

GREEN PAPER ON TEACHER EDUCATION IN EUROPE

High Quality Teacher Education for
High Quality Education and Training



Edited by

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Thematic Network on Teacher Education in Europe

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PART I
HIGH QUALITY TEACHER EDUCATION
FOR HIGH QUALITY EDUCATION AND TRAINING -
AIMS, CONTEXT AND OVERVIEW

1. “Towards a Europe of Knowledge” - New Priorities of Education Policy

Over the past few decades European societies have been confronted with substantial social, cultural, economic and technological changes and challenges. There seems to be widespread agreement that *education and training* will have to play a *key role* in order to meet

- these changes adequately and
- the challenges pro-actively (1)*.

Since the early nineties education and training (2) have *again* become *policy priorities* in most Member States of the European Union. By focusing on human capital theories (3), which stress the relevance of both comprehensive and coherent *human resource development* for the economic and social prosperity of post-industrial information societies, *education (policy)* has increasingly become an *integral part* of *economic* and *social policy*.

“*High Quality Education and Training*” has become a *powerful leitmotif* (4), in discussions about a “Europe of Knowledge” (cf. European Commission 1997). Such education and training has to be a lifelong provision covering all components in the broad spectrum of human capabilities (5).

High quality education and training are thus regarded as being indispensable

- in establishing a “*Europe of Knowledge*”,
- in transforming European societies into dynamic *learning societies*,
- in assisting the process of *European integration* for
- *economic prosperity* and
- *social cohesion*.

2. The Key Role of Teachers and High Quality Teacher Education

In establishing a “Europe of Knowledge” the important role of teachers and their education is stressed frequently by

- the European Commission,
- Ministries of Education of the Member States of the European Union as well as by
- a large number of educationalists.

High quality teachers and teacher education are *central components*, within a heterogeneous pool of measures necessary to make high quality education and training and a “Europe of Knowledge” a reality (e.g. reform of organisational structures of the education and training sector, reform of curricula, making effective use of new information and communication technologies for learning processes).

Due to the many new and rapidly changing tasks and roles teachers are expected to fulfil, substantial improvements and reforms of teacher education are seen as imperative. Thus “*High Quality Teacher Education for High Quality Education and Training*” must be another *leitmotif* of education policy.

3. Substantial Changes of the Context of Education – Substantial Changes of Teacher Education?

There is a close relationship between the importance attached to teachers and their education, and attempts over the past few years of the European Commission and a number of Member States to improve teacher education (6). Perceived anxieties about the ability of teachers’ competence to meet new tasks, challenges, and expectations pro-actively underlie these changes.

Emphasising “*professionalisation*” of teaching and teacher education, the measures taken to improve teacher education in a number of Member States of the European Union seem primarily to have been guided by *modification strategies* influenced by changing perceptions on the role of the state within the education sector. These measures follow

- a “*more of the same - rationale*” (7),
- although at the same time some *reluctance*
- and even controversial *strategies* can be seen in other Member States, although
- all the strategies adopted seem to reflect a number of *uncertainties*.

While some *modifications* of teacher education have been made (primarily the lengthening of initial teacher education and its incorporation into the higher education sector) in most Member States of the European Union the *core of teacher education* has not yet been changed.

Substantial changes of the context of education and training (e.g. changed values, globalization of life and economy, organisation of labour, the new information and communication technology) have an impact on the professional tasks and roles of the teaching profession and call for more *substantial reforms* of

- education and training in general (e.g. curricula and contents of teaching and learning, patterns of organisation), and
- teacher education in particular (e.g. aims, curricula, learning environments, structures).

4. Teacher Education as an Open and Dynamic System, and as a Continuous Process

There is general agreement that teacher education has to be conceived as

- an open and dynamic system, and as a
- part of a continuous process.

As an *open* and *dynamic system* teacher education

- is embedded in different *spheres* (e.g. “society in general”, the state, universities, colleges of education, schools)
- with a large number of different *actors* (e.g. teacher educators, teachers, politicians, administrators and school inspectors, quality assurance agencies).

Regarding core issues of teacher education and the teaching profession (e.g. curricula and the knowledge base of teaching and learning, quality controls, resources or conditions of practice of education staff) the actors may have different views, interests and power (8).

Teacher education has to support the *professional development* of teachers during all phases of their professional career.

The *process of Continuous Professional Development (CPD)* starts with the recruitment process for initial teacher education, and consists of the closely related components

- initial teacher education,
- induction,
- in-service teacher education, and
- further education (9).

Continuous professional development has to be connected to educational innovation (e.g. school development and school improvement) and educational research.

Despite a *general agreement* on the need for *dynamic conceptions* of teacher education *in principle* most systems and models of teacher education in the Member States of the European Union have been organised along traditional lines (cf. static conceptions of teacher education):

- They focus on a relatively short period of initial teacher education,
- while neglecting the relevance of continuous professional development.
- Another characteristic of inertia has been the strict separation of initial teacher education, in-service and further higher award work of teachers.
- Similarly there has been little systematic connection between initial teacher education, schools, staff development, school development and improvement, and educational research.

5. TNTEE – A European-Wide Professional Network for Teacher Education

The important role teacher education has to play in achieving a “Europe of Knowledge” was recognised by the European Commission in commissioning a comprehensive cross-European study (the *Sigma project*). The aim was

- to provide an *evaluation* of the *current state* of teacher education in the Member States of the European Economic Area and
- to develop appropriate *perspectives* to enable teacher education to meet changes and new challenges (10).

The foundation of the Thematic Network on Teacher Education in Europe (TNTEE) within the Thematic Network Project initiative of the European Commission (DG XXII, action scheme SOCRATES) in 1996 had close parallels to the Sigma project (11).

From the very beginning TNTEE has aimed at

- the *coherent integration* of
- *research-based knowledge* of high quality teacher education with
- the many *rich experiences* of those concerned with and involved in teacher education (the *professional community*).

The aim is to raise both the *problem-awareness* and the *problem-solving capacity* within teacher education in order to contribute to high quality teacher education leading to high quality education and training. This has been attempted through adopting a *networking strategy* on a European-wide scale.

Since 1996 TNTEE has become a *meeting place* for

- approximately 300 institutions of teacher education,
- thousands of teacher educators,
- important professional as well as research organisations and associations (e.g. British Education Research Association, Deutsche Gesellschaft für Erziehungswissenschaften),
- decision makers and
- teachers all over Europe, and thus
- contributed to develop a coherent *voice for teacher education*.

As a Pan-European professional network TNTEE has had frequent requests from various Ministries of Education, committees responsible for teacher education reforms, professional organisations and universities all over Europe dealing with teacher education, to provide input for reforms and improvements of teacher education.

The recognition of teacher education as both an open and dynamic system and a continuous process has meant that TNTEE has taken an *integrated approach* to the different, but related components of teacher education. Initial teacher education, in-service, advanced further

education, school and professional development, and research have been approached as a *continuous whole*, considered *comparatively* within the social, cultural, political and economic dimensions of their contexts across Europe.

This adoption of this approach makes it possible for TNTEE to submit this Green Paper

- addressing *key issues* of teacher education in the Member States of the European Union, and
- suggesting *strategies* for its reform and improvement.

6. The Green Paper – Outcomes of Networking, Research and Development

One of the outcomes of the work within TNTEE is this Green Paper on teacher education in Europe “High Quality Teacher Education for High Quality Education and Training” (12).

Draft versions of this Green Paper have been prepared by an editorial board consisting of

- F. Buchberger (Linz, Austria),
- B.P. Campos (Lisbon, Portugal),
- D. Kallós (chairperson of TNTEE, Umeå, Sweden) and
- J. Stephenson (Leicester, United Kingdom).

This Green Paper is based on the outcomes of continuous *analyses, research and development* by the *sub-networks of TNTEE*. The membership of these multinational groups was drawn from all the countries of the European Union. Issues covered included:

- “Politics of teacher education”,
- “Partnerships between teacher education and schools”,
- “Reflective practice in teacher education”,
- “Establishing powerful learning environments in teacher education”,
- “Didaktik/Fachdidaktik as science(-s) of the teaching profession”,
- “Multiculturalism and teacher education”, and
- “Gender issues and teacher education”.

The draft versions of the Green Paper have been subject to discussions both in a number of meetings and on the web-site of TNTEE. The editors especially wish to thank the TNTEE members I. Buchberger (Helsinki, FI), C. Day (Nottingham, UK), B. Hudson (Sheffield, UK) and G. Weiner (Umeå, SE) for their critical comments on an earlier version of this Green Paper.

TNTEE will provide space to continue these dialogues and intends to submit updates of the Green Paper “High Quality Teacher Education for High Quality Education and Training” as a result of further discussion and development.

7. The Green Paper – Scenarios for “Problem-solutions”

The Green Paper begins by presenting and discussing a number of examples which are based on

- comparative *conceptual analyses* of the current state of teacher education in the Member States of the European Union;
- analyses of “*state of the art knowledge*” on successful teacher education; and
- analyses of recent rapidly changing *contexts* of education and training, teacher education and the teaching profession.

These examples aim at

- stimulating the *dialogue* between all actors that attempt to improve teacher education at a European, national, regional and local level,
- enriching *definitions of the “problem-space”* both in different cultural and social contexts within the Member States of the European Union and at an European-wide level in order to support *informed decision making*, and
- providing an input for *problem-solving processes* that can only take place in particular cultural and social contexts.

The Green Paper thus attempts to address different actors at different but interrelated levels:

- the macro-level (e.g. European Commission, Ministries of Education, professional organisations and associations of teacher education and the teaching profession) (13),
- the meso-level (e.g. institutions of teacher education) as well as
- the micro-level (e.g. particular programmes and courses of teacher education).

It is neither intended, nor would it be feasible to provide

- simple answers to the many changes, problems and challenges confronting teacher education or
- “ready made solutions” for reform and improvement of teacher education in the different Member States of the European Union or at an European-wide level.

Instead the Green Paper will address in a comparative perspective

(i) some *key issues* of teacher education, such as

- educating highly competent and committed teachers,
- new tasks and roles of teacher education,
- the teaching profession in rapidly changing societies,
- the relationships between teacher education, the teaching profession and schools,
- the role of educational research to improve teacher education, and
- the role of teacher education and the teaching profession in the process of European integration;

(ii) *persisting problems* of teacher education, such as

- patterns of organisation,

- curricula of teacher education and the knowledge base for teaching and the teaching profession,
 - relationships between initial teacher education, continuous professional development, further education and school development and school improvement, and
 - learning environments of teacher education;
- (iii) *measures* with a high potential to tackle these issues and problems formulated as examples or options dependent on decisions in particular cultural and social contexts.

8. Structure of the Green Paper

The Green Paper is arranged in five main parts:

- (i) Following this overview (Part I),
- (ii) the current state of teacher education in the Member States of the European Union will be briefly analysed (Part II).
- (iii) In Part III the changed and rapidly changing contexts of education and teacher education will be described and analysed. As an implication of these changed and new tasks for teacher education and the teaching profession will be described.
- (iv) In Part IV some scenarios for reforms and improvements of teacher education will be presented and discussed.
- (v) In Part V some proposals for concrete measures relevant for teacher education reform and improvement will be presented.

PART II

REMARKS ON THE CURRENT STATE OF TEACHER EDUCATION IN THE EUROPEAN UNION

A number of comprehensive descriptions of the current state of teacher education in the Member States of the European Union have been compiled from the late eighties and onward (14). Eurydice (<http://www.eurydice.org>) and Cedefop provide detailed and up-to-date information on the formal aspects of teacher education and the teaching profession.

Based on these sources and a large number of reports submitted by the different sub-networks of TNTEE a brief conceptual analysis of the current state of teacher education in the Member States of the European Union is presented in order to define the “problem-space” for the challenges teacher education must meet.

A more detailed description of the similarities and differences between models of initial teacher education in the Member States of the European Union is found in the **Annex**.

9. Teacher Education in Europe – a Case of Crisis?

There is a wide *difference* of *opinion* and *belief* about the current state of teacher education in the Member States of the European Union both within and between them:

- While some observers have expressed *sharp criticism* on teacher education and its efficiency,
- other hold quite the *opposite view*.
- What is still lacking is more *profound research* on the effects and consequences of different systems and models of teacher education (15).

At a general level *three quotations* may serve to characterise succinctly the *current situation* of teacher education in European countries:

- As regards the situation of teacher education in England and Wales, H. Judge (1990, p.11) argued that “*teacher education is a product of history rather than of logic (although much has been achieved in the past twenty years to give it more shape and coherence)*” and this argument seems to hold true for most of the models of teacher education in Europe (16).
- In the preface to the first edition of the Handbook of Research on Teacher Education W. Houston (1990, pp. IXff.) commented on the current state and potential future of teacher education as follows:
 - “*the conceptual and research base for decisions about teacher education has never been as strong as it is today*”;
 - “*there has been notable recent progress, but the research basis for such important work as educating the nations teachers is still extremely thin*”;
 - “*we need to base research and practice on what we currently know about teacher education, in order to implement an agenda for consistent, continued development of the field. Until we begin to build on the conceptual constructs and research findings of other scholars and to pursue a line of inquiry in depth, teacher education will continue as a cult practice, with wide differences among schools of education and professors, unable to evaluate or replicate specific practice*”.
- *In most European countries the diverse and complex field of teacher education seems to be full of contradictions, tensions and paradoxes, and one of them lies in the fact that intentions expressed are not always succeeded by appropriate action. This applies to policies concerning teacher education as well as to teacher education itself. Although there is widespread agreement that improvements of teacher education in all its subsystems (initial teacher education, induction, in-service education) are imperative, a host of both internal and external barriers seems to hamper innovations and reforms necessary. Thus, teacher education cannot always fulfil the prominent role postulated*” (F. Buchberger 1997, p. 6).

In times of rapidly changing contexts of education and training *even preserving* existing quality calls for continuous improvement and reform. If it is an aim to *enhance* the existing

quality of education and training, a *programme of perpetual improvement* and *substantial reform* becomes imperative.

It could be hypothesised that the neglect noted above may account for a number of problems confronting contemporary teacher education in many Member States of the European Union today. Some *lack of pro-activity* on the part of different actors in the various spheres of teacher education could be one of the conditions that make more substantial reform of teacher education vital (17). At the same time it has to be noted that teacher education all over Europe has, from time to time, made great progress and improvements especially through a large number of small-scale projects at an institutional level (18).

10. Teacher Education as a Mass Enterprise

Teacher education across the European Union is a mass enterprise:

- More than *half a million teacher students* receive initial teacher education
- in more than *one thousand institutions* dealing with teacher education
- where more than *fifty thousand staff* (e.g. teacher educators, specialists in academic disciplines) and a large number of co-operating teachers (mentors) work.
- In-service education as well as further education have to be provided for more than *four million teachers*.

11. Diversity as the Salient Feature of Teacher Education in Europe?

The claim of diversity seems to be a salient feature in discussion of teacher education in the European Union. Some observers, (teacher educators as well as politicians dealing with teacher education) in the different Member States frequently stress the *uniqueness* of “their” particular system of teacher education and its *incomparability* to “other” systems.

At the same time teacher education may be characterised by some elements common to most Member States of the European Union. Additionally, for several years, policies of the European Commission and OECD (19) have stimulated a detectable *trend towards convergence*.

However, teacher education in the Member States of the European Union is currently organised in systems and models of *a highly heterogeneous nature* (see the Annex for more detailed descriptions).

At a **structural and organisational level** differences can be seen

- **between** the different Member States of the European Union (e.g. the considerable differences of the structure and organisation of initial teacher education between the neighbouring countries of Belgium and France, or different patterns of organisation of teacher education in English speaking and Nordic contexts) as well as
- **within** them (e.g. the different systems and models of initial teacher education in the sixteen *Länder* of Germany).
- **Within** different Member States initial teacher education is usually split up into **different systems** and models for **different categories** or **types of teachers** (e.g. primary school teachers, secondary school teachers, teachers for the vocational school system).

It could be argued that differences between teacher education for different categories of teachers within Member States of the European Union are sometimes larger than those between the same category of teachers across the European Union.

The presence of **diversity** at the structural level of teacher education is mainly a reflection of the fact that pragmatic changes have been made.

- These were governed by **circumstances** (e.g. industrial revolution and the need for a qualified skilled working force, conditions of economic prosperity)
- prevailing at the **time** (e.g. predominance of certain fashionable policies, times of major social changes).
- Teacher education systems were shaped in particular **cultural** and **national contexts** (e.g. relating different perceptions on the role of the state with their impact on the roles of schools, teachers and teacher education in British, French, German or Nordic contexts), and
- have been strongly influenced by **political arguments** (e.g. conservative, social-democratic or neo-liberal ideologies).
- Additionally, diversity reflects distribution of **power** enjoyed by the players between the state and governments, teacher education institutions, schools in the different Member States of the European Union and its subsequent influence on structures, curricula and contents of teacher education, forms of quality control or conditions of teacher work.

It could be argued that the most prominent role in the construction and development of models of teacher education has not been played by theoretical and research based arguments, rational planning or by the expertise of practitioners.

The **collaborative involvement** of all actors involved in teacher education (e.g. politicians, administrators, teacher educators, teachers) in tackling these problems seems to be indispensable to improve the quality of teacher education.

Arguments and empirical evidence put forward by many researchers and observers suggest that the big differences, detectable mainly at a structural level, do not necessarily correspond to variations in curricula and cultures of teacher education. They hold that the teacher

education programmes provided by most institutions across the European Union are strongly influenced by *similar traditions* and *hidden curricula* (“impression of sameness in content”). Diversity is perceived by these observers as being largely a *surface phenomenon* (20).

However, diversity at a structural and organisational level may be regarded as a big *advantage*. Diverse patterns in teacher education might provide rich material for (re-)defining “problem-spaces” and for developing “problem-solutions” for reforms and improvements of teacher education believed to be necessary in the different cultural and social contexts of Europe (21).

12. Common Patterns and Trends

Although diversity may be seen as a salient feature of teacher education in the Member States of the European Union, there are also a number of common patterns and trends.

- Some of the *traditions* common to most of the systems and models of teacher education and their influence on contemporary teacher education will be considered in the next chapter (chapter 13).
- A *rationale* common to most European systems and models of teacher education will be described in chapter 14. The following chapters will deal with
- the leitmotif *professionalisation* of teaching and teacher education (chapter 15),
- *minimum-competency models* of teacher education (chapter 16),
- issues of *evaluation* and *quality* (chapter 17), and
- *curricular components* common to most models of teacher education in Europe (chapter 18).
- Finally, major *common trends* in European teacher education over the past thirty years are described in chapter 19.

13. Contemporary Teacher Education – Bound by Traditions?

Contemporary teacher education in the Member States of the European Union seems to be strongly influenced by some *long-standing traditions*. These traditions are made up of

- a *blend* of
- not always consistent and sometimes hidden
- *assumptions, beliefs* and *opinions* on the professional role of teachers and on the acquisition of professional expertise.

These long-standing traditions may account for the *segmentation* and divisions between different categories of teachers and the corresponding models of initial teacher education. They mirror the sharp distinction in schools, specifically that between public elementary education on the one hand and secondary education provided only for a privileged minority throughout the last century and well into this on the other.

The influence of these traditions can still be seen in the organisational and institutional patterns as well as the curricula of teacher education.

13.1 Primary School Teacher Education and a “Normal School Tradition”

Teacher education for teachers at the primary school level has been strongly influenced by a “normal school tradition” (“*Seminarium*” or “*Ecole normale tradition*”). The *focus* of this tradition is on

- “*practical training*” in the form of *methodology courses* closely related to curricula and subject matters and/or learning areas taught in schools and on
- supervised *teaching practice* frequently organised in special training schools, while
- the importance of *educational theory, academic and scientific knowledge* and *research-based knowledge* on teaching, studying and learning is *devaluated*.
- Categories like “*ethos*” or the “*personality of the teacher*” (“*Lehrerpersönlichkeit*”) form integral parts of this tradition and
- in rather *rigid learning environments* prospective teachers should learn to “*model the master*” (teacher) and to acquire some basic skills of teaching following an *apprenticeship-model*.
- To a large extent this tradition builds upon untested “*craft*” *knowledge* developed by practitioners and could be defined as a “*celebration of experience*”.

At an *institutional level* the “normal school tradition” was originally a part of the programme in schools at upper secondary level. Most of these teacher training schools at upper secondary level have gradually been transferred into single-purpose institutions at post-secondary level (e.g. *Pädagogische Akademie* in Austria), non-university institutions of higher education (e.g. *Seminarium* in Denmark) and later, in many Member States of the European Union, integrated into universities.

Even today at an *organisational level* the “normal school tradition” can be closely identified with a *concurrent model* of teacher education:

- Parallel programmes in
- methodology,
- some basic subject studies,
- some educational studies (e.g. “*Didaktik*”, educational psychology, educational sociology) and
- supervised teaching practice are followed by the students over the whole of the course.

Although in most Member States of the European Union teacher education for primary school teachers has been transferred into the higher education sector, the “normal school tradition” still exerts an influence (e.g. on matters such as the culture of teaching, studying and learning and on the importance attached to methodology courses and teaching practice). To some extent the tendency to neglect educational research can be seen as a legacy of this tradition. A certain *lack of coherency* in the goals of primary school teacher education may reflect general problems concerning the identification of a knowledge base for teaching and the teaching profession and reflect the “normal school” influence.

13.2 Secondary School Teacher Education and an “Academic Tradition”

In contrast an “academic tradition” has had a very strong influence on teacher education for teachers at schools at the (upper) secondary level. This tradition emphasises the overriding importance of *scientific knowledge* in academic subject disciplines for teaching and the teaching profession.

In the “academic tradition” it is assumed that

- knowledge of the scientific structures, contents and methodologies of particular academic disciplines,
 - the competencies (e.g. general problem-solving capacity) and
 - attitudes learned during the processes of knowledge acquisition (“academic habitus”)
- are sufficient to enable teachers to perform the tasks of teaching and education competently. Reference is frequently made by representatives of an “academic tradition” to the Humboldtian principle of “*Bildung durch Wissenschaft*” (literally interpreted as education or erudition through dealing with science) or the concept of *liberal education*.

The importance of educational theory, methodology and teaching practice is only partly recognised within the “academic tradition”. While scientific studies in a small number of academic disciplines frequently comprise more than 80-90% of the programmes, professional studies and teaching practice are restricted to the remaining percentage.

This implies that

- (prospective) teachers are socialised as *subject specialists* in a small number of academic disciplines (or in only one academic discipline in some Member States), and that
- *main tasks* of teachers and the teaching profession (e.g. “providing powerful learning environments” or “supporting students’ learning”) are *discounted* as goals and contents of initial teacher education (22).

While the “normal school tradition” may be identified as “celebrating experience”, an “academic tradition” of teacher education may be defined as “*celebrating the academic discipline*”.

At an *institutional level*, historically, the “academic tradition” of secondary school teacher education has been a part of the various faculties of *universities* (23).

At an *organisational level* it is mostly identified with the *consecutive model* of teacher education in which

- scientific studies in academic disciplines at university are followed
- by (some) professional studies and/or
- a (short) probationary period at schools.

Similar conditions apply in the *sector of higher education teachers*. While being highly qualified in their academic disciplines, teachers in higher education do not get adequate, if any education for teaching.

13.3 A Rich Variety of Other Traditions

In some cases there are somewhat different traditions of education and training for other categories of teachers and groups of education staff (24), e.g. for

- teachers of “practical subjects” (e.g. sports, arts and music),
- teachers in vocational and technical education and training,
- teachers in economic and/or business education and training,
- teachers in special needs education,
- school managers and administrators,
- curriculum developers,
- kindergarten and preschool teachers,
- teachers in adult education and
- day care staff or social workers.

Different from a “normal school tradition” and an “academic tradition” these other forms may be seen as examples of the diversity to be found in the education of teachers and education staff in Europe. While these other traditions have frequently been neglected in discourses on teacher education, consideration of their potential could provide an additional input for reforms and improvements of teacher education (25).

14. Static Conceptions of Teacher Education and a “Rucksack-Philosophy”

Most systems and models of teacher education in the Member States of the European Union adopt a static “rucksack-philosophy”. *Static conceptions* of teacher education

- *stress* the importance of initial teacher education,

- *disregard* the need for continuous professional development of teachers, and
- *neglect* the importance of in-service education and further education of teachers, and
- *little* or no *attention* is given to creating systemic relationships between teacher education, staff development, school development and educational research.

The *hidden assumption* behind this concept is that initial teacher education has the ability

- to equip prospective teachers with all those competencies that seem to be necessary to competently fulfil the tasks of the teaching profession over a life-long career, and
- at the same time to develop the problem-solving capacity necessary to meet rapidly changing tasks of teaching and the teaching profession.

While these assumptions may, to some extent, have been valid in static societies, they are *inappropriate* in the dynamic and rapidly changing contexts of the today.

In addition a characteristic of this conception of teacher education is the *strict separation* between the different phases of teacher education. No connections are made between initial and in-service provision or from initial phases into school development and improvement activities.

There can therefore only be *limited transfer of knowledge and experience* across the areas limiting the potential for development and improvement.

A *recognition* of the *shortcomings* of static conceptions has led to the introduction of sometimes comprehensive models of in-service education in most Member States of the European Union. However, the majority of these can be regarded as simply “*add-ons*” to the pre-service programmes. The in-service education of teachers taking place in different institutions, sometimes in single-purpose in-service institutions, and the aims and contents of in-service education have in most cases not been related coherently to the curricula of initial teacher education and to school development (26).

There is still a *lack* of the more *systemic reform* of teacher education perceived to be necessary in a dynamic learning society (27).

15. Professionalisation – a Predominant Leitmotif?

The emergence of the movement for the “professionalisation” of teaching and teacher education in the nineteen-sixties could be due to a number of factors. Among these are:

- the perception of severe *shortcomings* within traditional models of teacher education (e.g. the “normal school tradition” and the “academic tradition”) with regard to both effectiveness and efficiency,

- a strong need to improve and reform education and training (cf. “*school reform movement*”),
- *new challenges* for education and training (e.g. providing equality of education opportunity, secondary education for all), and
- a belief in the *benefits of modernity* (e.g. the potential of scientific knowledge and scientifically validated educational practices and technology to improve all education and training in general, and teacher education as a necessary condition for high quality education in particular).
- Added to this were a number of *sociological factors*. The move towards introducing all forms of teacher education as university education being one factor in the transformation of the teaching profession into an academic profession comparable to medicine, law or engineering (28).

“Professionalisation” like many other movements may be seen as a rather heterogeneous concept with different meanings both within and between the different cultural contexts of the European Union (29).

In the discourse on teacher education and the teaching profession the broad concept professionalisation comprises amongst others the concept of “*pedagogical professionalism*” (30) and sociological aspects of “*professionalism*”. Both aspects of professionalisation seem to require

- a comprehensive *research-based knowledge base* on teaching, studying and learning validated by research, and
- a rich repertoire of empirically *validated practices* for promoting the processes of teaching, studying and learning effectively, and imply
- *autonomous* and
- *competent* professional teachers acting as
- *critical intellectuals*
- in the *interest* of their *clients* (e.g. students), and with a
- responsibility to (*an*) *autonomous professional organisation(-s)* of the teaching profession and
- its/their *code of ethics*.

Teachers who are professionals might then be conceived as those who

- adopt cogent and justifiable transformations of
- research-based knowledge and validated practices of education, teaching, studying and learning
- to particular cases (e.g. learning situations, students)
- as specially educated and/or trained persons (education staff)
- considering the interests of the clients (e.g. students) involved.

Inspired by the concept of a “*new professionalism*” (31) and considering developments of other academic professions such as the medical profession (32) activities in many European

countries have aimed at increasing the quality of teaching and teacher education by professionalisation.

The *main components* of a professionalised teacher education programme might be

- studies in the *sciences of the teaching profession* (e.g. educational sciences, *Didaktik/Fachdidaktik* literally translated as didactics and subject matter didactics, educational psychology, educational sociology),
- all of these closely connected to *educational research* and aiming at the development of
- professional problem-solving capacity,
- a broad repertoire of validated practices to promote and support learning, and
- a professional code of ethics.

Other components are:

- coherent and supervised *practical and/or clinical studies*,
- in-depth studies in a number of *academic fields* relevant for curricula of schools and teaching, studying and learning particular cases and/or topics, and
- an *integration of studies* in the sciences of the teaching profession, other academic studies and clinical and/or practical studies would also form part of such a programme.

Reforms of teacher education in Germany and England and Wales in the seventies, in France with the introduction of Instituts Universitaires de Formation des Maitres (I.U.F.M.) at the beginning of the nineties, the permanent reform and improvement of Finnish teacher education the past two decades, innovations in some other Nordic countries and recently in Portugal, work along this line. Similar developments can be observed in the USA.

There is evidence that the attempts to professionalise teacher education have brought about

- a *large number of improvements* and positive effects both on teacher education and teaching at school level in most Member States of the European Union (33).
- At the same time these attempts did not lead to substantial reforms of structures and curricula of initial teacher education in a majority of the Member States, and
- the *nucleus of traditional models* of initial teacher education has not been subjected to more fundamental changes.

The incorporation of initial teacher education into the higher education sector as one component of the process of professionalisation may be seen as a *necessary condition* for pedagogical professionalism. In no way can it be seen as a *sufficient condition* for successful teacher education and teaching (34).

16. Minimum-Competency Models of Teacher Education – the Renaissance of Old Models?

In *sharp contrast* both to

- traditional models of teacher education (“normal school” and “academic”) and to
- the approach of a professionalised teacher education outlined above

attempts have been made mainly in English speaking cultural contexts to *(re-)introduce* different forms of teacher preparation based on a minimum-competency concept (35). Attempts to (re-)introduce “*school-based teacher training*” in England and Wales and so-called “*alternative routes into teaching*” or “*standards-based teacher training*” at State level in the USA are examples of this (36).

The notion of minimum-competency can be understood in two quite opposite ways:

- as an *absolute minimum* of competencies necessary to fulfil basic tasks of teaching to be acquired in teacher education, or
- as a certain *standard of competence* that has to be guaranteed by teacher education in every case.

Although greatly heterogeneous in nature minimum-competency models of teacher education often have the following characteristics:

- a *short duration* of professional studies,
- a focus on (short) periods of *practical training* in schools (“apprenticeship”),
- a *disregard* of or low priority for educational theory and educational research, as well as of
- scientific knowledge of academic disciplines.

Furthermore

- teachers are conceived as “*doers*” and are supposed to execute certain externally pre-defined tasks (e.g. teaching basics in a prescribed format).

It is perceived as rather *problematic* by most experts in the field of teacher education, that there is some evidence that the minimum-competency models might lead to a *deprofessionalisation* of teaching and teacher education. High quality education and training might not be achieved by teachers trained this way. Additionally, minimum-competency models of teacher training seem to have *limited potential* for the development of

- professional problem-solving capacity,
- critical thinking and
- pro-activity

necessary to meet rapidly changing tasks of the teaching profession. This needs to be investigated further. However, minimum-competency models of teacher training have to be regarded as a challenge to both traditional and professionalised forms of teacher education.

17. Evaluation – a New Leitmotif?

The *evaluation* of institutions, programmes and courses as a *mechanism* and *strategy for reform*, development and control of education and training in general and of teacher education in particular may be seen as another and very persistent strategy.

The introduction of evaluation measures was one response to demands on e.g. accountability and efficiency, which grew during the seventies and eighties. The development and introduction of *systematic* external and internal *evaluation* of universities, programmes, courses, staff or students at a national and local levels were called for.

Evaluation strategies should enable national and local actors to

- justify the allocation and use of economic and other resources,
- provide data concerning standards and outcomes attained,
- ensure accountability, and
- encourage staff and programme development (37).

It is important to note that in the early nineties and onwards the emphasis on evaluation within the education sector became coupled to concepts originally developed within the *industrial sector* like “quality”, “quality assurance”, or “total quality management” mainly as part of neo-liberal policies.

The need and importance to develop and introduce models and techniques of evaluation is evident. This need is further accentuated e.g. in connection with recent attempts to *accredit teacher education programmes* and by demands to introduce *new models of teacher certification*. This also emphasises the necessity to try to identify the specific characteristics of teacher education and teacher work in the development and refinement of evaluation strategies and methods (38).

18. Common Curricular Components in Teacher Education Programmes

The different systems and models of teacher education in the Member States of the European Union with their goals, contents, learning cultures, assessment procedures and structures of organisation might be seen as more or less tightened *conglomerates* consisting of components of very different origins.

However, some *curricular components* seem common to most of the models of initial teacher education:

- studies in education and/or in educational sciences (e.g. *Didaktik*, educational history and philosophy, educational psychology, educational sociology evaluation),

- academic studies in disciplines related to or with perceived relevance for curricula of schools,
- studies in *Fachdidaktik* (literally translated as subject matter methodology or subject didactics) or studies in *Bereichsdidaktik* (literally translated as methodologies of certain cross-curricular fields at school level such as multicultural education, social studies, peace education, business education, environmental education, gender studies or learning with new information and communication technology) (39), and
- teaching practice.

A clear terminology has not yet been developed and the components mentioned have different meanings in the different cultural contexts of Europe (40).

The importance attached to these different components, the sometimes rather peculiar combinations of them as regards sequence or integration, and a set of interrelated features of an organisational as well as an institutional nature have led to the *variety* of systems and models of teacher education recognisable in the Member States of the European Union.

On a rather general level the following basic *structures of curricula* of teacher education may be described (41):

- *concurrent models* of teacher education, in which all components mentioned have to be studied in parallel,
- *modularised models* of teacher education, in which in many cases students themselves may decide the sequence,
- *consecutive models* of teacher education, in which academic studies precede professional studies (e.g. education studies, studies in *Fachdidaktik*, teaching practice), and
- *integrated models* of teacher education, in which the focus is on the integrative study of professionally relevant themes and problems relevant for teaching and the teaching profession (e.g. “problem based learning” or “thematic” approaches).

Coherent research on the effects and efficiency of these different models is still not available. However, the current state of the curricula of teacher education points to a number of unresolved *problems*:

- The *goals* for the professional education of teachers remain *vague* (42). This vagueness may contribute to unsatisfactory outcomes. Central tasks of the teaching profession such as “providing powerful learning environments” or “support of students’ learning” are in many cases not found as main targets of teacher education.
- Curricula of teacher education are in most cases organised around the *structures of academic disciplines*. This applies especially to models of secondary teacher education. The complete relations between the academic discipline and its development on the one hand and the school subject on the other are in most cases insufficiently analysed.

In *primary school teacher education programmes* the following problems can be traced:

- In some countries traditional curricula of teacher education, focusing on methodologies

of the different subject matters taught at school have only been subjected to some small modifications (e.g. Austria and Ireland).

- Other countries have begun to centre primary school teacher education curricula on rather traditional academic conceptions of secondary school teacher education and introduced academic studies in a small number of disciplines into the curricula (e.g. Germany).
- In countries with highly developed professionalised structures of teacher education (e.g. the Nordic countries) targets defined for teacher education may be met more adequately by adopting more integrative curricular approaches.

Other problem issues are:

- Recent curricula of initial teacher education do not always reflect changed and ***changing roles*** of teachers and new tasks that the teaching profession is expected to fulfil (cf. a certain or even strong reluctance of teacher education in many Member States of the European Union to deal with issues of multiculturalism or the process of European integration, gender issues, or with the adoption of new information and communication technology for teaching, studying and learning processes).
- A ***scientific base*** of/for the teaching profession (such as medicine for medical doctors) dealing with teaching, studying and learning processes integratively is not fully developed. Uncertainties and disputes about the knowledge base for teaching may play a significant role in this situation.
- ***Research and development*** is absent in several programmes of teacher education both as an integral curricular component and as a guiding principle.
- Additionally, contents of curricula of teacher education frequently seem to correlate with a learning environment characterised by “***knowledge transmission teaching***” which seems to be counterproductive to aims defined for professional teacher education.
- Finally, an ***orientation*** on problem-, project- and research-oriented learning processes is limited.

This general characterisation of common curricular patterns and problems outlined could be supplemented by a number of rich, promising, ***alternative approaches*** which have contributed to substantial restructuring and improvements of curricula of teacher education mainly at an institutional level (e.g. developments in the Nordic countries). We will return to such alternative approaches.

19. Common Trends: the Past Thirty Years

All the factors outlined in the previous chapters have led, over the past thirty years, to some broader and not always consistent patterns and trends in most European countries (43). But,

it has to be noted that these patterns and trends have been challenged in recent years by various sources (e.g. new priorities of education policy, changing patterns of accountability or managerialism and New Public Management).

The *duration* of programmes of initial teacher education has gradually been prolonged:

- This applies in particular to initial teacher education for teachers at kindergarten, pre-school and/or pre-primary school level. Such programmes now usually last for *three years* (in e.g. France and Portugal even longer) and takes place in the sector of post-secondary education in many Member States of the European Union.
- The minimum duration of programmes of initial teacher education for *primary school teachers* in the European Union is now *three years*. In all Member States of the European Union (except Austria) initial teacher education for primary school teachers takes place in the sector of higher education.
- Programmes of initial teacher education for teachers of general academic subjects at (*upper*) *secondary level*, organized by universities, last a *minimum of four years* in all Member States of the European Union.

The criteria for *admission* to teacher education have been tightened.

- In most countries applicants to initial teacher education for primary and secondary schools have to hold a qualified school leaving certificate at upper secondary level which may be obtained after a minimum of eleven years of schooling (44).

New systems of initial teacher education have been introduced in many countries

- for teachers within the sector of *special needs education*, and
- for *vocational education*.
- The latter applies especially to initial teacher education for teachers for commercial schools, while problems persist concerning the initial teacher education for teachers for technical schools in most Member States.

There has been a trend towards the incorporation of all types of initial teacher education into the *higher education sector* and into university faculties although the patterns differ. With regard to the initial teacher education for teachers of compulsory schools the following stages of development can be traced:

- Creation of schools at upper secondary level providing initial teacher education in the 18th and 19th centuries.
- Establishment of separate institutions for initial teacher education at the post-secondary level (e.g. *Seminarium*).
- Linkages of these post-secondary level institutions with higher education institutions.
- Incorporation of these separate institutions of teacher education into the sector of higher vocational education (e.g. polytechnics or *Fachhochschulen*) or into the university sector (e.g. Finland, Germany, Greece, Portugal, Sweden and United Kingdom).

It is also evident

- that many programmes of initial teacher education have become more highly *formalised*,
- that *standardisation* and *rationalisation* are apparent, though a lack of explicitly defined goals for the professional education of teachers seems to persist in many countries, and
- that more specific and *professional components* have been drawn into programmes of initial teacher education for teachers at the primary school level. In many countries this

applies to specialised studies for different domains of learning (e.g. social studies, environmental studies, gender studies, learning with new information and communication technologies) and/or to subject studies (e.g. mathematics, foreign languages).

- The **relationships** between programmes of teacher education and curricula of schools have been tightened. This applies particularly to teacher education for teachers at (upper) secondary level and to former decentralised education systems (e.g. England and Wales). Recently **more elements of professional relevance** have been added to many programmes of teacher education; especially to teacher education for secondary level and in the sector of vocational education. This means more studies both
 - in the sciences of the teaching profession (e.g. educational sciences, *Didaktik* and *Fachdidaktik*), and
 - more practical components (e.g. supervised teaching practice) have been infused into the programmes of initial teacher education have been absorbed into the programmes of initial teacher education.
- In some Member States of the European Union **isolation** and **differentiation** between the education of different types of teachers and different institutions and their programmes of teacher education have been reduced. The **permeability** between them has been increased (e.g. Finland, Portugal and Sweden), but problems of fragmentations of initial teacher education for teachers of different types of school at lower secondary level (e.g. Austria and Germany) or between general academic and vocational education still persist.
- In most countries the importance of in-service education and of continuous professional education as well as of further education have been recognised and in some countries comprehensive systems for these components have been established.

It is debatable whether these broader trends and changed or changing patterns outlined

- may be seen as **modifications** following a “*more of the same philosophy*” model,
- if they reflect **incremental change** and **effective adaptations** to changed tasks and expectations, and/or
- if they imply **substantial change** in teacher education.

Without doubt modifications and reforms of teacher education springing from the emphasis on professionalisation have brought about a large number of improvements and incremental change. The inclusion of all forms of teacher education into the university structure that has been achieved in a number of Member States of the European Union, can be seen as a necessary condition both

- for improvements made and
- for more necessary and imminent far-reaching reforms.

At the same time it cannot be ignored that the **core of teacher education** has not been subject to substantial reform over the past thirty years. In most European countries this seems to apply to the goals and contents of initial teacher education (especially for secondary level teachers), to the continuous professional development of teachers, and to the relations between initial and in-service components.

The rapid changes of the context of teaching, of the teaching profession and of teacher education have been perceived and considered by the different actors in the different spheres of teacher education only after some *delay* and only to a limited *extent*.

Confronted with changed and rapidly changing contexts, the actors in the different spheres of teacher education may have been too *reluctant* to act and may have missed opportunities to be *pro-active*. While incremental change to meet some continuing and acute contemporary issues could be achieved, the context and the problems to be solved for education and training in general, and teacher education in particular, have increased. Has teacher education fallen into an “*innovation trap*”? (45). Based on an analysis of the current situation it becomes increasingly evident that a more substantial reform of teacher education in all its components has become inevitable.

PART III

THE CHALLENGE OF CHANGE – TEACHER EDUCATION IN RAPIDLY CHANGING CONTEXTS

This part of the Green Paper on the challenge of the change confronting teacher education is arranged in nine chapters.

- In chapter 20 some general remarks are made on the complex relationships between changes in society, the education sector and teacher education.
- After a brief consideration of perceptions of the European Commission on recent changes of the context of education and training (chapter 21)
- some major changes at three interrelated levels (geo/social/political, technological and material) are described in chapter 22.
- That chapter is supplemented by reflections on the changing perceptions of the role that the state is supposed to take in the education sector (chapter 23),
- an analysis of the influence of an increased emphasis of economic thinking on teacher education (chapter 24), and
- descriptions of general changes in the higher education sector and their relevance for teacher education as an integral component of higher education (chapter 25).
- Chapter 26 deals with research on teaching and teacher education as components of a rapidly changing context of teacher education and their impact on teacher education,
- while chapter 27 discusses challenges for a teaching profession confronted with change (e.g. differentiation of tasks, problems of demand/supply) and their repercussions on teacher education.
- In the final chapter the changed perceptions of the roles and tasks teachers are expected to fulfil are discussed (chapter 28).

20. Relationships between Changes in Society, the Education Sector and Teacher Education

Various groups in the society that hold different interests and power seem to be interconnected in a number of complex *systemic relations* to the education and training sector, and to teacher education (46).

Changes in society may influence the *education sector*

- because the education sector may provide (already or through changes) answers and *solutions* (partially or even fully) to new challenges and problems,
- by producing *changed relations* between the education sector and other sectors of society,
- by questioning the *monopoly* of the education sector,
- by shaping *new divisions of labour* in educational matters (e.g. between home and school, between education institutions and informal learning environments), and/or
- by placing *new demands* on the education sector.

In their turn these changes are presumed to influence teacher education. They become visible as changes in one or more of the following areas:

- the *aims* and *goals* of teacher education (e.g. orientation on key qualifications instead, on knowledge products, learning to deal with complexity and uncertainties in unstable contexts);
- the contents of *curricula* (e.g. knowledge management instead of learning scientific structures of academic disciplines),
- the *cultures* and *methodologies* of teaching and learning (e.g. focus on problem-, project- and research-oriented learning),
- the *allocation of resources* to various components of teacher education programmes,
- the *division of tasks* between the different components of teacher education (initial teacher education, induction, in-service education and further education),
- the *structure of organisation* of teacher education and
- its *institutional location*.

21. Three “Factors of Upheaval ”

“Among the many complex changes taking place in European society, three major trends, three “factors of upheaval”, are manifest. These are

- the internationalisation of trade (*impact of internationalisation*),
- the dawning of the information society (*impact of the information society*), and
- the relentless march of science and technology (*impact of the scientific and technical world*)” (European Commission 1995, pp. 5-6).

As solutions that “*education and training might provide in eliminating the pernicious effects (of) these three sources of upheaval*” the White Paper “Teaching and Learning: Towards the Learning Society” of the European Commission suggests

- “*a reintroduction of the merits of a **broad base of knowledge***”, and
- “*building up **employability***”.

While the three trends mentioned by the European Commission circumscribe some major changes at a level of symptoms, more comprehensive descriptions and analyses of changes (e.g. shift of values) and profound sociological analyses are required to gain a deeper understanding of these changes, their conditions and implications.

The focus of the European Commission on economic, social and subsequently on education aspects seems to be of highest relevance. At the same time it is debatable, whether the rather narrowly conceived focus adopting *traditional paradigms* and measures should be enlarged and take into account *alternative paradigms* for “problem-solutions” that are perceived to be necessary (47).

22. Some Major Changes and Challenges

Education and training in the next century must contribute to equip citizens, organisations and structures of the community with knowledge and skills to deal pro-actively and effectively with the many challenges of change with which European societies are confronted.

Without going into detail at a level of symptoms a large number of both *diverse* and *interrelated changes* of the context of education may be observed that are challenges for education and training. Some major changes may be described at a geo, social, political, technological and material level.

Despite the number and diversity of changes, three *common features* should be analysed:

- the *rapid speed* of changes,
- their *impact* on *most spheres of human life*, and
- an ever increasing *complexity* of social, cultural and economic issues with which European citizens are confronted.

At a *geo, social and political level* the following main issues of change should be described:

- the phenomenon of *internationalisation* and *globalization* of all aspects of life,
- the process of *European integration* closely related to an increasing *mobility* of the citizens of the European Union,
- increasing immigration into the European Union. Both the mobility within the European

Union and the immigration into it have close relationship to the issue of *multiculturalism* and *racism*,

- changes of *values* (e.g. a shift from solidarity to autonomy and individualism) and a degree of collapse of old *social mores*,
- changed structures of *family* and *partnership*,
- longer *life expectancy* and an *ageing population*,
- changed structures of *labour* and *employment* (48) and
- *social unrest* and *disenfranchisement*.

At a *technological level* e.g. the following phenomena are observable:

- an ever increasing *explosion of information* and knowledge coupled with an increasing complexity both of social and technological issues,
- the impact of *new information and communication technologies* on all aspects of life,
- the rapidly increasing impact of *new technologies* (e.g. biotechnology),
- an ever increasing *complexity of work-place skills*, and
- demands of industry for *flexibility* in work-force.

At a *material level* the issues of

- *higher standards of living* on the one hand and of
- a *new poverty* (cf. social exclusion) on the other,
- pressures on *world commodities* and
- an increase in *leisure time*

have to be taken into account as changes as well as challenges. Differences between and within countries in these respects have to be taken into account.

Some of these changes that affect the role and tasks of education and training, schools, teachers and teacher education have been placed high up on the *education policy agenda*. These include

- integrating information and communication technologies into teaching, studying and learning processes,
- gender issues,
- foreign and/or Community language learning,
- increasing the “*employability*” especially of youth,
- combating failure at school, and
- establishing new partnerships between the education sector and the sectors of labour and economy.

Other important changes and challenges (e.g. European integration, citizenship education, values education, multiculturalism) with their implications for the (re-)definition of the aims of education and schooling and to the teaching profession and teacher education have only received *limited attention* in education policy.

23. Changing Perceptions of the Role of the State in the Education Sector

Since the early nineties perceptions as to which role and tasks the nation state, government and administration ought to fulfil have changed in most Member States of the European Union. The introduction into the political discourse of such concepts as globalization and/or inescapable market forces and principles such as subsidiarity the State has *reduced* its *responsibility* in a large number of fields of policy such as economic affairs, health care, social security, traffic, environmental protection and education and training (49) in many of the Member States.

The vision of a *social welfare state* providing equal education opportunities for all has come under *heavy attack* by neo-conservative and neo-liberal policies on the one hand and by post-modernist ideologies on the other. In most Member States of the European Union it was perceived to be advantageous to *reduce the responsibility* of the democratically legitimate State in the areas of education and training and either to complement it with, or to replace it by new structures and mechanisms such as New Public Management (50).

Devolution, deregulation, autonomy choice as well as privatisation and private initiatives have become *new formulae* frequently used in political discourses on education and training. But, in the different Member States of the European Union and for different groups of society these concepts have different meanings:

- Deregulation or autonomy may be seen as a next and necessary step in the development of democratic societies in which an increasing number of citizens will have to take increasing responsibility.
- Neo-conservative and neo-liberal ideologies or a “New Right” see these formulae as programmes where control is relocated to the private or market sphere.

Although highly heterogeneous in nature these changed perceptions on the role of the State have implications for education and training in general and for teacher education in particular. Implications relate to structural and curricular problems as well as to organisational, administrative, managerial and financial issues.

As regards *school education*

- an increasing demand on parents to become *active partners* in education and training matters may be seen as a symptom.
- Similar considerations apply to the move towards more *autonomy of schools* in curricular and organisational affairs.
- In addition, the attempted professionalisation of teaching and the teacher work may be interpreted as a need for more *professional autonomy*.

As regards *teacher education* most Member States of the European Union have adopted the following policies:

- A policy of *devolution* and *deregulation*. Mechanisms of governance have changed from so-called “rule-directed models” making use of sometimes rather narrowly conceived guidelines (e.g. national curricula) to so-called “goal and outcome-directed models”.
- Responsibilities and tasks of the state have been reduced to issues of *strategic planning* and *strategic management*.
- More *autonomy* has been given to institutions of teacher education as regards responsibilities both for curricula and the administration of material and human resources.
- At the same time many Member States have begun to establish professional *agencies for the accreditation* of teacher education programmes and the *certification* of teachers (e.g. Portugal) aiming at high quality teacher education programmes and a professional monitoring of the quality of programmes of teacher education.

In contrast to these trends mentioned a small number of Member States of the European Union has increased the responsibilities for teacher education programmes at a central state level (51).

However, a certain *trend towards convergence* may be observed. Governments and Ministries of Education seem to take more responsibilities for the strategic planning of teacher education and less for curricular issues, administration and management, while responsibilities for the latter increase at an institutional level (52).

While the trends mentioned seem to have a strong influence on teacher education and its organisation, they also imply that teacher education curricula have to provide learning situations in which teachers may acquire those qualifications necessary to act competently in the new context of increased autonomy at school and classroom level. Teacher education has to prepare teachers to deal competently with the *increasing relative autonomy of schools* both regarding curricular issues (e.g. development of school action plans and curricula specific to particular schools) and managerial issues.

An orientation of teacher education towards a “*new professionalism*” might become a necessary condition to realise *school autonomy*.

24. Increasing Economic Rationality

Economic rationality and economic thinking have gained an increasing influence in society even in the field of education and teacher education (53). Especially since the early nineties these issues seem to dominate education policies in general and on teacher education in particular in a number of Member States.

Aimed at a reducing of public expenditure for (teacher) education *new forms of financing*

(teacher) education have been introduced in some Member States of the European Union based on

- somewhat narrowly conceived criteria (cf. problems in regard to performance indicators) and on
- outcomes produced.

While public expenditure for teacher education has been reduced in most Member States, institutions of teacher education have increasingly been made accountable for an optimal *economic use* of both material and human resources. As a result e.g. changes in the student-staff ratio had to be made in a number of teacher education institutions and/or the teaching load of staff had to be increased. It should further be noted that teacher education – initial teacher education as well as in-service teacher education – has become subject to *market forces* and an increased competition between different providers of teacher education may also be detected. This applies particularly to providers of in-service education. At the same time education and training are seen as *commodities* by an increasing number of parents and students. A “value for money” attitude is winning ground (54). This changing attitude may have a number of repercussions on education as well as on teacher education.

25. Structural Changes in the Higher Education Sector

In most Member States of the European Union teacher education has become an *integral part* of the sector of higher education (55). Thus, teacher education shares both the general changes of the context of the higher education sector and the challenges with which the sector is confronted.

“Secondary education for all” was a catchword of the sixties and “*life-long learning for all*” or “*higher education for all*” have become formulae of the political discourse in the nineties.

Five components are included in this rhetoric:

1. From an economic perspectives it is argued that highly developed post-industrial information societies depend on the optimal development of all their human resources (cf. *human capital theories*). This would call for the development of qualifications at the highest level possible, and higher education and training for a large number of persons.
2. The speed of technological changes and social developments would imply, that the higher education sector has to assume more responsibility for the *continuous education* and training of a large number of persons. In addition, institutions of higher education and training had to be developed into *comprehensive knowledge centres* responsible for
 - the production of *scientific knowledge*,
 - the development of *problem-solutions* in close partnership with enterprises (cf. issues

of knowledge transfer and knowledge transformation),

- the ***initial education and training*** of an increasingly heterogeneous population of learners (students) and
 - the ***continuous education and training*** for different groups of persons.
3. At the same time an ever ***increasing number of persons*** have developed a pressing need for the highest possible quality of education and training (56).
 4. New information and communication technologies and their adoption for education and training processes have opened up ***access*** to higher education and training (cf. open and distance learning, tele-learning, virtual universities and attempts to establish a virtual teacher college).
 5. Working parallel to providers of formal higher education the presence of ***providers of non-formal higher education*** and training may be perceived as an additional challenge (57).

All these factors outlined have led to an expansion of the higher education sector in all Member States of the European Union and ***mass higher education*** has become a reality. Closely related to the expansion of the higher education a process of ***diversification*** has taken place. ***New types of institutions*** have been established in the sector of higher education (58).

In a number of Member States changes of the structures of higher education programmes, of the ***mechanisms of approval*** of programmes and of the ***structures of certification*** have been made. An European-wide trend towards convergence to the following structures of programmes and certification may be observed (cf. the Joint declaration of the European Ministers of Education convened in Bologna on the 19th of June 1999 - “The European Higher Education Area”):

- undergraduate studies,
- postgraduate studies,
- doctoral studies and in addition,
- institutions of higher education and training are supposed to provide programmes of short duration leading to certain diploma.

These developments have challenged traditional conceptions of higher education and especially of university education in a number of Member States of the European Union. A number of universities have failed to be sufficiently pro-active in dealing with changing contexts and this has accentuated the current problems (59).

All these factors and general trends within the higher education sector will ***affect*** teacher education as an integral component of the higher education sector:

- Changes in the ***institutional location of initial teacher education*** (cf. the discussions in some Member States of the European Union whether initial teacher education for teachers at primary school level should be (re-)located to institutions of higher vocational education

or remain at universities, and problems with establishing and running virtual teacher education colleges).

- Changes concerning the *structures of programmes* and
- *certification* of teacher education studies (cf. trends towards a modularisation of initial teacher education).
- Problems in regard to the *location* of in-service education, continuous professional education and further education of teachers as well as educational research.
- Problems with the organisation of these, and/or
- problems with an increasingly *heterogeneous teacher education student population*.
- Changed and changing tasks of the higher education sector call for *qualified teaching staff*. Surely, an essential element of high quality higher education and training is a well-educated and professional staff in the higher education sector. This might well be a new and important task for teacher education.

26. “State of the Art” or “State of Practice”?

“*State of the art-knowledge*” can be defined as the knowledge gathered from the huge amount of research and the scientifically validated practices for improving teaching and learning and teacher education submitted both by research on teaching and research on teacher education in recent years (60). At the same time the “*state of practice*” of teacher education may be identified by a number of persisting problems (e.g. curricula, relationships with schools).

Although new insights from research on teaching or research on teacher education do not occupy the most prominent role in the social arena of teacher education (reform), these insights have to be regarded as another component of a rapidly changing context of teacher education, and as a *challenge* to existing programmes and practices of teacher education.

Some *main insights* produced by research on teaching and research on teacher education are:

- Experiences from a number of *concrete reform and development projects* (61) or cross-European *curriculum development projects* some of which have been supported by the action scheme ERASMUS of the European Commission.
- Increased knowledge on the *effects and efficiency* of different models and methodologies of teacher education.
- Insights into the conditions and effects of models of *reflective teacher education, action research* as well as from the “*teacher as researcher*” movement.
- Improved knowledge about the *professional development* of teachers.
- Progress in developing a research-based *knowledge base* for teaching and

- insights into the phenomenon of *teacher responsibility*, its conditions and development.

Research on teaching and teacher education indicates that in schools as well as in teacher education “*powerful learning environments*” should be attempted. Powerful learning environments may be defined as

- situations that elicit in students active and constructive processes of knowledge and skill acquisition, and
- that offer ample opportunities for interaction, communication and cooperation.

Powerful learning environments in addition aim at

- stimulating students to set their own goals, and
- guide them to assume responsibility for their own learning activities and processes.

In other words, in powerful learning environments students and student teachers progressively become agents of their own learning activities and processes.

The observation that the “*state of the art-knowledge*” to be found in dynamic teacher education courses, is only used to a limited extent by the different actors (e.g. education politicians, teacher educators) in the different spheres of teacher education calls for careful analysis. Furthermore the lack of a coherent research component in many curricula of initial teacher education programme correlates with a suboptimal use of “*state of the art-knowledge*”. At the same time many teacher education programmes based on a “normal school tradition”, an “academic tradition” or on minimum-competency models have, as yet, only reluctantly developed a clear commitment to educational research and to adopt the “*best practice*” possible based on the “*state of the art-knowledge*”.

27. Challenges for the Teaching Profession

The different social *position of the teaching profession* in the Member States of the European Union as well as the changing conditions of the labour market for teachers exert a strong influence on teacher education.

Large differences exist in regard to the *status of teachers*. If income is used as an indicator teachers usually rank lowest among the academic professions. Frequently secondary school level teachers receive higher salaries than primary school teachers (62).

In many Member States teachers have the status of *civil servants* or of a *public employee*. The tendency seems to be to change the civil servant status into a public or private employee status. The status of teachers of course affect the developments towards professionalisation of the teacher force.

Teaching is regarded as a *lifelong career* and a *full-time employment* in most Member

States of the European Union. Moves to change this are observable e.g. when teaching as part-time and/or life-phase specific employment become a reality.

Until recently *differentiations* within the teaching profession have largely been centred around

- the teaching certificates obtained in initial teacher education for different types or levels of school,
- different subjects taught at school and if subjects are taught by subject teachers or class teachers,
- teaching, administration and/or management, and
- seniority.

A limited number of other forms of differentiation may also be observed. The forms of differentiation mentioned arise from tradition and demonstrate the rather *flat career structures* within the teaching profession. Over the years this have been regarded as problematic in certain social contexts.

Considering the diversification of competencies requested *complementary* and *alternative forms of differentiation* of the teaching profession might become necessary, in which criteria such as

- *different tasks* (e.g. teaching, curriculum development, management, cooperating teacher in initial teacher education, mentor in induction, “school innovator”, open and distance learning tutor, “lifelong learning supporter”),
- *responsibilities* (e.g. teacher – head of department – school manager) and/or
- *subject areas* following a thematic approach (e.g. gender studies – environmental studies – peace education – information and communication technology)

will have to be taken into account.

Teaching and to some extent teacher education has become increasingly *feminised* in most Member States of the European Union. Developments regarding gender have been achieved in identifying, on the one hand, *shared assumptions* and understandings about the goals and roles of teacher education, and on the other, increasing *complexity* resulting from changes in global and national material conditions, cultural expectations, and group and individual identity. If an *inclusive gender perspective* for teacher education is indeed feasible, teacher educators will need to *prioritise* the following:

- The necessity to claim an ideological space in which they can mount a challenge to male hegemonic theories and practices.
- An understanding of the specificity of gender and feminist discourses in different countries, and in particular, the interaction between local gender concerns and priorities and wider feminist movements and ideas.
- An appreciation of variations in experience of gender depending on history and culture of the country or region involved, relationship to political systems or political movements, and the material conditions of individuals and groups.

- Acknowledging similarities in terms of teachers' low status positioning as women's work and its simultaneous importance in providing employment, upward mobility and professional satisfaction for many women.
- A fusing of gender with other educational inequalities, for example, those related to social class, ethnicity, nationality or sexuality.
- An understanding of the relative instability of gender relations historically and culturally, and the impact of changed patterns of gender difference in schools and teacher education.
- A critical appraisal (and celebration) of the distinctive educational contributions that women have made to (teacher) education.

How to achieve a more informed perspective on gender within schools and teacher education is not at all evident at present. Neither does it seem feasible or practicable to talk about a single European gender perspective on teacher education, given the variation in gender regimes and educational priorities within different countries. Nevertheless, shared understanding of the processes by which gender(-awareness) is produced through teacher education will strengthen the ability to challenge gender injustice however it appears (63).

Teacher *supply* and *demand* and *retention* furnish other problems for teacher education. Some Member States of the European Union find themselves confronted with a shortage of teachers (e.g. England and Wales, Sweden).

Shortages may exist for

- all types of schools and/or teachers,
- certain subjects (e.g. mathematics and natural sciences, information technology, foreign languages),
- particular types of schools (e.g. vocational, technical, commercial schools), and/or in regard to
- location (e.g. shortage of teachers in inner city areas or rural regions).

Some experts predict a *general shortage of teachers* in the near future in many Member States. Around half a million new qualified teachers will probably have to be educated in the European Union in the immediate future. This calls for

- discussions on *recruitment policies* as well as on
- new definitions of the *professional role* of teachers and their education, and
- *new groups* of persons (e.g. "mature students", qualified teachers who have left the teaching profession, persons from other occupations) that will have to be attracted into the teaching profession.

Other Member States of the European Union (e.g. Austria, the new Länder of Germany, Greece, Ireland, Italy, Spain) are confronted with a *surplus* of teachers which is frequently linked with a very young age profile in the teaching force. This calls for discussions on the selection of teachers. In addition these countries are confronted with the problem that all new tasks in school and education have to be achieved with a "*graying profession*", which

means that systematic efforts in in-service education and continuous professional development are vital.

In addition the surplus of teachers in some European countries and the shortage in other countries raises the question of teacher mobility and the validity of teacher education programmes across countries.

28. New Challenges for Teachers

Complementary to the many already existing strengths and achievements of teachers, schools, and teacher education changes and challenges outlined call for a *redefinition* of the professional tasks and roles of teachers and teacher education.

Traditional role conceptions such as teaching as *knowledge transmission* or teaching as a *craft* may well have become *obsolete*.

There are many cogent arguments that these conceptions will have to be replaced by more *dynamic conceptions* oriented on a *new professionalism* in general and *pedagogical professionalism* in particular.

Based on recent scientifically validated knowledge and practices (“*state of the art-knowledge*”) teachers should be able to provide the best education service possible to the clients of education and training. Provision has to be made that (prospective) teachers

- will have the ability to develop *professional autonomy* and
- become *pro-active agents of change*.

In order to achieve this, conditions for “*empowerment*” have to be provided.

At the same time it is being maintained that schools and teachers cannot deal adequately with increased, changed and new expectations and tasks. Teachers supposedly have a *lack of pro-activity* and competence in dealing with changed and rapidly changing conditions of schooling and education (e.g. school autonomy and the development of local curricula). The sometimes inadequate education of teachers is seen as one of the main contributors for this unfavourable situation, although it is worth mentioning that in some countries teachers and schools may have adapted in a more appropriate way to changes than some programmes of initial teacher education.

As early as in 1835 the German educationist and teacher educator A. Diesterweg stated ironically that expectations on the roles and tasks teachers are supposed to fulfil have always been unrealistically high. A. Diesterweg called for the *best academic preparation* of teachers possible as a necessary condition to fulfil, at least partially, expectations and tasks defined

by different groups in society. However, the best academic teacher education possible has not yet become a reality in a number of Member States of the European Union.

Three aspects seem to be of the utmost relevance:

- Teachers are supposed to acquire competence to establish **powerful learning environments** in order to make high quality education and training a reality. Do (prospective) teachers find ample opportunity to learn the necessary competencies in existing teacher education programmes?
- Teachers should be able to **transform academic knowledge** into **teaching and learning situations** in order to make provision of a broad knowledge base (cf. the concepts of holistic education, erudition and “*Bildung*”). Does contemporary teacher education, with its focus on either “*the practical*” or on a small number of academic disciplines provide the competencies necessary for these transformation processes?
- **Co-operative problem-solving** and **teamwork** seem to be indispensable to meet the challenges of teaching and learning. Does teacher education with its predominantly individualistic cultures provide adequate learning environments?

In reacting to the problems mentioned above and oriented on the *leitmotif* of professionalisation many countries have tightened the entry requirements for initial teacher education, have prolonged its duration, have transferred initial teacher education into the higher education sector, have made modifications of its curricula, and/or have established a sometimes comprehensive system of in-service education. But, it remains debatable as to whether such policies (“*more of the same*”) are adequate to solve the problems or whether substantial reforms applying changed paradigms will be necessary to meet new challenges in rapidly changing contexts.

Two observations may be added to underline the necessity for a substantial reform of teacher education:

- Most prospective teachers in the Member States of the European Union graduating in 1999 have not received coherent education and training in making use of the rich potential information and communication technologies provide for teaching, studying and learning processes. Only a limited number of teacher educators are making use of these new technologies in their teaching. Therefore, prospective teachers are experiencing only to a very limited extent the appropriate learning environments in which to acquire multimedia-competence (64). Somewhat ironically one might ask, whether someone could imagine a primary school teacher not being able to read and write properly but still be teaching reading and writing?
- While an adequate preparation of students for lifelong learning has been declared as a target of highest relevance, the consideration of this phenomenon by OECD only began in 1997. Models for its use in teacher education are still missing in a number of Member States of the European Union.

Teacher education needs to be an open and continuously **learning** and **developing system**

pro-active to its environment if the ever increasing speed of change is to be adequately handled. Initial teacher education can no longer (if it ever could) “prepare” teachers for a career of some thirty years and provide them with competencies demanded and often not yet even known. As early as 1971 the *Deutscher Bildungsrat* defined five task areas for teachers (and teacher education) with “**competence and readiness for innovation**” as one of them and similar proposals were put forward at that time in the United Kingdom or the Nordic countries. It is however an open question as to how German and other European teacher education systems have been able to prepare teachers to meet the task of innovation.

Re-definitions of the roles of teachers based on a “normal school tradition” or an “academic tradition” may raise problems. This seems to apply even more to re-definitions of teachers’ roles based on minimum-competency models with their focus on the rationales of early industrialism.



PART IV

SCENARIOS FOR TEACHER EDUCATION REFORM

In principle, widespread agreement seems to exist that teacher education has to be conceived as an open and dynamic system and as a continuous process consisting of the closely interrelated components

- initial teacher education,
- induction into the professional cultures of schools,
- in-service teacher education and/or continuous professional development,
- further education for teachers,
- school development and improvement, and
- research.

As outlined in the preceding chapters despite this widespread agreement on dynamic conceptions of teacher education in principle, most systems and models of teacher education in the Member States of the European Union have, so far, been organised in accordance with static conceptions. Frequently teacher education reform has primarily been focused on improvements of initial teacher education (65).

Making teacher education as an open and dynamic system a reality, have a **host of implications** which will sometimes involve the breaking down of old concepts of teacher education and the teaching profession.

Subsequently some **scenarios** formulated as options for improvements and reforms of teacher education related to **key issues** are put forward for discussion. These will be addressed in eleven chapters in this part of the Green Paper.

- In chapter 29 some fundamental problems concerning the **goals** of teacher education will be discussed and related to three basic **curricular conceptions**.
- Providing powerful learning environments may be seen as a **central**

task of teaching and the teaching profession. Implications of this proposition for the **knowledge base** of the teaching profession as well as in regard to the curricula of teacher education and their reform will be discussed in chapter 30.

- Chapter 31 deals with the potential of **Fachdidaktik** or **subject-matter didactics** to develop pedagogical professionalism.
- In chapter 32 the development of **professional problem-solving capacity** will be elaborated.
- **Research and development** are indispensable components of teacher education and will be discussed in chapter 33.
- Chapter 34 deals with the **practice component** of teacher education programmes and issues related to a close **co-operation** between initial teacher education institutions and schools as a necessary condition of effective teacher education.
- Problems of the **induction** of beginning teachers into **professional cultures of schools** are discussed in chapter 35.
- In chapter 36 issues of **in-service education** and the **continuous professional development** of teachers are taken up.
- Chapter 37 is devoted to issues of the **further education** of teachers;
- Questions of **staff development** in teacher education is the subject of chapter 38.
- Issues of **accreditation** of teacher education programmes and the **certification** of teachers are the focus of chapter 39.

29. Coherent Goals for the Education of Teachers

Teacher education in general and initial teacher education programmes in particular may be described by some as having *unclear*, unrealistically *ambitious*, *incoherent* and sometimes even *conflicting goals*.

It seems to be necessary to *(re-)define* the goals and tasks of the *entire system of teacher education*. The goals and tasks of teacher education, and the systemic relationships of its components as well as their contributions to the professional development of teachers need to be clarified. Without devaluing the high relevance of comprehensive initial teacher education it seems to be necessary to clarify which competencies and attitudes prospective teachers may be able to develop during initial teacher education.

Both in professionalised and traditional models of teacher education it seems to be a widely *accepted goal* that teacher education has to support (prospective) teachers so that they can develop those abilities and attitudes that seem to be necessary to meet the *professional tasks* of the teaching profession *competently, reflectively*, and by considering recent *scientific knowledge*.

Realising this goal calls for

- analyses of the *professional roles* teachers are expected to fulfil depending on normative decisions within particular cultural and social contexts (66),
- analyses of *professional tasks* of teachers such as teaching, educating, counselling, evaluating, administrating and innovating (67),
- analyses of *qualifications* necessary to fulfil professional roles and tasks,
- explicit models of how these qualifications may be *acquired*, and
- the orientation of programmes of teacher education on *tasks and qualifications* analysed.

It is debatable in what ways traditional models of teacher education may be able to meet these requirements:

- The potential of *minimum-competency models* for initial teacher education seems to be limited. Most minimum-competency models focus on rather narrowly conceived conceptions of the roles and tasks teachers are expected to fulfil. Analyses of qualifications necessary to fulfil professional roles and tasks as well as the model adopted for the acquisition of professional competence based on minimum-competency strategies give the impression of superficiality (68).
- *Traditional models* of teacher education seem to be in great need of substantial changes. The enrichment of traditional models of teacher education both for primary and secondary school teachers to include some professional components has brought about a number of improvements but at the same time it may have contributed to unclear and conflicting goals of teacher education. The potential of an enrichment strategy seems to be restricted.
- Models of initial teacher education centred on *professionalisation* seem to have a high potential to meet the requirements outlined and to improve teacher education. Evidence

in support of this proposition may be found in teacher education models of most Nordic countries and in a number of concrete teacher education-improvement projects in different Member States of the European Union.

30. Providing Powerful Learning Environments – the Central Task for Teachers and Teacher Education?

Problems related to the current state of the knowledge base of teacher education and the teaching profession seem to be numerous. While research on teaching and teacher education have sometimes led to substantial progress, problems in regard to programmes and curricula of teacher education seem to have become even more obvious. A well developed *knowledge base* for teacher education and the teaching profession seems to be a *missing* but indispensable *link*, in making substantial improvements to teacher education and the professional service to be provided by the teaching profession.

Teaching, studying and learning may be perceived as the *central content areas* of the knowledge base of/for the teaching profession. These activities and/or processes always

- take place in particular contexts (environments),
- have to be interpreted primarily as intentional actions of the actors involved
- are directed towards aims and objectives,
- have substance (content), and
- may be supported by different media (e.g. teaching and learning aids).

The *focus* is on the studying and learning processes of students and on the design of *learning situations* (cf. the concept of “powerful learning environments”) in which students can find ample opportunity to develop structures of meaning, knowledge and action. Supporting the development and construction of meaning, knowledge and action on the one side and the transmission of academic knowledge on the other may be seen as rather different entities.

Which science(-s) and contents that might form the scientific knowledge base(-s) still remains an unresolved problem in regard to the teaching profession and teacher education. Concerning teacher education for the secondary level of the school systems in most of the Member States of the European Union, prospective teachers most frequently receive

- their education in one or two academic disciplines.
- Education and preparation for the main tasks of the teaching profession (e.g. providing powerful learning environments) are often perceived to be of minor importance (69).
- Additionally, in most Member States prospective teachers do not graduate in education or educational sciences but in other academic subjects, which may have an impact on the development of their professional identities of teachers.

In common with many curricula in schools, teacher education and its programmes are split up into different and, in many cases, *unrelated academic disciplines*:

- In most cases these academic disciplines focus on the development of *scientific knowledge*, explanatory models and theories.
- They do not consider the *teaching, studying and learning* of particular topics.
- Neither do they deal with the *transformation* of scientific knowledge structured in a propositional and systematic format into *human knowledge structures* following different patterns of organisation (e.g. holistically, episodic, cases, schemata). Most academic disciplines have defined the production of explanatory knowledge as their most important aim and do not deal coherently with the transformation of explanatory knowledge produced for learners.
- Additionally, a number of academic disciplines seems to devalue the relevance of scientifically *validated practices*. This fact can raise problems when it comes to teaching, studying and learning phenomena analysed by these academic disciplines.
- The complex relations existing between school subjects and academic disciplines are in most instances not analysed. The problem of transforming and relating the knowledge structure of the academic disciplines to the structure of the school subject is accordingly in most cases a neglected area.

The problems highlighted have become increasingly obvious and a number of measures to tackle them have been taken in some Member States. More *integrated curricula* of teacher education have been developed focusing on a *thematic approach*. Thematic studies e.g. in multicultural education and in European studies dealing in a comprehensive way with the process of European integration have been woven into some teacher education curricula. However, measures taken have, in most cases, been *complementary* to existing patterns of teacher education, while the basic structures of teacher education programmes have not been subject to change.

Comprehensive efforts seem to be necessary to develop a *coherent knowledge base* for teacher education and the teaching profession to make necessary reforms, at both the level of schools and teacher education, possible.

31. The Potential of Fachdidaktik or Subject-matter Didactics

In a number of European cultural contexts *Fachdidaktik(-en)* (literally translated as subject-didactics, subject-matter didactics or subject specific methodologies) in/of various subject matters taught at schools, and *Bereichdidaktik(-en)* (literally translated as methodologies of certain cross-curricular fields of study at school level such as social studies, environmental studies, civics education or learning with new information and communication technologies)

have been established as *academic disciplines* and have sometimes made remarkable progress (e.g. Finland, France, Germany).

Various *Fachdidaktik(-en)* and *Bereichsdidaktik(-en)* have recently provided *scientifically based knowledge* and *empirically validated practices* for teachers to establish *effective teaching and learning situations* in their respective fields.

The foundation of both *national and European-wide associations* in subject-didactics (e.g. mathematics, foreign languages and natural sciences), the foundation of *research and development institutes* for different *Fachdidaktik(-en)* (e.g. Institut für die Didaktik der Mathematik) and for different *Bereichsdidaktik(-en)* (e.g. Institut für die Didaktik der Naturwissenschaften) or the introduction of *professorships* for various *Fachdidaktik(-en)* (e.g. in the Nordic countries) and *Bereichsdidaktik(-en)* may be seen as catalysts for a number of improvements in teaching and teacher education.

However, the tendency to isolate particular *Fachdidaktik(-en)* (e.g. mathematics) even from neighbouring ones as well as a certain lack of integration can be observed. The learning and developing student may be abandoned, while expectations of a particular *Fachdidaktik* related to an academic discipline and its structures might become predominant. This may also apply to the holistic personality development of students. In addition, a frequently given justification of particular *Fachdidaktik(-en)* – the argument that subject didactics have to provide scientifically validated knowledge for different school subjects as these have been defined by education politicians for national syllabuses and curricula – would need careful consideration.

Bereichsdidaktik(-en) focussing on a *thematic approach* and concrete problems seem to have more potential than various *Fachdidaktik(-en)*. More coherent efforts to establish *Bereichsdidaktik(-en)* as fields of research and development seem to be called for.

The production or *design* of scientifically validated practices and education software (e.g. textbooks, multimedia products) can be regarded as a rather neglected field of the educational sciences in general and of teacher education in particular. Designing education software and exploring its effects and efficiency call for co-operation in *collaborative problem-solving groups* comprised of *experts* in a number of different fields (e.g. Didaktik, *Fachdidaktik*, *Bereichsdidaktik*, linguistics, communication sciences, telematics) and *teachers*.

In most Member States of the European Union institutions of teacher education have adopted the development, production and design of education software only to a limited extent. Free reign has been given to a marketisation of this field which has resulted in products that are sometimes rather disappointing (70).

It is suggested that teacher education institutions should deal more coherently with the production and design of scientifically validated practices and education software (cf.

developments in Nordic countries). It may be expected that such efforts

- might lead to more *efficient teaching and learning aids*, and
- help to reduce *technological deficits* obvious in the field of teaching, studying and learning (71).

Establishing structures for research and development on *Fachdidaktik(-en)* and *Bereichsdidaktik(-en)* at institutions of teacher education seems to be an important issue in teacher education reform, with a potentially enormous impact on teacher educators, (prospective) teachers, the teaching profession, and students. It might contribute effectively to the reduction of problems both of traditional models of teacher education and of minimum-competency models.

32. Developing Collaborative Problem-Solving Capacity

To be able to act effectively and efficiently in dynamic environments characterised by rapidly changing tasks teachers, like all other professionals, need professional *problem solving capacity*. It seems to be necessary for professionals

- to be able to *define “problem-spaces”* and to formulate questions,
- to possess a broad and developed *repertoire of problem-solving skills*, which enables them
- to *solve* particular *problems* (72).

Teaching is a complex activity needing simultaneous thought and action on a wide number of fronts. While some relatively homogeneous and standardised tasks and problems of teaching may be present (*“well-defined tasks and problems”*), teaching may at the same time be described as having a large number of unstructured and *“ill-defined” tasks and problems*. When they are teaching, teachers permanently have

- to interpret complex situations,
- to define “problem-spaces”,
- to adapt different routines,
- to develop problem-solutions for particular situations and cases in order to provide high quality education and training and
- to develop communicative skills and a rich and varied behaviour repertoire in order to be able to cope with the multitude of different interactions taking place in a classroom.

Most models of teacher education seem to be able to provide a number of *standardised solutions and practices* for well defined professional tasks:

- One of the strengths of models of teacher education based around a “normal school tradition” might be, that they may provide a number of routines which enable (prospective) teachers to master standardised tasks and well defined problems of teaching. This also

seems to apply at least to some extent to minimum-competency models.

- In contrast an “academic tradition” of teacher education, by self-definition, aims at the development of problem-solving capacity. Considering that problem-solving capacity to a large extent is domain-specific, an “academic tradition” may not always be able to meet this aim, especially when the focus is put on the acquisition of scientific domain-specific knowledge structures.

At the same time sometimes serious *misgivings* have been expressed as to whether teacher education based on these two models is able to provide learning situations appropriate for the development of both competence and readiness to define problem-spaces. Further questions are raised concerning their ability to foster the problem-solving capacity necessary to meet both newly identified *ill-defined problems* of teaching and *future problems* which are bound to arise.

Competence in *collaborative problem-solving* and competence for *co-operation and team-work* are perceived as other domains that seem to be of utmost relevance in highly developed information societies. As regards education and training the move towards more *autonomy for schools* and an increasing necessity for teacher *team-work* makes the acquisition of these competencies vitally important.

Teachers from various backgrounds will need to be placed in situations where they are able to acquire strategies and understandings for the development of school-specific curricula through collaboration and co-operation. The “problem-spaces” they encounter may not be well-defined. Our query should be how well do present models of teacher education with predominantly *individualistic cultures* provide learning experiences for the development of these competencies, which are essential for each form of school improvement and professional learning?

It appears that the future programmes and *curricula of teacher education* will be oriented more on

- *process-*,
- *problem-*,
- *project-* and
- *research-oriented* learning environments and that
- *inquiry-oriented cultures* have to replace rather rigid and re-active cultures of teaching, studying and learning (cf. the potential of models of reflective teacher education or of educational action research), if the desired change is to be accomplished.

33. Research and Development as a Component of Teacher Education

In most Member States of the European Union the relationships between teacher education, the teaching profession and educational research and development need to be redefined (73). As in all other (and not only academic) professions a close relationship between

- (educational) *research and development*, and
- the (teaching) *profession* seems to be indispensable.

An *increasing recognition* of the high relevance of research for high quality education in general and high quality teacher education in particular has led to a certain *expansion* and *cultivation* of research and development related to and relevant for teacher education (74).

However, in most Member States of the European Union

- institutions of teacher education and their staff as well as student teachers and teachers have, until recently, been separated from research and development.
- Many institutions of teacher education do not have a clear responsibility to take part in, nor adequate resources for, research and development.

While coherent and targeted research and development seem to be essential for the improvement of all forms of teacher education, it cannot be denied that models of teacher education based on a “normal school tradition”, and especially minimum-competency models of teacher education, encompass different opinions on this issue. A characteristic of secondary school teacher education is that (student) teachers are usually confronted with research in certain academic disciplines which may not always be of relevance for teaching and the teaching profession.

Initial teacher education as well as in-service teacher education need to find a *clear profile* in regard to

- *research and development*, and
- an *active involvement of teachers* in it (cf. the contributions of TNTEE subnetwork F on reflective practice in teacher education, or the promising concepts of “teachers as researchers”, or action research).

A development in this direction implies that all institutions and/or departments involved in teacher education programmes must themselves be actively involved in research and in doctoral programmes specifically related to teacher education, teaching and teacher work.

34. New Partnerships between Institutions of Teacher Education and Schools

Active *systemic relations* and *mutual partnerships* between institutions of teacher education, teachers and schools are extremely important in all forms of teacher education. Close co-operation in areas such as

- the teaching practice component of programmes of initial teacher education,
- research and development, and
- school improvement activities

between institutions of teacher education, teachers and schools are important in establishing and maintaining *professional cultures* of learning and development in schools as well as in institutions of teacher education. This development of “partnerships” is taking place in most countries of the European Union, although progress is by no means uniform.

Unlike the medical or other academic professions the relations between teacher education, teachers and schools has not yet reached an optimum level. Examples of teacher education on the one side and schools and teachers on the other working completely independent of one another can be found. At the same time comprehensive attempts have sometimes been made to establish *close partnerships* between schools and institutions of teacher education (e.g. in Denmark, England and Wales, and Sweden).

There are many statements stressing the *high importance of practice* in initial teacher education, the extent to which this is borne out is however variable. While in many models of secondary school teacher education a comprehensive practice component is not undertaken, most models of primary school teacher education provide practice in *different formats*, such as

- *short-term teaching serial practice* (e.g. once a week over a period of time) in schools attached (cf. model and training schools, *Modell- and/or Übungsschulen*) or related to institutions of teacher education (e.g. *Praxisschulen*),
- *teaching practice of a longer duration* at schools (e.g. block practice often in a variety of schools throughout the programme to provide a selection of different contexts and challenges),
- *microteaching* at institutions of teacher education and/or
- *experience in non-school settings* with an educational and/or social focus.

A comprehensive account and analysis of current practice in specific institutions in Member States of the European Union can be found in the first issue of the TNTEE Journal (<http://tntee.umu.se/publications/journals.html>). The issue reflects a three years project undertaken by members of TNTEE Sub-network B.

Research on practice (the practicum) in teacher education programmes has highlighted a host of *unresolved* and often *suppressed problems*. Many models of teacher education do not provide a coherent practice component (75). It seems as if

- outdated “*apprenticeship models*” or
- highly debatable models of *learning to teach by experience* are predominant.

Professionalised models of teacher education aim at

- the development of a *broad repertoire of professional actions*, which teachers may use
- in a *justified* and
- *flexible* way adapted to individual learners, goals, tasks, contents and situations.

The development of a broad repertoire of professional actions/action structures seems to call for a broad *knowledge base* as well as for coordinated and *coherent practice* in which (prospective) teachers may find learning situations appropriate to promote the development of competent, reflective and theory-based action.

It seems to be necessary to *integrate* practice coherently into all models of teacher education. In integrating practice and the other components of teacher education into specific programmes prominent factors will include

- the development of a strong, mutually beneficial, partnership with schools,
- differentiation and understanding of the division of work and responsibilities between the partners,
- high quality teachers specially educated to fulfil the demanding tasks of co-operating supervisors, mentors and partners (76).

The concept of *Professional Development Schools* developed by the Holmes Commission (1990) in the USA provide one example on how to integrate practice of student teachers, academic studies, research and development in schools, and initial teacher education and in-service teacher education. The concept of Professional Development Schools focuses on *mutual partnerships* in a number of areas:

- High quality teachers with an additional education to fulfil the tasks of a *co-operating teacher* or mentor are integrated into the teaching practice component of initial teacher education programmes
- providing *in-service education for teachers* in close co-operation with Professional Development Schools (e.g. on integrating new information and communication technologies into powerful learning environments),
- who are actively involved in *research and development projects* (e.g. development of innovative methodologies) done in close co-operation of all actors.
- *Teacher educators* and *educational researchers* are at the same time actively involved in innovative work done in schools, and
- as a consequence *permanent partnerships* between institutions of (initial) teacher education and schools have to be established (77).

Following the conception of Professional Development Schools outlined above, institutions of teacher education might develop themselves into *knowledge resource centres* and *professional meeting places*. They might then be able to integrate effectively initial teacher

education, measures of induction, in-service education, further education, school improvement and educational research. However, the dangers of adopting such a system should not be overlooked (78).

35. Induction into the Professional Cultures of Schools

In general a *blind spot* in present teacher education, shared by the school inspectorates as well as schools and the teaching profession, is a *systematic* and *co-ordinated induction* into the professional cultures of schools.

Research with beginning teachers on their induction into the professional cultures of schools and the teaching profession while in their first position, clearly indicates that many positive effects of initial teacher education are “*wiped out*” when beginning teachers reach schools. Although this loss of competence means a certain *waste* of both individual and public resources, this fact has not led to systematic efforts to solve this problem in most Member States of the European Union. In addition, the majority of schools, all over Europe, have not yet developed a “*culture of induction*” for beginning teachers or new staff members (79).

Coherent and successful induction calls for *collaborative problem-solving processes* involving institutions of initial teacher education, school managers (administrators, heads of schools), teams of qualified teachers in schools, and the beginning teachers themselves. Qualified teachers taking responsibility for the induction of beginning teachers must be supported by specialised education to enable them to fulfil the tasks of induction competently.

A coherent induction programme may well provide a link between initial teacher education, schools and in-service education, and thus contribute to the improvement of all subsystems of teacher education (cf. recent developments in England and Wales with the introduction of career entry profiles for beginning teachers).

36. Systemic Conceptions of In-Service Education and Continuous Professional Development

It seems almost self-evident that high quality education depends very much on *high quality teachers*. In rapidly changing societies with increasing demands on the teaching profession, even preserving the existing quality of the school systems calls for *increased* as well as *new competencies*. Since large numbers of teachers need to constantly up-date their competencies, the formation and maintenance of comprehensive systems for in-service

education (begun in the early sixties) need to be strengthened and reviewed.

A rich *variety of different models* for the in-service education of teachers has been developed in the different Member States:

1. In the late sixties models of in-service education were mainly oriented on traditional conceptions of *knowledge transmission* and focused on the *individual teacher* (cf. “deficit models”).
2. Later on *concepts* have been introduced focusing on the *professional autonomy* of teachers (cf. the introduction of teacher centres run by teachers themselves).
3. Increasingly conceptions focusing on the individual teacher have been supplemented by more *systemic approaches* (cf. the introduction of school-based and/or school-focused in-service education). Programmes of in-service education have become more closely related to
 - staff development programmes of individual schools,
 - school development activities and
 - measures of organisation development focusing on the improvement of the quality of an entire school in a systemic perspective (80).
4. In the future in-service teacher education will need new forms of *school-based* and/or *school-focussed activities* in which teacher educators co-operate with the staff of a school for a longer period of time where all parties involved intend to improve the school and its problem-solving capacity.
5. Both formal in-service education and *informal professional learning* have received increased attention.
6. *Professional development profiles* for teachers have been introduced in a small number of education systems. In such systems provision of in-service education had to be provided for the different phases of the professional career of a teacher.
7. Recently *European projects* run by teachers of a minimum of three schools in different Member States of the European Economic Area and *cross-European in-service education programmes* supported by the European Commission action scheme SOCRATES (chapter COMENIUS) have had a strong impact. Such projects have the potential to combine the strengths of different approaches of in-service education.
8. The *world wide web* (Internet) has become another powerful means of in-service education (cf. the potential of the European School Network project supported by the European Commission and the different education servers of the Member States of the European Union linked to the European School Network).

However, some *unresolved problems* in regard to in-service education of teachers have to be noted:

- Continuous professional development and in-service education are not yet perceived as integral parts of the *professional responsibilities* and the *work load* of teachers neither by employers nor by some members of the teaching force. Perceptions of in-service education as a voluntary *addendum* for teachers may be directly linked, at a systems and at an individual level to the presently rather disappointing progress towards higher quality.

Making high quality education a reality calls for the recognition of continuous professional development and in-service education as *integral parts* of teacher work and of teacher education.

- Closely related to this first observation are discussions whether in-service education ought to be *voluntary* or *compulsory*.
- Formal in-service education is frequently subject to control by the school administration (e.g. provision, contents). It is debatable whether this solution contributes to the professional development of teachers. More *professional control* of in-service education by the teachers and schools themselves seems to be important.
- Issues of *evaluation* and quality control of in-service education seem to be other unresolved problems.
- In most Member States of the European Union no decisions have been taken about who will have to cover the *costs* for in-service education (e.g. teachers themselves, schools, municipalities, local education authorities, state). In every case it seems to be crucial to *invest more* into in-service education both quantitatively and qualitatively (81).
- Additionally, the *separation* of in-service education from initial teacher education, induction, further education, school development and educational research and development in many Member States of the European Union can be seen as adding to the problem.

Comprehensive *knowledge resource centres* (as mentioned above) may have an enormous potential to effect the synergy necessary to realise high quality (in-service) teacher education.

37. The Diversification of Professional Tasks of Teachers and the Relevance of Further Education

Both the *expansion* of the education and training sector and rapidly *changing tasks* for teachers and teaching may be seen to be closely related to an *increasing diversification* of the professional tasks of teachers and the teaching profession. Traditional patterns of diversification, outlined in chapters 27 and 28 cannot meet all the challenges confronting schools and teachers. They are obsolete and yet, at the same time discussions have started focusing on closer relationships between a diversification of teachers' tasks and career structures in the teaching profession (82).

As a consequence strong moves can be seen in a number of Member States of the European Union

- to *complement* existing patterns of diversification
- or to *restructure* these (e.g. England and Wales).

Both complementing and restructuring existing patterns of diversification call for coherent efforts of *further education* in which teachers may acquire *special competencies* not previously covered by initial teacher education. Such provisions seem to be of the highest

relevance for the development of high quality education and training. The successful completion of programmes of further education frequently leads to a recognised certificate or diploma which may further the teachers' career prospects.

Highly relevant subjects for further education presently include:

- School management (cf. that in the majority of Member States of the European Union no coherent education programmes for the school inspectorate or heads of schools have yet been established).
- Curriculum development (cf. the move towards school autonomy and the necessity to develop school-specific curricula).
- Telematics education. Coherent concepts for the introduction of new information and communication technologies into education establishments seem to be an exception in most Member States of the European Union. The issue of providing top qualified staff has so far been widely neglected.
- European studies necessary to promote the process of European integration.
- Multicultural education.
- Gender studies.
- Personal social and health education.
- Methods and strategies to combat school failure.
- Education of staff for higher education in general and teacher education in particular.

While traditional models of further education of teachers provided by higher education institutions may have brought about a large number of positive effects, there is a strong need for them

- to be complemented by more *dynamic solutions*
- based on the *modularisation* of programmes and
- making intensive use of open and distance learning and/or *net-based learning* (83).

Comprehensive *knowledge resource centres* could be very important in meeting the challenges for high quality education and training and the teaching profession.

However, the necessity of systematic and coherent further education of teachers has so far been *disregarded* by a number of actors in the different spheres of teacher education.

38. Teacher Education for Teacher Educators

Although the quality and the effectiveness of teacher education largely depends on the competence and expertise of teacher educators, so far only limited efforts to professionalise this activity have been made. A clear *profile of the staff* of institutions of teacher education will have to be developed.

Most teacher educators such as professors and lecturers in the fields of education, *Fachdidaktik(-en)* or other academic disciplines, mentors or co-operating teachers at schools responsible for the practice component of teacher education programmes or the induction of beginning teachers, as well as teacher educators in the fields of in-service education and further education have never received education and training in methodologies of teaching, co-operation and learning appropriate for *adult learners* (student teachers and professional teachers).

A number of problems of teacher education could arise from the fact that the whole issue of education of teacher educators have been rather neglected. In addition, problems seem to exist concerning the *formal qualifications* of teacher educators in a number of Member States of the European Union. These qualifications are often perceived as too low compared to other fields of professional education (e.g. medicine, civil engineering).

Both an increase of the *formal qualifications* of teacher educators and a coherent initial as well as a continuous in-service *teacher education for teacher educators* might contribute to substantial improvements of teacher education (84).

39. Accreditation of Teacher Education Programmes

Most systems of teacher education make use of

- an **external system** of *approval* and/or *accreditation* of the *programmes* of teacher education and/or of
- an **external system** of *certification* of the *professional qualifications* of (prospective) teachers.

These external systems aim at giving *public assurance* of the *adequacy* of programmes of initial teacher education and their *suitability* to prepare for the professional tasks and roles of the teaching profession.

In addition these systems may fulfil two other roles:

- They may help to facilitate the *professional mobility* of teachers within the European Union, and
- may also act as a main *encouraging factor* for the improvement of teacher education programmes that may contribute to build a *new teacher professionalism*.

In order to reach such aims, systems of *accreditation* and/or *certification* have to meet the following *criteria*:

- They must be *governed by institutions* comprised of various recognised social partners where teachers and teacher educators have to play a decisive role.

- They have to follow methodologies that build on *social consensus* in the elaboration of the definitions of the roles and tasks of teachers as well as concerning standards of evaluation of teacher education programmes and of professional qualifications.
- Accreditation and certification given by these institutions have to be *renewed periodically* taking into consideration changes in the context.
- They have to consider the *entire process of teacher professional development*.
- The standards that these systems approve have to be defined as *general guidelines* that provide space for a *variety of individual solutions* to be found and built by particular teacher education institutions.

PART V

SOME PROPOSALS FOR CONCRETE MEASURES RELEVANT TO TEACHER EDUCATION REFORM

The scenarios of teacher education reform described in the preceding chapters aimed at

- fostering the **dialogue** between **all the actors** involved in teacher education and its reform (e.g. the professional community, decision makers and politicians) at an all-European, national, regional and local level,
- enriching **definitions** of the **problem-space** for reforms and improvements of teacher education
- in order to support **informed decision making**, and
- providing **input for problem-solving processes** in reforming teacher education.

The scenarios presented challenged traditional conceptions of teacher education with their static rationale, sometimes hidden assumptions and segmentation, but at the same time pose questions that will have to be answered, within the realities of the development of teacher education in the different cultural and social contexts of the European Union.

Based on comparative conceptual analyses of the current state of teacher education in the Member States of the European Union, on analyses of challenges in rapidly changing contexts of education and teacher education, and on analyses of the “*state of the art-knowledge*” of successful teacher education the scenarios presented described and analysed options relevant for reforms and improvements of teacher education at macro-, meso- and micro-level in different social and cultural contexts.

As a supplement to those scenarios some **proposals** for relevant **concrete measures** to support teacher education reform will be brought forward in this final part of the Green Paper. Recognising the legal framework defining

the responsibilities of the European Commission and the Member States of the European Union in education and training (cf. Treaty of Maastricht and Treaty of Amsterdam) the proposals will focus on measures to be taken

- either primarily at the level of the Member States of the European Union (chapter 40)
- or at the level of the European Commission (chapter 41).

This focus should in no case be misinterpreted as a devaluation of the importance and high potential of problem-solving at local and institutional levels. Being aware of the many interdependent relations of problem-solving processes at local, regional, national and all-European levels in reforming teacher education, particular proposals submitted should be regarded as components of a complex system with a number of repercussions.

40. Measures at the Level of Member States of the European Union

Differences in regard to the current state of teacher education between the Member States of the European Union, as well as differences of the quality of discourses on education in general and teacher education in particular, imply that the *eight proposals* to be presented here will have *different relevance* for teacher education reform in the fifteen Member States of the European Union.

40.1 Committees for Teacher Education Reform

While some Member States of the European Union already have discussed or even started substantial reforms of teacher education, others seem to be reluctant to change. Attempts to reform teacher education did not always consider the “*state of the art – knowledge*” of successful and effective teacher education.

Against this background it is proposed that national *committees or task forces* for teacher education reform representing *all actors* and spheres involved in teacher education are established.

40.2 Concrete Reform Projects

The degree of *autonomy* given to institutions of teacher education to develop curricula of their own differs greatly between the different Member States of the European Union. Sometimes rather narrowly conceived *national guidelines* do not permit

- the implementation of concrete *reform projects*,
- the change of *programmes* and *curricula* even when current problems are obvious, and/or
- the use of highly developed *human resources* and expertise available at institutions of teacher education.

Due to such constraints progress and possible improvements are hindered. Against this background it is proposed that the

- professional *autonomy* and *responsibility* of institutions of teacher education should be increased and that
- *coherent support* (human and material resources) for *concrete projects* to reform teacher education programmes and curricula should be provided.

In previous chapters several areas within teacher education have been mentioned where development and change are needed. These concern for example the effective use of modern information and communication technologies for teaching, studying and learning processes, multicultural issues and gender issues.

In some countries opportunities for local development projects of the kind mentioned above already exist.

40.3 Coherent Programmes for Research and Development Related to Teacher Education and Teacher Work

Problems concerning the *knowledge base* of teacher education and the teaching profession have become obvious.

It seems to be necessary to try to develop *coherent profiles* of research and development for teacher education institutions. Progress could be assisted by establishing appropriate *structures for research* and development at institutions of teacher education. In previous chapters it has been noted that it seems necessary to emphasize that such research should be the concern of all institutions engaged in teacher education and thus not be restricted to education (or pedagogy) as a discipline.

40.4 Action Plans for In-service Education and Further Education

Convincing arguments have been submitted stressing the *absolute necessity* of in-service education and continuous professional development of teachers as well as their further education so that schools and teachers may meet the *challenges of change* pro-actively and competently. However, some *reluctancy* may be detected in a number of Member States of the European Union to make *effective provision* of in-service education and further education. Against this background the proposal is made to develop coherent *national action plans* for the in-service and further education of teachers.

Such plans should also take into account the necessity of challenging existing divisions of labour between initial teacher education programmes, in-service education and the continuous professional development of teachers.

40.5 Establishing Partnerships

Close co-operation between the teaching profession, schools and teacher education with its different components (initial teacher education, induction, in-service education and continuous professional development, further education, school development and research and development) may be seen as a *necessary condition* for high quality education and training. However, in a number of Member States of the European Union separation and fragmentation are characteristics of teacher education and possible and necessary *effects of synergy* are not realised.

Without devaluating the relevance of co-operation among all actors in all the spheres of teacher education mentioned above, it seems to be of special importance to reconsider forms of co-operation as regards the practice component of initial teacher education programmes and the induction of beginning teachers.

This leads to the proposal to establish *partnerships* between institutions of (initial) teacher education and schools focusing on the practice components and on the induction of beginning teachers. Different models of such partnership have to be considered as well as provisions for staff development programmes.

40.6 Comprehensive Knowledge-Resource-Centres for Education and Training

In most Member States of the European Union the education and training sector, as well as teacher education, are split up into a large number of *loosely coupled* and sometimes even unrelated *systems*. As regards teacher education a large number of *negative effects* related to this state of affairs have been described in the preceding chapters. It seems to be necessary to emphasise the need to *integrate* different forms of teacher education, school improvement and research and development in order to enhance synergy.

Against this background it is proposed that *comprehensive knowledge-resource centres* for education and training at the *higher education (university) level* dealing in a coherent manner with the initial teacher education for all categories of teachers, induction, in-service education, further education, school improvement, and research and development should be established.

40.7 High Quality Teacher Educators

High quality teacher education depends on high quality teacher educators. However, in most Member States of the European Union rather low *formal qualifications* are required to work as a teacher educator, particularly when compared to other fields of professional education. Coherent initial education for teacher educators or measures for an induction into the professional cultures of teacher education do not generally exist. Provision has been made only in some Member States for the support and continuous professional development of teacher educators and/or for other teachers in higher education institutions.

It is proposed that the *professional qualifications* of teacher educators should be reviewed and raised and that coherent *staff development programmes* for teacher educators should be introduced.

40.8 Autonomous Professional Organisations

To foster compatibility with other academic professions the establishing of autonomous professional organisations for the teaching profession (cf. teaching councils) may be supported at (nation) state level. These autonomous professional organisations might take *responsibilities*

- for guaranteeing and increasing the *quality of the professional services* provided by teachers, and teacher education,
- by participating with other social partners in the *approval and accreditation* of teacher education programmes, and/or
- in the *certification of professional qualifications*.

41. Measures at the Level of the European Commission

In this chapter we discuss *seven clusters* of proposals for measures to be taken at the level of the European Commission.

41.1 The Relevance of European Commission Action Schemes

Within the legal framework defined by the *Treaty of Maastricht* and the *Treaty of Amsterdam* the European Commission has been able to contribute to a number of reforms and improvements of teacher education in the Member States of the European Union in two parallel ways:

- *indirectly* by submitting *policy documents* as Green Papers or White Papers (e.g. on the relevance of new information and communication technologies for the education sector, or on early language learning), and
- *directly* by supporting concrete European-wide *curriculum development projects* and the *mobility* of teacher education students, teachers as well as staffs of institutions of teacher education (cf. the action scheme SOCRATES and its components such as ERASMUS for higher education, COMENIUS for school education and the in-service education of teachers, LINGUA for the learning of Community languages, the chapter on Open and Distance Learning and the Thematic Network Project Initiative).

Although financial support provided by the European Commission is rather low (especially when compared to other items of the budget of the European Commission), *substantial improvements* could sometimes be made mainly at an *institutional level*.

- Curricula of teacher education have become subject to reform,
- new fields of study have been introduced into programmes of teacher education (e.g. European studies) and

- networks of high quality teacher education institutions have been established.

Against this background, and considering that until recently only a limited number of proactive institutions of teacher education has been able to make maximum benefit of the opportunities provided, it is *proposed*

- to *continue* and to *expand* the action scheme SOCRATES,
- to increase the *coherence* and *co-ordination* both
- between the different chapters of the action scheme SOCRATES and
- the SOCRATES programme and other action schemes run by the European Commission (e.g. LEONARDO and research programmes) and
- to *increase the funds* for institutions and networks running projects to improve teacher education.

Recent attempts of the European Commission to establish within the action scheme SOCRATES a particular *chapter for school education* including teacher education need to be considered carefully.

- Both the *size* of teacher education and its *particular problems* might be used as arguments to justify a particular chapter within the action scheme SOCRATES. In most Member States the number of students in initial teacher education is larger than in other forms of academic professional education.
- *Open and systemic conceptions* of teacher education stress the necessity of an integration of initial teacher education, induction, continuous professional development, further education, school improvement, and research and development. This may again be seen as an argument in support of a chapter specifically dealing with teacher education.
- Progress in regard to the quality of teacher education can be seen as closely related to the incorporation of teacher education into the *higher education sector* where the professionalisation or “universitification” of teacher education has been important. This fact stresses the importance of linking initiatives in regard to teacher education to initiatives that concern higher (university) education
- As for other professions, high quality education to a very important degree depends on *research-based knowledge* and *validated practices* being developed through research and development in close co-operation with teachers and others working within the education sector. This points to the necessity of developing initiatives where teacher education, research and practises within the education sector may be linked.

Sythesising these arguments it may be concluded that a particular chapter within the action scheme SOCRATES on *teacher education* including school education might have a high potential.

41.2 A Committee for Teacher Education Reform

Expectations on high quality education and training to make a “Europe of Knowledge” a reality and the importance attached to teachers and teacher education on the one hand, and the current state of teacher education in the Member States of the European Union on the other call for coherent action at an all-European level.

One measure could be the establishment of a “*Committee for Teacher Education Reform*” at the European Commission level comprised of representatives of actors in the different spheres of teacher education. The experiences of the Thematic Network of Teacher Education in Europe (TNTEE) point in such a direction and work already started to implement a European Network on Teacher Education Policies may also be taken into account as a basis for establishing a Committee for teacher education reform.

41.3 Cross-European Knowledge Centres for Teacher Education

Institutions of teacher education all around Europe have been able to develop solutions for successful teacher education in particular fields centred around their strengths (e.g. learning with new information and communication technology, European Studies). However, these solutions are *in most instances local*.

Against this background the introduction of a chapter into the action scheme SOCRATES is proposed aiming at the establishing of *pan-European knowledge centres* for teacher education, which at the same time might operate as co-ordinators of *quality networks* for particular fields of teacher education.

41.4 Research on Teaching and Teacher Education

Achieving high quality education and training and high quality teacher education necessitates the development of a comprehensive *research-based knowledge base* and *empirically validated practices*. Despite the high relevance of attaining these targets, research on teaching and teacher education have not been priorities of European Commission action schemes in the research sector.

The proposal is put forward to make research on teaching and teacher education a *priority* incorporated as a special chapter in the coming action schemes for research.

41.5 Cross-European Master and Doctoral Programmes

It is proposed to expand opportunities already provided by the action scheme SOCRATES and to adopt measures within the action scheme LEONARDO to support the development of

- high quality,
- innovative and
- modularised
- European-wide Masters and Doctoral programmes in the sector of further education for teachers, that
- make maximum use of open and distance learning and/or net-based learning.

41.6 Fostering Mobility

An increase in mobility of teachers between the Member States of the European Union could be highly relevant in the process of *European integration*. However, different regulations mainly at the level of nation states may be seen as sometimes creating severe *obstacles*. On the other side efforts in regard to the European Credit Transfer System (ECTS) have at present only brought about limited progress.

Efforts to increase the *equality (compatibility) of teaching diploma* across the European Union seem to be necessary.

41.7 Developing the European Dimension

The Green Paper on the “European Dimension in Education” (European Commission) made explicit reference to the important role of teachers and teacher education in making this dimension a reality. Compared to the situation in the late eighties only incremental progress has been made in this respect. More coherent and substantial efforts especially in teacher education seem to be necessary if the European Dimension in Education is to be developed further.

Against this background it is proposed to establish an *action scheme* focusing on teacher education to *promote a European Dimension* in teacher education.



Notes

(1) In the interests of brevity the corpus of the text of the Green Paper contains the main lines of argument. We will present additional and/or supporting arguments as well as further references in these notes.

(2) A large number of central concepts frequently used in the European education discourse in *English* (e.g. education and training, professionalisation) have *different meanings* in other *European cultural contexts*. A translation of the English concept “education” into “*Bildung*” in German or “training” into “*Ausbildung*” and vice versa may lead to misunderstandings in cross-European education discourses and policy. Similar considerations apply to the White Paper on Education and Training (European Commission 1995) which contains a number of inappropriate translations and/or interpretations (even in its title in the German edition). While progress has already been made with the *Education Thesaurus* developed by the Council of Europe and the European Commission, we need to develop a European dictionary for education and training comprising definitions in all languages of the European Union.

(3) *Human capital theories* may be seen as rather general conceptions which are in strong need of specification and empirical validation and/or repudiation. Against this background the recent strong focus of education (as well as of economic and social policy) on human capital theories needs more careful consideration, if unintended consequences are to be avoided. Current education-, social- and economic policies seem to follow rather narrowly conceived conceptions of human capital theories. Improved means (e.g. closer relationships of general and vocational education and training, use of modern information and communication technologies in education and training processes) should contribute to meet (slightly changed or even unchanged) aims and objectives more appropriately, while changes in society would call for more substantial changes of ends as well as of means of education and training.

At the same time a certain move towards “back to basics” may be traced in education and training policies of some Member States of the European Union (e.g. England and Wales), which seem to run counter to human capital theories.

(4) Although rather general in nature “*leitmotifs*” have strong impact on the educational and political discourse. They usually have the potential to combine different interests of various groups of society (e.g. the leitmotif “*equality of educational opportunities*” in the seventies which was able to combine social-democratic, conservative and liberal positions). The recent focus on “*high quality education and training*” is another example. While recent interpretations of this leitmotif frequently focus on economic and social aspects as well as on aspects of training, more comprehensive and clear interpretations of “high quality education and training” are still pending (e.g. aspects of holistic education or “*Bildung*” as defined by the Study Group on Education and Training of the European Commission 1997).

(5) Cf. statements on the necessity, aims and different interpretations of “high quality

education and training” submitted by the European Commission (1995, 1997), Europäische Kommission (1997), OECD (1996) and UNESCO (1996, 1998).

(6) The European Commission has made a number of attempts to support improvements of teacher education (cf. the RIF initiative, special support for initial teacher education within the action schemes ERASMUS for higher education, COMENIUS for school education and the in-service education of teachers, LINGUA for foreign language teachers, the Open and Distance Learning (ODL) scheme for introducing information and communication technology into teacher education or the efforts to establish ECTS, the European Credit Transfer System). In a number of Member States of the European Union rather far-reaching but heterogenous changes of teacher education have been made the past few years (e.g. Finland, France or Portugal with an orientation on the concept of a “new professionalism” or England and Wales with an orientation on a “minimum competency model” of teacher education). Other substantial reforms may be expected in the near future in e.g. Germany (cf. E. Terhart 2000) and Sweden.

(7) Modification strategies of (teacher education) reform often follow a logic of “*more of the same*”. Only some small changes are made within an existing system (e.g. by increasing the duration of programmes in general, by extending a particular component of a programme, or by infusing a new curricular component at the periphery of a programme) without changing the entire system.

OECD is convinced that the education sector would need more substantial reform and has criticised the *inadequacy* of the “more of the same – logic”.

(8) D. Corrigan & M. Haberman (1990) have analysed the *context of teacher education* (in the USA) using a matrix with *different spheres* (e.g. society – state – university - colleges of education - schools) and *criteria* (e.g. knowledge based curricula - quality controls – resources - conditions of practice of teachers). T. Popkewitz (1993) has described the context of teacher education as a “*social arena*” with a number of actors holding different interests and power.

(9) The term “*further education of teachers*” is frequently used for programmes through which teachers may obtain an additional certificate and/or diploma of professional relevance after their successful completion (e.g. school management for prospective heads, certificate for teaching new subject areas such as immersion programmes or information and communication technology).

(10) T. Sander et al (1996) have edited the proceedings of this European-wide project containing comprehensive descriptions and analyses of the teacher education systems of the Member States of the European Economic Area as well as comparative analyses. An update describing changes of teacher education systems between 1995 and 1999 has recently been published by TNTEE (Sander 1999).

(11) TNTEE was established in 1996 as one of the projects within the *Thematic Network Projects Initiative* of DG XXII of the European Commission (action scheme SOCRATES). The Socrates grant provided by the European Commission helped to establish an all-European network of teacher education institutions and to contribute to a large number of improvements of teacher education all over Europe.

Some 20% of the costs to fulfil the objectives and tasks defined by TNTEE and requested by the Socrates scheme could be covered by the Socrates grant, while the remaining 80% had to be covered by the institutions joining the TNTEE network. Costs for research and development necessary to fulfil the tasks of TNTEE had to be covered exclusively by the participating institutions as well as by staff of these institutions.

These figures are evidence of a strong need for teacher education institutions, teacher educators and educational researchers all over Europe to work on improvements of teacher education. At the same time they indicate the necessity of a combined European professional network for teacher education.

It is worth mentioning that the European Commission did not interfere in the work of TNTEE. This fact applies e.g. to issues of aims, contents and/or policies of teacher education. Therefore, the responsibility for all work done and for the publications produced rests with TNTEE.

(12) The Thematic Network on Teacher Education in Europe (TNTEE) has also launched a web site (<http://tntee.umu.se>) which contains a wealth of material of importance to teacher educators on Europe and elsewhere. The site is continuously updated (<http://tntee.umu.se/news/>). TNTEE Publications is a series that is published on the web site (<http://tntee.umu.se/publications/publications.html>) as well as the TNTEE Journal (<http://tntee.umu.se/publications/journals.html>). The contributions, submitted by teacher educators from all over Europe to the first international teacher education conference organised by TNTEE in May 1999 in Lisbon, are also published at the web site (<http://tntee.umu.se/lisboa/papers/full-papers/>). The web site is thus another indicator of the achievements of TNTEE. The web site has had more than 30.000 visitors and its statistics testify to its increasing importance (<http://tntee.umu.se/stats/>) for teacher educators all over the world.

(13) ETUCE, the pan-European organisation of trade unions and professional associations for education staff, submitted a document comparable to this Green Paper in 1994. A number of Ministries of Education of Member States of the European Union and professional organisations have recently presented Green Papers on teacher education reform for public discussion (e.g. England and Wales, Sweden and the German Land Northrhine-Westphalia).

(14) Cf. F. Vaniscotte (1988), J. Le Metais (1991), F. Buchberger (1992, 1996), T. Sander et al (1996) and T. Sander (1999).

(15) The importance attached to teacher education and the fact that teacher education in Europe has to be seen as a mass enterprise would support the call for more *empirically validated knowledge* on the effects and efficiency of teacher education. However, research

on teacher education may be seen as a field that has been widely neglected. This lack of empirically validated knowledge has a close bearing on the *vulnerability* of teacher education to *ideologies* and *political influence*.

Although it may sound paradoxical, the main source of criticism on schooling, teachers and teacher education might arise from *success* (cf. J. Oelkers 1996). Over the past centuries schools and teachers have been able to fulfil satisfactorily an ever increasing number of new tasks and changing expectations defined by different social groups. It might even be argued that meeting new tasks and expectations successfully has brought about an *inflation of expectations* (“*Anspruchsinflation*”). In any case it seems to be necessary to analyse the conditions of success and progress made by schools, teachers and teacher education if achievements are to be raised further.

Additionally, it might be hypothesised, that an inflation of expectations and tasks did not always correspond to an increase of the support necessary to improve teacher education and the conditions of work for teachers. Particularly in one Member State of the European Union teachers and teacher education have been blamed in the political rhetoric for a number of the economic and social problems with which that country has been confronted. Most observers however hold that the blame might have been more appropriately laid on incoherent State education policies (cf. J. Elliott 1998).

However, leaving aside rather global and populist criticisms of teacher education and its efficiency (e.g. statements such as “teachers mistaught” or “teacher education as a low impact enterprise at high costs”) a number of problems of contemporary teacher education should not be neglected (e.g. a certain lack of pro-activity, curricular problems closely related to problems of a knowledge base for the teaching profession and/or the sometimes orthodox patterns of organising teacher education).

(16) The statement of H. Judge points to the fact that (teacher) education for a long time has been primarily influenced by different political ideologies, and that more empirically validated knowledge is needed. This does not imply a pure technical or rationalistic model of policy making or curriculum development. (Teacher) Education seems to be dependent on values and attitudes held in different cultural and social contexts. However, both different values and attitudes within different cultural and social contexts, and empirically validated knowledge on successful teacher education have to be considered in improving it (cf. J. Stephenson et al. 1999).

(17) Cf. the critical remarks of J. Delors, the former president of the European Commission, on discrepancies between concrete education policies and statements of education politicians on the high importance attached to it (UNESCO 1998).

(18) At an *institutional level* and even within the framework of sometimes rather rigid national regulations of teacher education a *rich variety of projects* to improve teacher education may be noted (cf. E. Glumpler et H. Rosenbusch 1997 for the situation in Germany and H. Niemi 1999 for a global perspective). Two components are closely related to such projects and their outcomes.

Research and development oriented institutions of teacher education seem to meet changes and challenges better both in terms of quantity and quality (e.g. Departments of Teacher Education at Finnish universities).

Action schemes of the European Commission (e.g. curriculum development projects within the framework of ERASMUS or LINGUA) have an impact on teacher education programmes and their improvement.

(19) A. Adams (1998) has submitted a comparative analysis on “*Convergences and Divergences in European Education and Training Systems*” commissioned by the European Commission and described a number of convergent trends. Similar work has been submitted by A. Green et al. (1999). G. Neave has analysed teacher education in the Member States of the Council of Europe (G. Neave 1987) and the European Communities (G. Neave 1992). His analyses suggest *trends towards convergence* in a number of areas (e.g. incorporating all forms of teacher education into the higher education sector). These studies highlight the necessity of comparative analyses for *informed political decision-making*. At the same time these studies reflect a number of unresolved problems of comparative analyses.

OECD (1990, 1994, 1999) studies and projects on teachers and teacher education had substantial impact on national policies of education and teacher education.

F. Buchberger (1998) and A. Novoa (1996) have analysed education policies of the European Commission and their impact on national policies of education in the Member States of the European Union. Both authors speak of a strong impact of “*indirect policies*” operating in parallel through convincing patterns of discourse (e.g. the White Paper on Education and Training) and incentives (e.g. by action schemes such as Socrates, Leonardo or Telematics Application).

Some recent reform activities of the education and training sector in different Member States (cf. A. Green et al. 1999) are rather uniform across the European Union (e.g. early language learning, restructuring the organisation of higher education studies) and may be perceived as examples of the “*indirect policies*” mentioned.

(20) In her analysis of structures and curricula of teacher education programmes in the USA S. Feiman-Nemser (1990) concluded that structures and curricula of teacher education may be characterised by “*uniformity*” and “*sameness*”. T. Sander (1999) reached similar conclusions in analyses of teacher education curricula in the Member States of the European Union.

(21) Research-based knowledge on the effects and efficiency of the many different models of teacher education in the European Union is still less than comprehensive. Comparative analyses of the different systems and models of teacher education in Europe might bring about more understanding of what is an appropriate knowledge base for teacher education reform. The predominance of one European language - English - in the discourse on teacher education may be seen in close connection to a number of restrictions of definitions of the *problem-space*. At the same time the hypothesis may be advanced that this predominance seems to be related to an overall decrease of diversity in discourses on teacher education and its reform.

(22) F. and I. Buchberger (1999) have analysed some *hidden assumptions* of the “*academic tradition*” of teacher education and noted that one of the many problems may be that the different aims of academic disciplines and scientific inquiry on one side and the aims of teaching and supporting learning particular problems on the other are considered rather superficially. A similar situation applies to the different formats of scientific knowledge structured systematically and in propositions in theoretical systems, and human knowledge structured holistically in meanings, schemata or scripts around problems. Considering the high relevance of both scientific knowledge and human knowledge structures the authors have developed a concept of *Didaktik/Fachdidaktik* as an integrative transformation science for teaching, studying, and learning.

(23) Unlike Faculties of Medicine or Law, separate Faculties of Education were not established in universities in the nineteenth century and no specialised Universities for Education were created. While the education for teachers at primary school level was placed at schools at the upper secondary level or at university colleges (or at Teacher’s Colleges) the education for secondary school level teachers has been a part of the universities. Adopting the aims of departments and faculties of universities the academic education of prospective teachers did not aim at teaching and the teaching profession, but on educating scientists in particular academic disciplines (see also H. Seel 1985).

(24) The concept “teacher” has frequently been restricted to “school teacher” in many Member States of the European Union. This restriction implies that education staff working in kindergartens or in adult education are not recognised as teachers or members of the teaching profession in a number of European countries. Additionally, this restriction excludes a number of education staff working in schools.

Cedefop (1995) has described problems in defining the concept of teacher in vocational education and training. It seems to be necessary to adopt a broader concept of “teacher” and “teacher education”.

(25) Note that the highly developed systems of teacher education for vocational, technical and economic education and training at the upper secondary school level in a number of continental European countries have become subject to analysis by education decision makers and educationalists of other Member States of the European Union aiming at improvements in these and other sectors of teacher education.

(26) The introduction, since the mid sixties, of models of in-service education may be seen as an important step in the development of teacher education. At the same time the introduction of institutions devoted to in-service education of teachers only, and separated on one hand from initial teacher education and educational research and on the other from schools and school improvement may be perceived as rather problematic. More appropriate measures have not been taken in most European countries (e.g. making in-service education an integral part of university teacher education). Solutions adopted in some countries including the establishment of state-run pedagogical institutes or pedagogical centres seem to reflect

a strong need of the State and the school inspectorate to keep control over teachers and their in-service education (e.g. Austria and Germany).

(27) In England and Wales the Department for Education and Employment has recently submitted proposals for teacher education reforms based on a coherent systemic perspective (DfEE 1998). While opinions expressed especially when compared to “state of the art – knowledge” on successful initial teacher education can be seen as problematic, the close relationships suggested between initial teacher training, induction (cf. “career entry profiles”), continuous professional development, staff development, further education and school improvement, seem to be challenging.

(28) While the education of teachers for the secondary schools has been organised from the very beginning at universities, this is not the case for all other categories of teachers. For a long time primary school teachers and their associations in several countries have made claims for the best teacher education possible. The “best” being regarded as an academic and university-based teacher education. These efforts have always been underpinned both by intrinsic motives (e.g. need for more profound and liberal teacher education) and extrinsic motives (e.g. academic teacher education as means to improve the status of the teaching profession).

(29) R. Bourdoncle (1994) has analysed the different meanings of the concept “*professionalisation*” in various European cultural contexts. Many misunderstandings might have been avoided in discussions on reforms and improvements of teacher education, if comparative analyses of the concept of professionalisation had been taken into account. Conceptions of professionalisation developed in English speaking countries seem to dominate the discourse. On the other hand main criteria of professionalisation, such as an emphasis on “*relative pedagogical autonomy*” (“*relative pädagogische Autonomie*”), and/or the recognition of the necessity of a scientific knowledge base for teaching, have for a long time been guiding principles of teacher education in Nordic and German speaking countries. As a consequence the British perception of professional autonomy may not always be compatible with views in other European contexts.

(30) For different conceptualisations of professionalism and distinctions between pedagogical professionalism and sociological aspects of professionalisation see A. Combe & W. Helsper (1996) or J. Wagner (1998).

(31) Concerning the concept of an “open” or “new professionalism” see P. Laderriere (1990).

(32) A historical analysis of the *development of the medical profession* might furnish rich material for a discussion of the professionalisation process regarding teachers. Important steps in the process of professionalisation in medicine were taken through the development of a scientific knowledge base, the development of empirically validated practices, a code of ethics and later on standardised treatments and technologies.

(33) Many institutions dealing with primary school teacher education have been able to develop clear *profiles of research and development* after their inclusion in universities. Improvements of the curricula of the primary school and of methodologies for early reading and writing or mathematics may be mentioned as examples. The adoption of constructivist learning theories and their transformation to establish powerful learning environments in primary schools provides another example. Similar observations may be reported for secondary teacher education, where progress has been made especially in regard to *Didaktik/Fachdidaktik* in a number of fields (e.g. mathematics, natural science studies, foreign language learning).

(34) In a number of European countries primary school teacher education was simply transferred to universities. This was done without defining coherent goals for the academic education of teachers, without establishing structures and profiles for research and development, and without provisions for coherent staff development programmes necessary for teacher educators initially socialised within a “normal school tradition”. In a number of cases these arrangements imply that opportunities which should have been provided for professionalisation were absent.

(35) The interest in minimum-competency models in English speaking contexts may be explained by a number of factors. One of these might be different perceptions on the role of teachers in English speaking contexts compared e.g. to perceptions in Nordic countries (cf. B. Gundem & S. Hopman 1998). In addition the (re-) introduction of minimum-competency models of teacher education in some parts of the USA could be tied to a severe shortage of teachers and some reluctance to invest in (teacher) education.

(36) Cf. for instance the National Commission on Teaching and America’s Future (1996) or the manifesto submitted by the Fordham Foundation (1999).

(37) Cf. OECD (1999) or F. van Vught & D. Westerheijden (1993).

(38) The update of the Sigma report produced by TNTEE contains a description of the models of evaluation of teacher education used in the Member States of the European Union (T. Sander 1999).

(39) Concerning the concepts *Didaktik*, *Fachdidaktik* or *Bereichsdidaktik* see the publication “Didaktik/Fachdidaktik as science(-s) of the teaching profession?” produced by a subnetwork of TNTEE and edited by B. Hudson et al (1999) or the contributions to a Scandinavian/German/American symposium on the context dependent concepts *Didaktik* and curriculum (B. Gundem & S. Hopman 1995, 1998).

(40) In a number of European cultural contexts curricular components are categorised into professional studies (educational studies, studies in different methodologies or subject matter didactics and teaching practice) and academic subject studies.

(41) More detailed descriptions of different curricular models of initial teacher education are found in e.g. M. Galton & B. Moon (1994).

(42) M. Kennedy (1990) has analysed goals of the professional education of a number of academic professions in USA. In regard to teacher education unclear goals seem to be related to rather problematic curricula and teaching and learning arrangements (and an insufficiently effective teacher education). For German speaking countries J. Oelkers (1998) has submitted cogent analyses of the vague and unrealistic goals of initial teacher education.

(43) Cf. the trend analyses submitted by G. Neave to the Standing Conference of Ministers of Education of Council of Europe Member States (1987) and the European Commission (1992).

(44) Although a tendency towards higher *admission criteria* may be observed as a general trend in teacher education, policies of Member States of the European Union differ as regards admission to fields in which a shortage of teachers exists (e.g. mathematics, foreign languages, natural sciences, information and communication technology). While some Member States think that more demanding admission criteria and better teacher education programmes might be appropriate for tackling the problem of shortage of certain categories of teachers, others hold that lower admission criteria and shorter programmes might be appropriate measures. At the same time some Member States of the European Union have introduced “*alternative routes into teaching*”. These alternative routes into teaching are designed to attract candidates with non-traditional qualifications to opt for teaching as a profession. Admission policies related to these alternative routes are frequently closely related to minimum-competency models of teacher education.

(45) Frequently innovations in the education sector seem to take the following pattern: A problem is perceived, the measures in order to solve it are taken into consideration. While time passes in the development of solutions, the problem might have changed or even “disappeared”. This gives the possibility that solutions developed might then be appropriate to solve a problem that does not exist any more and/or be inappropriate to solve the changed or new problem. This phenomenon may be described as an “*innovation trap*”.

(46) Concerning the complex systemic relations between changes in society and the education sector see e.g. D. Kallós & S. Lindblad (1994) and S. Lindblad & T. Popkewitz (1999).

(47) Economic social, cultural and technological changes have to be conceived as “*produced or made*” by different interest groups. European Commission statements on changes and challenges sometimes give the impression that certain changes (e.g. globalization) must be seen as “*inescapable trends*” rather than the *intermediate results of policies serving different social groups* holding different interests and power. Considering a certain sociological model (“*labour and employment society*”) measures proposed may be compatible with certain aims of economic and social policy, but do exclude at the same time a large number of

maybe more promising alternatives. Additionally, there is a danger to fall into an “*innovation trap*” by adopting traditional measures to tackle new problems of a rather rapidly changing nature. Profound descriptions and sociological analyses of recent social changes have been submitted e.g. by U. Beck (1998), A. Giddens (1997) and T. Popkewitz & S. Lindblad (1999).

(48) Main changes may be described as a *shift* from industrial production to service industries, and a shift from stability and life-long employment to flexibility and short-term multiple employment. Tele-working has become a new buzz-word. At the same time European societies are confronted with *mass unemployment* closely linked to the *social exclusion* of millions of European Union citizens. Against this background it may come as a surprise that schooling in most Member States of the European Union is still oriented on *Taylorist- or Fordist-conceptions* (of production), and changes in the context of schooling have been recognised only to a limited extent in organising teaching, studying and learning processes (cf. A. Hargreaves 1994 and M. Lawn 1994).

(49) Most Member States of the European Union have decreased the public expenditure for the education and training sector over the past decade (OECD 1999). This fact may be perceived as a contradiction if it is compared to the importance attached to education and training for several years.

(50) See the cogent analyses submitted by H. Simola, R. Rinne & J. Kivirauma (1999) for the situation in Finland, S. Lindblad & L. Lundahl (1999) for Sweden and J. Ozga & M. Lawn (1999) for the United Kingdom.

(51) Initial teacher education in England and Wales is circumscribed by rather narrowly conceived national curricula prescribing in detail contents to be taught and competencies to be acquired by prospective teachers. These national curricula have been developed at a central level (cf. Teacher Training Agency 1997). At the same time a structure of external examination coupled to a formal, detailed and periodic government inspection has been introduced. K. Ashcroft (1998) and B. Hudson (1999) have analysed how this regulatory framework may be threatening and oppressive, energy sapping and limiting in regard to the potential for innovation.

(52) Cf. T. Popkewitz et al. (1999) and their review of research on education governance produced within the European Commission funded project EGSIE.

(53) *Economic rationality* may be seen as one among a number of rationalities. Statements of The Study Group on Education and Training of the European Commission (1997) could be interpreted as a call for a balance between different rationalities, and also seen as a warning against a predominance of economic rationality.

(54) Cf. discussions on parental choice or school choice. A number of experts have expressed

doubts whether these principles may be compatible with the claim to equal education opportunity guaranteed by the constitution in most Member States of the European Union.

(55) The term “*higher education*” has different meanings in the different cultural contexts of Europe (cf. B. Clark & G. Neave 1992 and OECD 1999). In some countries it exclusively refers to university education (but, how to define that exactly?), but in other Member States it includes all education and training provided by post-secondary institutions, polytechnics or by vocational institutions (“*Fachhochschulen*”). Some prefer the term “tertiary education and training” or “third level education and training” which comprises all forms of post-secondary education and training. Work commissioned by OECD (1999) to develop categories for the description of education and training systems (ISCED) has brought about a number of clarifications.

(56) The strong demand for higher education may be explained both by intrinsic and extrinsic motives. Extrinsic motives seem to reflect the recognition of the empirically validated correlation of level of formal education received and opportunities on the labour market as well as prospective income.

(57) Cf. the European Commission funded study “Non-official Higher Education in the European Union” (D. Tsaoussis 1998).

(58) Many Member States of the European Union have established institutions of higher vocational education and training (e.g. polytechnics and *Fachhochschulen* in Austria, Belgium, Finland, Germany and The Netherlands). At the same time England and Wales have incorporated their polytechnics into the university sector.

(59) The problems of *changing missions of university* education and/or issues of the autonomy of universities are discussed in several documents (see for example the so called Bologna Declaration mentioned earlier in this text). On the other hand the European Commission (1995) has heavily criticised the higher education sector stressing the problem of “*paper qualifications*” obtained in the higher education sector.

(60) Cf. a number of comprehensive handbooks on research on teaching (e.g. M. Wittrock 1986, L. Anderson 1995) and on research on teacher education (e.g. W. Houston 1990, M. Sikula et al 1996, B. Biddle et al 1997 and G. Griffin 1999). See also L. Darling-Hammond (2000).

(61) For example the challenging, and still innovative, Oldenburg reform project of a one-phase integrated model of teacher education (P. Doebrich et al 1981) or recent projects within the framework of a standards-based teacher education model (G. Griffin 1999).

(62) The European Commission (1999) publication “Key Data on Education in the European Union” provides detailed information on salaries of teachers in the European Union.

(63) Cf. G. Weiner (1999), G. Weiner & D. Kallós (2000) and various papers of the TNTEE sub-network on “Gender Issues” (http://tntee.umu.se/subnetworks/subnetwork_h/).

(64) The introduction of modern information and communication technologies into institutions of teacher educations seems to be full of problems. A severe lack of human and material resources (e.g. appropriate equipment) has to be remedied. Coherent investment both in material and human resources seems to be indispensable.

At the same time even when resources are appropriate, severe problems in integrating information and communication technologies into teaching, studying and learning processes and learning environments, can be observed (cf. M. Sinko 1998 for problems in Finnish higher education).

(65) Focusing teacher education reform on initial teacher education can create several problems. Considering that only some 3% of newly qualified teachers per year (and in some countries such as Greece much less) enter the teaching profession changes and improvements expected may have a rather delayed impact. At the same time the investment of huge resources (usually more than 90% of the resources invested in the entire teacher education system) into the period of initial teacher education may be questioned.

(66) The concept “*normative*” has different meanings in different cultural contexts. In some contexts its meaning is closely related to “*prescriptive*”. The authors use the concept “*normative*” as “*dealing with norms*” and not its meaning as “*prescriptive*” (for a discussion of the differences between *normative* and *prescriptive* in educational discourses see e.g. M. Uljens 1997).

A certain neglect of normative analyses may be detected both at the level of political decision making and in research on teacher education. Vague, unclear or implicit goals for teacher education frequently seem to reflect avoidance behaviour or a particular form of escapism as regards normative decisions coupled to a fashion for decontextualized thinking.

While a neglect at the level of political decision making might have resulted in vague goals for teacher education and subsequently in a suboptimal use of resources, a neglect of normative aspects in research on teacher education might be seen as having a bearing on restrictions of the “*problem-space*” for more substantial improvements of teacher education.

(67) As early as 1971 the “*Deutscher Bildungsrat*” defined teaching, education, counselling, evaluation, innovation and administration as central tasks of teachers and the teaching profession. Depending on normative decisions and cultural contexts the definitions of central tasks of teachers and the teaching profession may differ. Some observers think that teaching would be the most important task including the other tasks defined by the *Deutscher Bildungsrat* (*Deutscher Bildungsrat* 1971).

(68) Cf. the descriptions in the training curriculum for new teachers submitted by the English Teacher Training Agency (1997).

(69) Recently, syllabuses and national curricula of schools in most of the Member States of the European Union could be classified as *common sense based* (explainable in historical terms) *collection-code syllabuses or curricula* not always compatible with the changed and rapidly changing tasks and expectations of society. Curricula did not reflect the progress of scientific disciplines as well as changed patterns of knowledge production. Substantial reforms or restructurings of syllabuses and national curricula are still pending in most European Union Member States. Coherent curriculum research has become indispensable and teachers are supposed to take a prominent role in this process (e.g. developing school-based curricula or “school-plans” as for example in The Netherlands and in Sweden).

The predominant orientation of existing syllabuses and national curricula on some academic disciplines is rather problematic in at least four ways:

- (i) The fragmentation of syllabuses or curricula into (school) subjects corresponding to certain academic disciplines could be seen as a debatable pattern of organisation of teaching and learning closely related to outdated industrial modes of production (e.g. Taylorism).
- (ii) It still remains debatable why certain academic disciplines have been incorporated into the syllabuses and/or national curricula and others have been rejected or are at present neglected (e.g. communication sciences).
- (iii) A sometimes hidden assumption is the presumed direct correspondence of a particular academic discipline to a particular subject at school. H. Seel (1998) has analysed the inadequacy of this assumption for the school subject geography. I. Buchberger (1999) has submitted the argument that mother tongue teaching and learning as a subject in the school has to integrate knowledge produced independently in more than fourteen different academic disciplines.
- (iv) The difference between the aims and tasks of many academic disciplines (production of explanatory knowledge structured systematically and in propositions) on the one side and the aims of teaching and learning on the other side is neglected in many ways, leading to severe problems.

(70) Textbooks and education software aim at promoting the learning processes of large number of students. However, there are no coherent empirical studies on the effects and efficiency of textbooks and education software available on the education market in the Member States of the European Union. A corresponding situation would probably be impossible in the medical and health care sector.

(71) Textbooks and education software need to be defined as educational technologies. While thousands of textbooks and large amounts of education software aiming at the promotion of learning are used daily by millions of students without being tested for their effects and efficiency (and maybe counter-effects), some educationists are convinced that education technology would be impossible (for the problem of education technologies see L.-M. Alisch 1995). On the other hand it seems to be vital that teachers should be qualified to make reasoned decisions on the selection of education software and to transform this knowledge cogently to particular cases and situations.

(72) Cf. D. Schön (1983) and his concept of the reflective practitioner and its implication for teacher education.

(73) Cf. the recent lively discussions on the roles and tasks of educational research and development in teacher education in Switzerland closely related to the process of incorporating initial teacher education into the sector of higher education.

(74) Cf. also the development of “new” forms of research as e.g. the “Teacher Research Movement” (M. Cochran-Smith & S. Lytle, 1999).

(75) The necessity of a coherent practice component in teacher education programmes has been recognised for a long time. In the process of bringing all forms of teacher education to university level in Germany, S. Robinsohn (1971) has submitted a proposal to establish a “*clinicum*” attached to university institutions of teacher education comparable to the “clinical faculties” of medicine. Although “clinica” might have been highly relevant to the provision of coherent practice for prospective teachers and a professionalised teacher education, the proposal received only limited attention in Germany. The review on learning to teach in English speaking countries submitted by M. Wideen et al (1998) highlights the problems of a coherent practice component in programmes of initial teacher education.

(76) Cf. the highly developed system of model and training schools at Austrian Pädagogische Akademien (H. Brenn et al. 1997).

(77) See L. Darling-Hammond (1994) for a comprehensive description of the concept of Professional Development Schools including a number of case-studies.

(78) See B. Whitford & P. Metcalf-Turner (1999) for an analysis of both strengths and problems of Professional Development Schools (PDS). While the benefits for higher education institutions and their students may be reasonably self-evident, outcomes for schools may not be so obvious.

(79) Cf. H. Vonk (1994).

(80) Cf. the International School Improvement Project (ISIP) commissioned by OECD which has brought about a large number of insights on effective school development and the in-service education necessary to materialise it. See C. Day (1999) on conditions of successful continuous professional development.

(81) Continuous professional development of teachers may be seen as one aspect of life-long learning. In light of this it has to be noted as somewhat of a paradox that in the “*Year of Life-long Learning*” most Member States of the European Union have reduced public expenditure for the in-service education of teachers. Another discrepancy can be noted if the amount of money spent on educating a relatively small number of new teachers is compa-

red with that spent on the continuous professional development for the much larger group of practising teachers.

(82) Cf. the concept of a diversification of the tasks of teachers coupled to different forms of teacher education and career structures submitted by the Holmes Commission (1986).

(83) Both the chapters ERASMUS and COMENIUS of the European Commission action scheme SOCRATES have given support to the development of Pan-European in-service education based and modularised masters programmes for teachers (e.g. European Studies, Multimedia Education and Consulting).

(84) In most Member States of the European Union opportunities to acquire special competencies for teaching in teacher education have not yet been developed. An European-wide consortium of universities composed of high quality teacher education universities will attempt to tackle this problem by establishing an *all-European research school for (teacher) education* and providing special PhD-programmes for prospective teacher educators (cf. the ERASMUS application EDIL co-ordinated by Umeå University).

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Annex

Systems and Models of Initial Teacher Education

The Thematic Network of Teacher Education (TNTEE) has published an overview and analysis of Teacher Education programmes in Europe (T. Sander et al., 1996). An update of that overview is to be found in Sander (1999). The text that follows builds upon those texts and on the analysis by F. Buchberger (1994).

In her description of systems of teacher education in the former twelve Member States of the European Union J. Le Metais (1991, p.1) restricts herself to “*general regulations governing*” teacher education for “*teachers of pupils of statutory school age and up to age 18+ in schools maintained or subsidized by the state. Teachers in nursery, technical or vocational schools and in special schools may hold different qualifications from, or in addition to, those employed in ordinary schools. Given the complexity of these differences, regulations specifically governing the training of these teachers have been excluded*”. On a country by country basis she presents descriptions structured under five headings:

- (i) type of school,
- (ii) categories of teachers (most countries have more than one category of teachers, depending on the education received and/or on the type of school in which s/he may be employed),
- (iii) requirements for admission to teacher training,
- (iv) teacher training process (e.g. level, length and content of teacher education for each category of teacher),
- (v) qualifications.

The limitations chosen may be interpreted as an indication of the many variables that have to be considered in comprehensive descriptions and comparisons of systems and structures of teacher education in Europe. Studies comparable to that of J. Le Metais (e.g. F. Buchberger 1992; 1994, F. Vaniscotte 1989, T. Sander et al. 1996, T. Sander 1999) seem to be confronted with similar problems. Differences in structures of education and types of school, different categories of teachers (e.g. for different stages of school systems, age groups, types of school or for different subjects), and sometimes very particular types of teacher education for different categories of teachers between and even within countries are some of the issues that make comparisons difficult.

Although we are very well aware of the problems outlined above some basic structures of systems of teacher education in European countries will be described below. These descriptions will focus on institutional and organisational features and additionally they will deal with some selected elements of programmes of teacher education for teachers at primary and secondary school levels.

Various criteria may be used for categorising systems and models of initial teacher education. Because of the close relationships between school systems, initial teacher education and

categories of teachers an approach frequently adopted for categorisations at an organisational and institutional level makes use of criteria such as

- (i) stages of the educational system (pre-primary, primary, lower secondary, upper secondary) and/or
- (ii) types of school (e.g. compulsory or non-compulsory, comprehensive or non-comprehensive, focus of education: general or academic, vocational education, special education).

Although problems connected with this approach are obvious (e.g. different meanings of the term upper secondary level, different age ranges of these levels), it has been adopted here to describe some basic structures of the systems of initial teacher education.

(1) Using the categories primary level, lower secondary level and upper secondary level as criteria three main types of systems of initial teacher education may be identified:

(1.1) A first type where initial teacher education of teachers for comprehensive schools is integrated (primary and lower secondary level), and where different forms of education for teachers at upper secondary level is provided (e.g. Denmark). The system of initial teacher education in Sweden may also be grouped into this category. In Sweden there exist two different forms of initial teacher education for teachers of comprehensive schools: one for grades 1 - 7 and another for grades 4 - 9.

(1.2) A second type where different programmes are offered to (prospective) teachers at the primary level and at (lower and upper) the secondary level (e.g. Ireland, Italy and Spain). The programmes which sometimes consist of some components common to both forms of teacher education are organised by institutions of higher education (universities). The duration of studies may be different (e.g. Spain) or identical (e.g. France).

(1.3) A third type has the following structure: programmes for (prospective) teachers at the primary school level, and different programmes for different types of school as well as types of teachers at the lower secondary level, which aim either at the lower secondary level or the lower and upper secondary school levels. Examples of this type are e.g. Belgium, Germany and The Netherlands.

(2) Teacher education for special needs education may be provided by widely differing structures:

- In some countries (prospective) teachers for special needs education receive their education in programmes running parallel to the education of teachers at the primary and (lower) secondary school levels (e.g. Austria).
- Special needs education may be an integral part of the education of primary school teachers and specialisation studies are offered during these programmes (e.g. Finland).
- In a third group of models teacher education for special needs education is provided as a post-graduate or post-diploma programme for teachers (e.g. The Netherlands and Sweden).

- Very specialised forms of education are provided to deal with different groups of handicapped (e.g. the blind) in many countries.

(3) Some systems of teacher education may be characterised by having highly developed structures and programmes for vocational education and training (e.g. Austria, Germany and The Netherlands), while others have not yet developed this sector (cf. Cedefop 1995).

- Some countries provide initial teacher education for vocational subjects at lower secondary level (e.g. Belgium and The Netherlands).
- Other countries have introduced special programmes for teachers of “practical subjects” in the sector of vocational education (e.g. Austria or Germany).
- Teachers for commercial schools at upper secondary level may receive their education within the higher education system or at university level (e.g. Germany).
- Initial teacher education for teachers of technical subjects has not yet been developed sufficiently in most Member States of the European Union (c.f. Cedefop 1995).

(4) Regarding institutions at which initial teacher education for teachers at the primary school level, at the lower and upper secondary school level is provided, three main categories may be identified:

(4.1) Some countries have incorporated all forms of teacher education mentioned above into the university sector (e.g. Finland, France, Germany, Greece, Spain and Sweden). Despite this fact the programmes offered to (prospective) teachers for the different levels of the school system may vary not only in content and curricular structures, but in their duration. While the duration of studies is of equal length for (prospective) teachers at primary and secondary level in France, it differs in Finland, Germany, Portugal, Spain or Sweden.

(4.2) A second category separates the different institutions at which initial teacher education is provided for different types of teachers. Teachers for the primary level and some types of school at lower secondary level may be educated at institutions at post-secondary level (e.g. Austria) or at institutions of higher education (e.g. Belgium and The Netherlands), while teachers for other types of school at the lower and at upper secondary school level receive their teacher education at university level.

(4.3) In a third category teachers for different types of school obtain their teaching certificates at institutions located at different stages of the educational system and have different status and it is up to the (prospective) teacher to choose where s/he intends to study (e.g. Poland).

(5) Recent decisions in England and Wales have shifted the responsibility for initial teacher training to schools (“school-based teacher training”) and changed and reduced the role of institutions of higher education in initial teacher education

(6) Institutions at which (prospective) teachers are educated have very different patterns of organisation:

(6.1) In some countries initial teacher education for teachers at the pre-school level is

organised in schools at the upper secondary level (e.g. Austria).

(6.2) There exist colleges of teacher education as single-purpose institutions (e.g. Austria and Denmark).

(6.3) Initial teacher education may be part of institutions of higher (vocational) education or polytechnics (e.g. Belgium and The Netherlands).

(6.4) At the university level different patterns may be observed:

- Initial teacher education programmes may be organised in departments of teacher education (e.g. Finland).
- Other countries have opted for schools of education (e.g. Spain).
- In fragmented structures responsibilities for initial teacher education are not always clear and teacher education is split up into a number of unrelated departments and/or faculties (cf. the situation at most German universities at which teachers receive the first theoretical part of their education).
- In some countries the responsibilities for initial teacher education are split up into different institutions: the university is responsible for a first and mainly theoretical part of teacher education; local school boards, pedagogical institutes and schools for a second and mainly “practical” part (e.g. the Austrian model for the education of (upper) secondary school teachers and the German two-phase system).

(7) The duration of programmes varies from very short courses (e.g. initial teacher education for teachers in vocational, commercial and technical schools in many countries) up to programmes lasting five years and more (e.g. France, Germany and Spain). With few exceptions all programmes for teachers at primary and secondary school level now have a minimum duration of three years.

(8) The programmes have different organisation and structure:

(8.1) In concurrent models the different components of teacher education (education studies, subject studies, Methods, *Didaktik* or *Fachdidaktik*, teaching practice) have to be studied parallel to one another.

(8.2) In integrated models these components are not only offered at the same time, but in an integrated way mainly focussing on professionally relevant topics and integrating “theoretical” and “practical” studies. Many programmes for the education of primary school teachers follow a concurrent model and a trend towards integrated and/or modularised models may be observed (e.g. in the Nordic countries).

(8.3) In consecutive models (prospective) teachers have to study academic disciplines or subjects (and sometimes education studies) at first. This part is then followed by professional studies and teaching practice (e.g. the English Postgraduate Courses in Education). Several models of teacher education for teachers at the secondary school level are consecutive.

(8.4) Modularised models of initial teacher education offer clearly defined modules and it is

up to the teacher student to make decisions in which sequence s/he will take the different modules. Some Nordic countries increasingly offer models of this type.

(8.5) A further distinction may be made between so-called “one-phased” and so-called “two-phased” models of teacher education.

- In one-phased models the successful completion of initial teacher education at institutions of teacher education permits the (prospective) teacher to apply for a post at schools.
- In two-phased models (prospective) teachers first have to complete (mainly) theoretical studies at institutions of teacher education (“first phase”). This “first phase” is followed by “practical studies” at schools and special courses dealing mainly with (subject) didactics (e.g. the German “*Vorbereitungsdienst*” or the Austrian “*Unterrichtspraktikum*”). Local school boards and local pedagogical institutes separated from the university are responsible for this “second phase”. A successful assessment of the tasks (prospective) teachers have to fulfil during this “second phase” forms a necessary condition for getting the status as a fully-fledged teacher. This “two-phased model” as executed for example in Germany ends with a so-called second state examination (“*Staatsprüfung*”) and may be seen as an indicator of the importance the state attributes to teachers and teaching (and their control).

(9) The curricula and contents of initial teacher education vary considerably. The amount of teaching practice reaches from almost nothing up to more than fifty percent of the total study time. The same applies to studies in educational sciences, professional studies as well as to subject studies (cf. that teachers for the same age range receive in Germany an academic education in one or two academic disciplines while they in the neighbouring country of Denmark receive an education in a rich variety of school subjects).

(10) Institutions of teacher education are either strictly controlled by the state (e.g. by rather narrowly conceived national guidelines, e.g. England and Wales) or have a relatively high degree of autonomy (e.g. Finland, Portugal or Sweden).

(11) Institutions of initial teacher education may either have close links to schools (e.g. England and Wales), to the school system and to school improvement or they may be separated from schools (e.g. Germany).

The institutional, organisational and curricular features outlined above reflect only some of the many characteristics in which systems and models of initial teacher education differ both within and between European countries. Institutional, organisational and curricular features are only three - and as some observers think not the most important - of the many integral components of the complex social system of initial teacher education.

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