applied intercultural ethics in teacher education.

In general, working with different types of learners has been a dominant issue in Finland because of efforts to make Finnish society more inclusive. Developing the ability to cooperate with multi-professional networks, especially in terms of inclusive education, should be an important objective in teacher training (Lappalainen & Mäkihohko 2004; Teacher Education Development Programme, 2001).

Meta-knowledge – promoting active and collaborative learning

Teacher education is a very intensive educational process. Within five years, students should understand the main functions of the teaching profession and be able to set individual goals for their own personal and academic development with a positive orientation toward the application of theoretical knowledge. Learning to learn and helping other people to learn are both demanding tasks in themselves.

The concept of knowledge is now different from earlier static, transmitted contents. We now understand knowledge to be ever renewable and to be construed jointly together with other learners. Teachers need meta-knowledge of learning processes: 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 to become active learners. They also need meta-knowledge of collaborative learning processes. This involves knowing how

knowledge can be construed in co-operation with others and knowing what the social components of learning processes are.

The task of teacher education in Finland involves the promotion and support of demanding intentional learning processes. According to researchers of metacognition and self-regulated learning (e.g. Ruohotie, 1994; Winne 1996; Pintrich, 1999; Pintrich, & Ruohotie, 2000; Boekaerts, Pintrich & Zeidner 2002) learners need knowing about knowing, and the ability to reflect, understand and control learning. Intentional learning is a consequence of cognitive goals, conscious control and the intentional use of knowledge. Students with intentional goals are committed to the learning process and are very much aware of their own individual motives, goals, beliefs and emotions.

The social and moral code of the teaching profession

Context bound work and national aims

Teachers' work is always very context-bound, depending on learner age level, cultural conditions, available resources and the contents that they are mediating to learners. Teachers and teacher education are also clearly related to national goals and purposes. The welfare and economy of the society definitely depend on the quality of educational outcomes, and these are associated with teachers' competences.

European and global aims

Besides being guided by of national and local community-based goals, teachers' work also has more generic aims. They open doors and windows to cultural enrichment and help people to understand other human beings and their cultural contexts. Teachers are key actors in promoting human rights, justice and democracy in a global world (Aloni, 2002). In Europe, teachers have in important role in advancing intercultural understanding and mobility.

Preparing for changing contexts

Teachers also have a key role in preparing a young generation as well as adult people to meet changing conditions (Niemi, 2000). The global world is very interdependent, and changes in technology, economy, politics, and security have immediate profound consequences on people's lives. All citizens should be given tools to analyse and manage these changes.

Representatives of an ethical profession

As teachers are key actors in enabling their student 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 they have an important role fulfilling the promise democracy, social justice and human rights. Therefore, according to Carr and Hartnett (1996) teacher development should be based on the following premises:

- 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.
- Teacher development must be located within a particular historical, political and educational tradition and context. Teachers do not work and reflect in a social vacuum. They act within institutions, structures and processes which have a past and a social momentum.
- A theory of teacher education has to re-establish a democratic political agenda and to develop constituencies in the wider society for this work, so as to bring about changes as required.

Teachers need in their profession a concept of culture which includes cultural knowledge and intercultural understanding. 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.

High quality pedagogical skills and reflection as a bridge between academic and professional development

As professionals, teachers need a lot practical skills that will enable them to mediate something to individuals or groups and to construct knowledge jointly. 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. The following summary describes what kinds of practical skills are needed in the teaching profession:

- the ability to support different learners (age, gender, cultural background, learning difficulties etc);
- the ability to work in co-operation with other teachers in schools or other educational settings;
- the ability to promote co-operation with stakeholders;

- the ability to develop and improve curriculum and learning environments;
- the ability to solve problems in school life or educational institutions;
- the ability to reflect one's own professional identity.

Teachers are working today in conditions where continuous change, cultural dispersion, and increasing diversity in all areas of life are commonplace. The structures of families and working life have undergone substantial change. Teachers are witnessing rapid and unforeseen changes in economic life, societal structures, production, and information technologies. Security issues are very real. These phenomena reflect on students' lives and on the educational systems in all Western countries. Teachers' competence must include a readiness to analyse these circumstances, to draw conclusions and to make decisions to adjust or to change something in the situation. This means that the teacher needs a critical mind and the ability to reflect. Reflection can be in action or on action. The fact that many decisions have to be taken very rapidly, in action, requires that teachers have internalised the professional knowledge and moral code that are needed in acting in changing situations. (e.g. Tabachnick & Zeichner 1991; Hargreaves, D., 1994; Grimmett, 1994; Järvinen et al., 1995; Birmingham, C. 2004).

7 Concluding remarks

The Bologna process in the Finnish teacher education is seen more as a phase of the evaluation and development of the teacher education curriculum than as a fundamental structural change. We see teacher education in the reference frame in which teachers are representatives of a high-quality academic and ethical profession. Teachers have to take an active role in raising serious questions about what they teach, how they teach, and the larger goals for which they are striving. We believe that teachers need to view themselves as public intellectuals who combine conception and implementation, thinking and practice in the struggle for a culture of democratic values and justice. Teachers have a right and an obligation to articulate educational needs and challenges in the society they serve. They also have to be active in public debates and decisions effecting the development of schools and education (Aloni, 2002; Aronowitz & Giroux, 1991). As professionals, teachers cannot be only implementers of decisions, but must also be partners in their development.

The 21st century will set high demands on learning. The world will be full of contradictory trends and tensions, such as globalization, regionalization, value conflicts and social inequities. Pressures to teachers' work cause stress among teachers and they need support for their own professional growth process and identity formation during and after TE.

Teachers need the high quality academic and pedagogical knowledge in their work. They also need the ability to cooperate with other educators. The public trust in the work that teachers do could be increased by improving the interaction of representatives of the teaching profession with other partners and stakeholders in society. Here, every effort must be made to assure the high quality teacher education. This assurance should take into consideration the many-sided requirements and educational components of the teaching profession.

Systematic evaluations in teacher education are imperative. Evaluations and quality assurance should create interaction and cooperation between the different partners, each of which has educational responsibilities vis-à-vis society. All evaluation processes should include a developmental aspect, and every effort must be made to make the profession strong to meet future challenges.

Teacher education in Finland will move to the two-tier degree system of the Bologna process on 1 August 2005. The Ministry of Education has anticipated that a follow-up phase will be at the end of this decade. That process will give us important information for the further development.

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