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STATE OF PLAY IN TEACHER EDUCATION IN HUNGARY AFTER THE BOLOGNA REFORMS

RENEWAL OF TEACHER EDUCATION / GROUNDWORK

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Translated by Anna Csilla Gösiné Greguss and Csilla Stéger

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Introduction

The accelerating changes of the past decade in the structure and conceptualization of initial teacher education (ITE) in Europe and in Hungary have provided self-evident and abundant material for investigation. Of the storehouse of possible trends, I have chosen three different, yet related and superimposed topics of investigation that have not been studied before, and that contribute important elements to the realistic and objective view of the present day situation of ITE in Hungary.

The effect of the introduction of the Bologna type, multi-cycle education system on teacher education is a fundamental theme of our times. The objective measure of the evaluation of the processes in Hungary is the comparison with other European countries. Therefore, in 2010 I studied the content of the ITE models in the European countries after the Bologna transformations, and the extent, directions, and state of the reforms. The arising overall picture served as an objective mirror for the evaluation of the Bologna reforms of ITE in Hungary.

In light of the relationship between the European trends and Hungarian reforms – whatever the outcome – the study of the divided system of views of Hungarian teacher educators is especially interesting. Which are the aspects along which we can find the deep differences among the groups of teacher educators with respect to systems of values, attitudes, and views? This question deserves attention, first, because the views of the student teachers are formed by the teacher educators; thus, the views of the educators are often reproduced in the new generation undetected, influencing the schools of the future. Second, the detailed knowledge of views regarding the reforms of the recent past may help in finding the real barriers to change.

In addition to the European comparison of the Hungarian reforms of ITE and to revealing the related views of teacher educators, the third pillar of the objective appraisal of the present situation was the assessment of the organizational dimension. Despite the reforms of the educational models, the participants, their views, and their personal relationships have remained unchanged – determining the frames of operation and efficiency of ITE. Therefore, it is particularly important to find out who – in the formal organizational structure of the institutions – are the ones who actually put ITE into practice and through what kind of interpersonal relationships they do that. Do the differences in the views of teacher educators affect their working relationships?

I based the study of these three complex, exploratory topics on various and sundry previous knowledge, and conviction. For example, an instance of "previous knowledge" could be my conviction formed among European experts that the content of the educational programs are already comparable, that there exist a common schema and a language that are interpreted similarly all over Europe. Furthermore, it was also evident for me that European comparisons cannot be made in merit at the general levels of concurrent and consecutive models; we need detailed and complete comparisons encompassing the whole learning pathway and we need to grasp the dynamism and direction of the changes.

Another instance of previous knowledge was my conviction that the striking attitude differences among Hungarian teacher educators were related not only to ITE, but to the Bologna Process, to mass education, and also to the qualities of a good teacher. Therefore, it is important to study these themes together. The belief that the views of the teacher educators could be determined by the institutions, by the disciplinary field, or by the function in teacher education was another starting point for the research.

I had, perhaps, the least amount of previous knowledge for the study of the system of relationships; I only knew that one cannot get in-depth knowledge of the functioning of the organization through only the

analysis of the documents and through interviews with the key figures, and therefore, completely new methods and approaches are necessary.

In the following pages, I will present the researches carried out based on these internal guidelines, starting from the European macro level processes, and arriving at the characteristics of the views and institutional interpersonal relationships of Hungarian teacher educators. Hopefully, these determining aspects of the present state of Hungarian ITE may be instructive for experts dealing with teacher education in other countries, too: they may demonstrate how different the objective and subjective evaluation of a reform can be, and how close cooperation can be maintained among teacher educators with different views.

This is a revised and shortened version of my doctoral thesis, which may not have been possible without the professional support of Professor György Hunyady and the methodological guidance of Professor Ákos Münnich. Special thanks are due to Professor Gábor Halász for being my supervisor. I would like to thank Katalin Rádli, ministerial adviser, Katalin Pörzse, János Máth, Magdolna Salát, Krisztina Pósch, and Andrea Szilveszter for their assistance in various phases of the research, also for Anna Csilla Gösiné Greguss for the English translation.

I.
Initial teacher education in Europe

1.) CONCEPTUAL BACKGROUND

Main European trends in higher education

At the turn of the millennium, European higher education functions within the paradigm of life-long learning. The primary aim of higher education is not to offer high levels of knowledge, founding upcoming life and eligibility to practice a profession to the majority of the 18 year old age group; rather, it provides the opportunity of adaptation necessary for the turbulent economic and technological development to a wide circle of society, by offering a whole range of bachelor's, master's, and doctoral levels of retraining and continuing education (*OECD*, 2008; *Eurydice*, 2010).

In the 21st century, the prerequisite of economic success is the availability of highly qualified workers who are able to accommodate to the quickly changing technological and innovation environment flexibly. Additionally, the key to success is the initiation of changes and innovation by the integrated application of the previously isolated branches of science. This knowledge-based economic and social environment expects the educational system, and higher education in particular, to provide high-level practical knowledge and to develop innovative and integrative skills (*OECD*, 2008). This attitude is reflected in the fact that the 2020 strategy of the European Union included two education-related target values; one of these target is to raise the proportion of 30-34 year olds holding a higher education qualification to 40%, which means mass higher education is to be strengthened (*European Commission*, 2010).

Within this system of expectations was born a demand for creating a compatible and transparent European system of higher education, commonly called the Bologna Process. Within the framework of the Bologna Process, the higher education systems structured by national traditions is replaced by the three-cycle degree system that can be clearly interpreted by the labor market at the European level: bachelor's, master's, and doctorate. In addition to the harmonization of the educational structures, other new systems have been implemented. Just to highlight a few: the ECTS (European Credit Transfer System) is a standard for measuring student progress based on student workload and learning outcome; the Diploma Supplement accompanies the higher education qualification, providing a standard description of the completed studies and thus making the diploma understandable in the international labor market, too. As a crown to the process, a European Qualifications Framework (EQF) was developed in European to organize and level national qualifications based on learning outcomes; the Member States connect to EQF by developing their own qualification frameworks in compliance with the European system (*Bologna Secretariat*, 2009).

The basis of transparency and compatibility is the principle of outcome, which got its final legitimacy in the principles of EQF. The outcome orientation wishes to end the strong European tradition that the parameters of the invested time or the amount and direction of inputs determine education; instead, emphasis is placed on learning outcomes. This means that the knowledge, skills, and attitudes acquired in the course of training determine education and the level of qualification. Outcome oriented – or, in other words, competence-centered – approach in higher education meant innovation from two aspects. First, the acquisition of skills and attitudes became revaluated; second, acquired knowledge or learning outcomes became the basis of assessment of education (*OECD* 2005; *European Parliament and the Council*, 2008).

All this changed the traditional system of education in which the teacher dominated the teacher-student relationship as a source of knowledge: Emphasis shifted to the student who may acquire new knowledge in his/her training from both the teacher and other sources (e.g., the Internet). The definite dominance of school-like formal education is loosened; non-formal and informal learning is revaluated, and so is knowledge gained in working experience (*Commission of the European Communities*, 2005). Schools and higher education have to compete with the Internet and the whole world as possible arenas of learning (*OECD*, 2008).

The conceptual foundations of initial teacher education in Europe

It is important to make it clear that I will call the system of views that form the common conceptual foundation in the European documents, in the related strategies of the Member States, and in the professional discussions of teacher policy at a European level as "European thinking"[1], while I am aware of the fact, naturally, that there is an unlimited variety of thinking and views in the individual member countries and of stakeholders in Europe.

The continuum of teacher education is approached in a complex way in European thinking. Teachers are supposed to develop continuously from being admitted to ITE to the end of their teaching careers. This continuum of teacher education has three phases: ITE, induction period (initial support system), and continuous, career-long professional development. The inter-relationship among the phases is illustrated in *Figure 1.*

Figure 1: *Phases of the continuum of teacher education and their relationships*
Source: Snoek 2008. Tallinn PLA

The European conceptual foundations and expectations regarding the continuum of teacher education also appeared in an official document, the so-called Council Conclusions (*Council of the European Union*, 2007, 2008, 2009). The European Commission published a handbook on the effective policy approaches creating a system of induction in 2010 (*European Commission*, 2010).

The first phase of the continuum is initial teacher education: Its aim is to provide students interested in the teaching profession all theoretical and practical knowledge that is necessary for starting a career as a teacher. European thinking places strong emphasis on having the best ones among those who choose teaching as a profession, on ensuring that teaching has a high prestige and reputation to make this possible. Recruitment, that is, attracting candidates to the teaching profession, is indispensable in most European countries, including Hungary; without this, the number of applicants is insufficient – except for a few countries (e.g., the Scandinavian countries and Poland). On the other hand, the selection of people entering ITE is also important in order to filter out the unsuitable persons as much as possible; selection and competition also ensures that the best of the applicants enter the profession (*OECD*, 2005).

The European recommendations for raising the quality of ITE tells the Member States to consider raising the level of ITE, to strengthen the acquisition of research methodology of field and applied research in teacher education, and to increase the practical component (*Council of the European Union*, 2007).

In the European approach, it is expected of ITE programs to have their modules logically built up, coherent and interlinked. One aspect of this inner coherence is the bridging function of methodology between pedagogy, psychology, and subject disciplinary studies. This also means that the knowledge, skills, attitudes gained in any of the modules must be clearly linked to the work of the teacher. The third aspect of the coherence is the interlinked support between theory and practice. There has been a change in the previous theory-oriented approach of higher education in several European countries. School-based ITE programs were started in England and in the Netherlands (Menter et al. 2011); in other countries and institutions instead of practice being at the end of training, a new structure emerged in which theory and practice alternate with each other, thus practice creates a demand for learning the theory. Evidently, the structural possibilities of combining theory and practice, or disciplines with one another are infinite; nevertheless, the European demand put forth is to ensure effective efficient learning by modules supporting the learning taking place in the other modules.

The European approach to ITE, in harmony with higher education, and perhaps playing a pioneering role in its development, is definitely competence-based. The teacher competence system that was developed by the European Commission and later accepted as official guidelines is built on key competences of lifelong learning (*European Parliament and the Council*, 2006) and on the document entitled "Common European Principles for Teacher Competences and Qualifications", jointly accepted by the European Commission and the Council in 2004 (*European Commission and the Council*, 2004).

According to the latter document, in order to improve the quality and efficiency of education, teachers have to be highly qualified (graduates from higher education institutions), they must be supported in their lifelong learning, mobility should be ensured in the initial and continuing teacher education phases and there is a need for a teacher profession based on partnerships. In order to have high quality and effective education, teachers must be able to do the following:

[1] The author was a member of the Peer Learning Cluster 'Teachers and Trainers' of the European Commission between 2008–2010, and has been a member of the Working Group 'Teachers' Professional Development' since then.

– work with others,
– work with knowledge, technology, and information,
– work with and in society.

"Teachers' work in all these areas should be embedded in a professional continuum of lifelong learning which includes initial teacher education, induction and continuing professional development, as they cannot be expected to possess all the necessary competences on completing their initial teacher education." (*European Commission and the Council*, 2004: 4).

A unified European set of teacher competences to be achieved by the end of the ITE has not been developed; the content, details, and form of competence systems are varied and diverse in the various Member States and are affected by social and cultural factors (*University of Yvaskyla*, 2009). Despite the diversity, the following list of competences specified in the Council Conclusions (*Council of the European Union*, 2007) can be considered as a common minimum:

– possess specialist knowledge of their subjects,
– possess pedagogical skills in the following:
  - can teach effectively in heterogeneous classes of pupils,
  - can make use of ICT in teaching,
  - can develop transversal/key competences,
  - can create a safe and attractive school environment.

In connection with competence-oriented European ITE approach, it must be mentioned that the Member States are quite varied in their the approach and practice whether the competences have to be determined at a general level, treating the complexity of the teachers' tasks as a unit, or competence-based standards and indicators denoting their fulfillment can also be determined. The advantage of the standards is the unequivocal, tangible system of expectations, while their disadvantage is the very consequence of this system, namely, the narrowly interpreted "check-list" that does not consider interrelationships (*Caena*, 2011).

The competences appearing as outcome expectations at the end of ITE represent a base level, a minimum for a teacher to start working in a school. The next phase of the continuum builds on the outcome competences of ITE.

The initial support system, or induction period, is a one to three year period at the beginning of a teacher's career after obtaining a teaching degree. Thus, this phase starts when ITE is finished successfully, and the newly qualified teacher starts working in a school. The induction period is a systemic support given in order to facilitate the transition of becoming a teacher, starting a teaching career. The professional, school, and institutional socialization, and the development and maturation of the teacher identity also take place in the period after receiving the teacher's degree. The success of this critical period in indispensable for remaining in the profession; this is why supporting new teachers is necessary (Cameron 2007; *European Commission*, 2010).

It is the right and obligation of every new teacher to take part in a systemic induction program and to receive systematic and coherent support (*European Commission*, 2010). According to the document of the European Commission, the support concentrates on three areas:

– professional support, including support given in the disciplinary areas of the subjects taught, in didactics, pedagogy, and psychology,
– personal or emotional support, and
– supporting socialization in the school, in the local community and in teaching profession.

These three kinds of support are provided by several, coherent subsystems that reinforce each other's effects within the framework of the induction support system: the mentor system, the expert support system, the peer system, and the system of self-analysis are examples of these subsystems.

The system of self-analysis deserves special attention among the support systems in the induction period, because it is the essence. Through self-analysis and the development of reflective practice, the novice teachers become lifelong inquirers and learners giving a solid foundation to the third phase of continuous professional development. Also, becoming a reflective teacher is essential for transforming schools into learning communities that adapt to the changes in school environment flexibly.

Effective support in the induction period reduces the number of teachers leaving the profession, contributes to raising the quality of teaching, and facilitates the school becoming a learning environment. Furthermore, its most important effect on the continuum is that it socializes the new teacher to become reflective and promote his/her own continuous development, bridging the gap between ITE and the phase of lifelong professional development (Löfström–Eisenschmidt 2009).

The third, longest phase of the continuum is the period of continuous professional development (CPD). In Hungary, this period is most often referred to as "further training" of teachers. The expression used in Europe itself reflects the difference in approach to this phase. In European thinking, the teacher, as a professional expert – similarly to doctors, engineers, and other intellectual professions – is responsible for his/her own professional development (*Teaching Council of Ireland*, 2011). His/her responsibility lies in the fact that he/she knows his/her needs to gain knowledge and to develop his/her skills, and that he/she strives to meet these needs, and thus he/she is an active promoter of his/her own development.

Another important aspect of this expression is that it is outcome-oriented, in other words, the emphasis is not on whether or not the teacher participates in some further training, but on the fact whether or not he/she develops as a result of an activity. Also, compared to "further training" the concept of "continuous professional development" is wider, permitting not only trainings but a variety of other forms of learning. *(Council of the European Union*, 2007).

The Council Conclusions of 2009 says that in the European approach teachers' continuous professional development should be based on self-analysis and reflectivity on the one hand, and on regular feedback from school leaders, from colleagues, and from students. The Council Conclusions also identify the goal of continuous professional development in higher quality teaching, in achieving improvement in the pupils' learning outcomes (*Council of the European Union*, 2007).

In connection with the third phase of the continuum, it is important in the European approach that the Member States must strive for offering relevant opportunities to teachers, meaning that the offer should be meeting teachers' needs. These opportunities should include broadening the opportunities for non-formal and informal learning, and improving the quality of the offers. In order to do the latter, the Council Conclusions outlined the necessity of operating a system of quality assurance (*Teaching Council of Ireland*, 2011).

In the conclusions of the Teaching and Learning International Survey of the OECD and in the strategic documents of the countries that have a leading role in the European teaching policy, it is strongly emphasized that professional development is most effective if the teachers cooperate with each other in the school for a continuous period of time. This means that it is advised to support not only the participation of teachers in short trainings, but rather their long term in school cooperation. The effectiveness of such programs can be improved if the schools run program comply with the school developmental plan (needs analysis) and the goals are worded in terms of pupil learning outcomes (Donaldson 2010; *Teaching Council of Ireland*, 2011).

The school leaders are a particularly important group, whose professional development greatly contributes to the quality of the educational system. According to the European approach and documents – and in accordance with the practice in Hungary – the school leaders need to have teaching experience and also management and leadership skills, therefore the provision of special trainings for them should be a priority (*Council of the European Union*, 2008).

The phases of the continuum of teacher education constitute a uniform, coherent, and coordinated system. According to the European approach, ITE, induction, and continuous professional development should be built on a common system of expectations. This means that the competences set as outcomes of ITE constitute the input for the induction phase. Also, the development during the induction and CPD phases are to be grasped in the improved performance in the very same competences. All this assumes that there is a consensus among teachers, teacher educators, and in society in general on what a good teaching is like, what it means to be a "good teacher". In many cases, this implicit or nascent consensus or public understanding is behind the fact that the resources spent on ITE, induction support, and continuous professional development are used effectively, and constitute a coherent system (*OECD*, 2005; *Council of the European Union*, 2007).

Naturally, public understanding is not enough; it is necessary to make a coherent legal framework for all the phases, in other words the development of a coherent teacher policy is also required. Teacher policy is the totality of policies related to teachers. It includes ITE, the induction phase, the system of continuous professional development, employment regulations in schools and in teacher education, the systems of waging, advancement, and motivation just as much as the sum of accreditation and quality assurance regulations regarding the programs for developing teachers at the various phases of the continuum. The European approach includes the need for the development of a coherent teacher policy, which means that the subordinate rules of the teacher policy should be based on the same principles, and that the terminology and system of expectations of the different regulations should be in harmony and should build upon each other. Due to the great number of stakeholders and their diverse interests, arriving at a coherent teacher policy usually requires lengthy coordination and negotiation.

This also implies that the continuum also works as a system of quality control in which the participants of the three phases consult with each other, provide feedback to each other on the basis of the achievements of (student) teachers, and the whole system is evaluated as a whole in a complex way (*Council of the European Union*, 2007).

In the European approach, the professional guarantee of coherence and feasibility of the continuum is the self-evaluating, self-reflective practice that motivates teachers in their career long continuous learning.

In addition to the continuum as an organizational framework, it is worth mentioning some further features of the European approach, without striving for completeness. A change in the perspective of pedagogy and pedagogical assessment, the handling of diversity, the issue of the teacher profession, and the special importance of the teacher educators are four such features I would like to highlight bellow.

There was a change in the perspective of pedagogy and pedagogical assessment. Instead of the already outdated pedagogical

approach that was knowledge and teacher centered and that was built on knowledge transfer, a new approach has gained dominance in the European conceptualization of teacher education, which is student, learning and competence (knowledge, skill, and perspective/attitude) centered, and which is often constructive in nature. According to this view, knowledge cannot be transferred by the teacher to the student. Knowledge is gained through the activity and work (constructive process) of the student. The role of the teacher in this process is to support, promote, and motivate learning, and to ensure safe and inspiring conditions. The everyday realization of this learning and student centered pedagogical approach is highly varied within European countries, but there is a consensus in the professional discourses at the European level regarding this approach. (All this is also in harmony with the expectations arising from the lifelong learning paradigm and labour market expectations of the education system).

The transformation of the perspective of pedagogy brings new accents in pedagogical assessment, too. Naturally, in school education, summative assessment in the maturation and final exam systems continue to be important, but formative assessment gains more and more weight and attention. In their famous paper in 1998, Paul Black and Dylan Wiliam call attention to the fact that changes inside the "black box" of the classroom, that is, in the learning-teaching process, are required in order to raise the effectiveness of the pupils' learning. One of the methods of this is the assessment for learning, which places formative assessment in the service of and as a part of learning, using self-assessment, evaluation of the peers, grading, and the system of summative assessment in new ways (Black–Wiliam 1998; Wiliam 2006). The transformation of the assessment system and sharing the related good practices are priority areas of the professional dialogue at the European level.

The handling of diversity is becoming a more and more central issue in teacher policy. Theorists and practitioners search for solutions regarding how to achieve differentiated classroom activity now, when individual differences within the classes, schools, and school systems are increasing. The problems of talent development, catching-up, cultural majority and minorities, migrants, and the differential development of children coming from the increasingly diverse social groups have to be solved at the same time. Thanks to the inclusion, the demolition of separating walls between mainstream and special education has been started. It is a growing realization that it is more and more important for teachers to acquire the competences of special needs education, while special education teachers need to know the pedagogical and psychological aspects of normal development. There is increased attention and pressure in Europe and in the world to make education open to all and receptive of personalized needs. For education is one of the most important means of decreasing social differences (*European Agency for Development in Special Needs Education*, 2012).

Lately the question of the *teacher profession* receives similar attention in Europe. The McKinsey & Company report on the best performing education systems in 2007 unequivocally pointed out the key role of teachers in the quality of education (*McKinsey & Company*, 2007). Despite their admittedly outstanding social role, in many European countries there is no teaching career scheme that is measurable to other traditional professions. In few countries exist a professional association that coordinates, displays or represents the professional interests of teachers (like Teaching Councils in the English-speaking countries). In numerous European countries the right to teach in schools is not linked to the successful fulfillment of the requirements of the induction period and is not based on other form of professional assessment than a qualification. In these countries the sectoral ministry (Ministry of Education) has no other partner for policy negotiations than trade unions whose interests mainly center on employment policy. Therefore, the approach of supporting teachers in taking the responsibility of forming their own profession body and their professional standards is an important challenge in many countries in Europe (*Council of the European Union*, 2009).

The question of the *teacher educators* is similar to that of the teacher profession. The European Commission and the OECD directed their attention emphatically to the teacher educators in 2010. If we accept the thesis of McKinsey & Company, that the quality of the educational system cannot be better than the quality of its teachers, we can apply it one level "higher" and say that the quality of teacher educators also determines the quality of the teachers, and thus, that of the educational system. Beyond this simplified extrapolation, there is agreement in the European discourse that the group of teacher educators[2] have a fundamental influence on the quality of education. Undoubtedly, their support and professional development is a key and strategic issue. At the same time this group is rather heterogeneous in their knowledge, in their roles, in their work environment, and in their commitment to teacher education; therefore, it is a complex task to address, motivate, and develop them. The latter two is made even more difficult for teacher educators in higher education by the fact that the organization, direction, and professional development of this group takes place within the autonomy of higher education institutions, and cannot be regulated at the national levels.

[2] The report of a Peer Learning Activity of the peer learning Cluster 'Teachers and Trainers' of the European Commission adopted the definition of Teacher Educator as "All those who actively facilitate the (formal) learning of student teachers and teachers". The report is on the Icelandic PLA. Source: http://ec.europa.eu/education/school-education/doc/prof_en.pdf

There is intensive thinking and discourse in Europe about the possibilities of facilitating the development of teacher educators (*Council of the European Union*, 2009; *European Commission 'Teachers and Trainers Cluster'*, 2010).

Summary

The European approach to higher education is fundamentally determined by the social and economic demand for lifelong learning. The changing demands force the rise of mass education in higher education and a uniform, transparent, and compatible structure of education at the European level; the latter takes place within the frames of the Bologna Process. Within the Bologna Process, the transition to the three-cycle training structure, the introduction of the unified credit system (ECTS) and the Diploma Supplement have already taken place, while the elaboration and implementation of the national frameworks in harmony with the European Qualifications Framework is in progress. The Bologna Process in higher education promotes the learning outcome approach and appreciates non-formal and informal learning.

In parallel with all this, the learning outcome and competence oriented approach is dominant in ITE as well. In the European view, the role of ITE is to prepare for the continuum of teacher education, to lay its foundations, and to ensure the acquisition of the fundamental competences. ITE prepares the next two phases of the continuum of teacher education (induction period and continuous professional development), and lays the foundations of reflective practice and a constant development during the whole continuum.

Beyond competence-orientation and the integrated continuum of the phases of the teacher education, the pedagogical system of views has definitely turned from factual knowledge to learning, from teacher to pupil, from teaching to learning. In parallel with this, the appreciation of formative methods can be seen in pedagogical assessment.

In the European professional public life, the acceptance of diversity in the broadest sense into the educational system, differentiation in the classrooms, the promotion of the professionalization of the teaching career, and the support and professional development of teacher educators are in the center of thinking.

2.) EUROPEAN COMPARISONS OF THE REFORMS AND STRUCTURES OF INITIAL TEACHER EDUCATION

As it became clear from the previous chapter, teacher education has been receiving a continuously increasing attention in the public thinking of the European Union and in the internal policies of the Member States in the past ten years. In parallel with the appreciation of teacher policy, the Bologna reform has radically redrawn European higher education, including ITE, in the past decade. Therefore, in 2010 the need came naturally from the situation for a comparative research at a European level concentrating on the structures and their changes in national ITE programs.[3] The present chapter shows the results of a European comparative study carried out in 2010, investigating the basic characteristics of reforms, and structures of ITE in 29 systems of 27 countries.

The topic was all the more timely since Hungarian ITE went through a thorough change between 2004–2009 and was debated, also as these lines are being published another, completely different reform is being implemented. So an European comparison make objective evaluation of different reforms possible and useful.

About the research

The subject of the comparative study was ITE programs for class teachers and subject teachers for the first three ISCED levels,[4] that is, teachers teaching from grade 1 to 12. The study was based on a questionnaire, that persons in charge of ITE in the ministries or their appointed specialists filled in about the following three topics: (1) the main characteristics of teacher education, (2) the state and the direction of the reforms, (3) the structure of the ITE programs (paths).

The specialists and persons in charge of ITE in the ministries of the next 27 countries of the European Higher Education Area (EHEA) provided data about their countries: Albania (AL), Armenia (AM), Austria (AT), Belgium (BE), Bosnia and Herzegovina (BIH), Croatia (HR), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), Germany (DE), Hungary (HU),

[3] The research relied on previous studies of similar subject: Thematic study Teachers Matter (*OECD*, 2005); comparative analysis of structures carried out by Dimitropoulos within ENTEP (Dimitropoulos 2008); and the study within the Key Data on Education regarding the questions of Eurydice on initial teacher education (*Eurydice*, 2009, 2012).

[4] ISCED: International Standard of Classification of Education, developed by UNESCO. ISCED 1 is primary education, ISCED 2 is lower secondary education, and ISCED 3 is upper secondary education.

Iceland (IS), Latvia (LT), Lichtenstein (LI), Lithuania (LV), Luxemburg (LU), Moldavia (MD), Montenegro (CG), Norway (NO), Romania (RO), Spain (ES), Switzerland (CH), Sweden (SE), The Netherlands (NL), Ukraine (UA), and United Kingdom, England (GB, E). (Since all three, namely, the Flemish, the French, and the German communities of Belgium have separate education systems, the given community is indicated by their names in brackets when presenting the results of Belgium.)

The validity of the present research results is limited by the fact that we have no data from all of the EHEA countries, and by the very method of the research, namely, that it reflects the opinion and evaluation one or two influencing persons. Although the specialists and persons in charge were designated to represent the official standpoint of the given country, subjectivity, that is, presenting individual opinions as a national standpoint cannot be excluded. Similar distorting elements could not be eliminated within the frames of this study.

The main characteristics of initial teacher education in the European Higher Education Area

The single word that characterizes the European situation is "changes". In all of the studied countries, ITE has been (and is being) transformed between 2005–2010. In the majority of the countries, ITE changed because of the comprehensive reform of higher education, but according to the answers Austria, Belgium (Flanders), Croatia, Denmark, England, Iceland, Lithuania, and Sweden gave the reforms of ITE that took place along their own logic of professional development and that were separate from those of higher education in general.

Naturally, the reforms are in different phases in the different countries. The status of the reform by ISCED levels are shown in *Table 1.*

If we take a look at the status of the reforms by ISCED levels, we can see a shift: The reforms have progressed the most at ITE programs preparing for the lower ISCED levels, that is, in the education of primary school teachers. They are the least advanced in the education of secondary level teachers. Concentrating on the countries, it is prevalent from the data that several countries (printed in bold in *Table 1*) can be found in multiple phases of the reforms at the same time. This means that in many European countries the reforms are taking place in waves, implying that in addition to and in parallel with the implementation of the Bologna cycles, several countries are planning and carrying out fundamental changes. Typically, however, the structural reforms have already taken place all over Europe, the fine-tuning of programs is in progress.

Table 1: *The status of the reform of initial teacher education by ISCED levels*

School levels	The status of the reforms:			
	Reforms have taken place	Fine tuning is in progress	Basic changes are taking place	Reforms are to be implemented yet
ISCED 1	AM, BE(Fl), CZ, DK, FI, HU, LU, ME, **NO**, RO, ES (11/28 – 39%)	AL, BE(Fr), BE(G), HR, EE, DE, MD, **NL**, CH (9/28 – 32%)	AT, IS, LV, LT, **NO**, ES (6/28 – 21%)	BA, **NL**, UA, GB€ (4/28 – 14%)
ISCED 2	BE(Fl), CZ, DK, ME, **NO**, FI (6/27 – 22%)	AL, AM, BE(Fr), **HR, EE,** DE, HU, MD, **NL**, CH, ES (11/27 – 41%)	**AT**, **HR**, IS, LV, LT, LU, **NO**, RO, SE (9/27 – 33%)	**AT**, BA, **EE**, **NL**, UA, GB€ (6/27 – 22%)
ISCED 3	BE(Fl), CZ, DK, FI, ME, CH (6/27 – 22%)	AM, BE(Fr), HR, **EE**, HU, MD, NL, ES (8/27 – 29%)	AL, HR, DE, IS, LV, LT, LU, **NO**, RO, SE (10/27 – 37%)	AT, BA, **EE**, **NO**, UA, GB€ (6/27 – 22%)

The various reforms are taking place in very similar environments of regulation. Based on the responses, in the great majority of the countries within the survey, the following are usually regulated centrally: determination of the level of qualification gained by ITE programs, number of credits to be earned, main components of the curriculums, and outcome requirements of ITE (i.e., determination of teacher competences, 94%, 97%, 72%, and 60% of the responding countries, respectively). In cases of countries that are composed of the federation of autonomous provinces, central regulation means that regulation is taking place at the level of provinces. In contrast, the curriculums of ITE are determined freely by the institutes of higher education (in 75% of the responding countries). Notably, the English higher education institutions enjoy the greatest freedom in developing the ITE programs, for in England, the institutes of teacher education are free to determine the level of qualification obtainable in their teacher education programs.

The data show that in 79% of the studied countries some kind of screening is applied before admission to teacher education programs. It does not mean that selection is generally used in all forms of teacher education programs; it only means that there are some teacher education programs or groups of applicants where it is applied. Aptitude tests as a form of selection are used in only a small number of programs or group of applicants: in 45% of the responding countries.

The form of the final exams of ITE is typically a dissertation; the only exceptions are England and Croatia. Furthermore, eight countries also require

a portfolio showing the learning acquired during the theoretical and practical studies.

Obtaining the teacher qualification after the final exam is the end point of ITE. The data also show that in roughly half of the countries (14 out of 29) no license is required to teach in schools, while in the other half (in 15 out of the 29 countries) a license exist. While in 9 out of these 15 countries the license is obtained by the qualification itself, in 6 there is a sort of induction process at the end of which the license is gained. It is also interesting to note that in most countries the obligation to get a license is the same for all ISCED level teachers, but in 2 countries, in Bosnia and Herzegovina, and Denmark some type of teachers receive "only" a qualification at the end of ITE while others receive qualification and license also.

The present research also studied subject orientations and level of qualification.

Regarding the subject orientations (or majors) obtained by the teachers, at ISCED level (i.e., in primary education), there is typically no subject orientation in the ITE programs in Europe; it is usually a class teacher qualification. At the second and third levels of ISCED (lower and upper secondary respectively) the number of subject orientations is usually one or two, the qualification for two majors is the most prevalent at ISCED 2 level. It is a general practice in Europe that depending on the case, both one or two subject oriented teachers are trained. It is interesting to highlight however that in some of the Scandinavian countries, three or even four subject majors are taken. The number of subject orientations at the various ISCED levels in the different countries can be seen in *Table 2.*

Table 2: *The number of subject orientations in initial teacher education in the studied countries*

School levels	Number of subject orientations obtained in initial teacher education:			
	None (class teacher)	One	Two	More than two
ISCED 1	AL, AM, AT, BE(Fl), BE(Fr), BE(G), BIH, HR, CZ, EE, Fl, DE, HU, LV, LI, LT, LU, MD, CG, NL, RO, SE, CH, UA, GB€ (25/29 – 86%)	AT, BIH, HR, DE, IS, ES (6/29 – 20%)	BIH, DK, D, IS (4/29 – 13%)	DK, NO (2/29 – 7%)
ISCED 2	HR (1/28 – 3%)	AM, AT, BE(Fr), BIH, HR, CZ, EE, Fl, HU, IS, LV, LT, LU, MD, CG, NL, RO, ES, UA, GB€ (20/28 – 71%)	AL, AM, AT, BE(Fl), BE(Fr), BIH, HR, CZ, DK, EE, Fl, DE, HU, IS, LV, LI, LT, MD, NO, RO, CH, UA, GB€ (23/28 – 82%)	BE(Fr), DK, LI, NO, SE, CH (6/28 – 21%)
ISCED 3	–	AL, AM, B(Fl), BIH, HR, CZ, EE, Fl, HU, IS, LV, LI, LT, LU, MD, CG, NL, NO, RO, ES, CH, UA, GB€ (23/28 – 82%)	AM, AT, BE(Fl), BIH, HR, CZ, DK, EE, Fl, DE, HU, LV, LI, LT, MD, NO, RO, SE, CH, UA, GB€ (21/28- 75%)	BE(Fr) (1/28 – 3%)

It also became clear from the explanatory notes given by the experts that in England, in the French-speaking community of Belgium, in Iceland, in Spain, and in Sweden, a teacher's qualification does not always and not necessarily determine the subject taught, that is, a language teacher might not teach only languages. This flexibility implies that the role of the teacher as supporting learning is more emphatic in these countries than the disciplinary subject orientation, and that logical and communication skills can be transferred from subject to subject.

The expected levels of qualification required for teaching in schools at the different school levels in the various countries are shown in *Table 3.*

In only two of the studied countries is it possible to teach in schools in the absence of a higher education degree. In primary education, the dominant qualification requirement is the bachelor's level; in lower secondary education both bachelor's and master's levels are accepted and required, while teachers at the upper secondary education, are typically required to have a master's degree. The initials of countries that accept more than one levels of qualifications at the given school level are printed in bold in *Table 3.*

In 53% of the studied countries, having a teacher's license is a further requirement for teaching in schools. Teacher license can be earned together with the diploma in nine countries, and with the successful fulfillment of the induction phase in six countries. Teacher licensing was introduced in all three school-levels (primary, lower secondary, upper secondary) in all, but two countries.

Table 3: *Levels of qualification required for teaching in schools in the studied countries*

School levels	Expected levels of qualification required for teaching in schools:			
	Below higher education	Bachelor's degree	Master's degree	Postgraduate training in the subject orientation
ISCED 1	AM, MD (2/29 – 7%)	AL, AT, BE(FI), BE(Fr), BE(G), BA, DK, HU, LV, LI, LT, LU, **MD**, ME, NL, **NO**, **RO**, ES, CH, **UA**, GB€ (21/29 – 72%)	HR, CZ, EE, FIN, DE, IS, **MD**, **NO, RO**, SE, **UA** (11/29 – 38%)	–
ISCED 2	MD (1/29 – 3%)	AM, AT, BE(FI), BE(Fr), BE(G), BA, DK, **HU**, LV, **LI**, LT, **MD**, ME, NL, **NO**, RO, **UA**, GB€ (18/29 – 62%)	AL, AT, HR, CZ, EE, FI, DE, **HU**, IS, LV, **LI**, LU, **MD**, **NO**, ES, SE, CH, **UA** (18/29 – 62%)	–
ISCED 3	MD (1/29 – 3%)	AM, BA, LV, **LI**, LT, **MD**, ME, **NO**, **RO**, **UA**, GB€ (11/29 – 38%)	AL, AT, BE(Fr), BE(G), HR, CZ, **DK,** EST, FI, DE, HU, IS, LV, **LI**, LU, **MD**, NL, **NO**, **RO**, ES, SE, **CH, UA** (23/29 – 79%)	BE(FI), **DK, CH** (3/29 – 10%)

In sum, we can say that the European systems of ITE constitute a colorful mosaic, due to historical, cultural, social, and economic reasons. In spite of the differences, however, they have some common characteristics, the most important of them being continuous change. Because of their complex goals, reforms came and come in several phases and waves, instead of a single step. The structural changes of the Bologna reform took place the fastest in programs preparing primary school teachers and the slowest to change were the upper secondary teacher ITE programs. In the great majority of the countries, the fundamental (structural) changes have already taken place; and the fine-tuning of the realized reforms is in progress. It is another common trend that the qualification requirements expected of teachers is higher for higher school levels. This implies that the European countries think that the realization of higher quality learning and teaching is ensured by a master's degree.

Reforms in initial teacher education and the signifi cance of the Bologna Process

The study of the reforms of ITE offers an opportunity to identify the direction of the momentary characteristics of the changes and to get to know the underlying motivations.

In the course of the present survey, 26 countries – the exceptions are Austria, Lithuania, and Sweden – said that the Bologna Process was relevant for them in the development of the reforms of ITE. For these countries, the most important features for ITE of the various attributes of the Bologna Process were the European dimension (i.e., recognition of the diplomas), a higher-level cooperation of education policies, and the introduction of the three-cycles (bachelor's, master's, doctoral levels) in higher education.

When presenting *the official goals of the implemented reforms*, most (six) countries mentioned the realization of the Bologna reforms, the facilitation of learning based on research (i.e., classroom research), and raising the overall quality of ITE; while five countries mentioned the propagation of competence-oriented teaching instead of knowledge-oriented teaching, five countries indicated the strengthening of practical training, and five countries marked raising the educational level of the teachers.

After the open questions of the survey, different motives for change were tested by indicating the significance of the given item (0: irrelevant – 5: the most important). The European means of significance of the given factors can be seen in *Figure 2.*

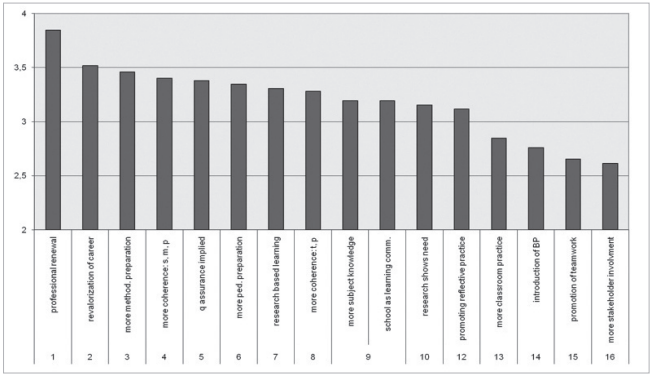


Figure 2: *Means of the importance of the motives of the reforms of initial teacher education (0: irrelevant – 5: the most important)*

As it can be seen in the figure, according to the mean of the survey the most important motive was the demand for professional renewal (3.85)

all over Europe, followed by the appraisal of the teacher career (3.52) and the strengthening of methodological training (3.4). The introduction of the Bologna Process was in the midfield, and the strengthening of training in the special subjects (which is in the foreground of Hungarian discourses) was only 10th among the factors determining the reforms of the European countries. According to the responding countries, the changes were the least influenced by the demands for more school training (mean importance: 2.85), strengthening of group work (2.65), and better involvement of stakeholders (2.62).

One question in the survey asked about the most important stakeholders fostering the reforms. It seems from the answers that there could have been more room for *key stakeholder involvement* in general. The participation of the subject professors of the higher education institutions and of the government and ministerial staff was general. Nevertheless, the schools (11 countries), experts and professional organizations (7 countries), quality assurance agencies (5 countries) and parent and student organizations (only 4 countries) acted as initiators of the reforms in only less than half of the responding countries.

Highly varied answers were given by the countries to the open-ended questions about the *planned changes and reforms*. Strengthening the didactic and pedagogical training was mentioned by five of the 29 countries, more efficient acquisition of teacher competences was indicated by four countries as the aim of the future reforms. Both directions suggest the belief that the quality of ITE can be ensured by a greater attention to the learning-teaching process rather than knowledge in the disciplinary fields.

In view of the Hungarian situation, it is a remarkable finding that 65% of the 29 countries have a strategy of ITE, while Hungary doesn't.

In sum, it can be seen from the data collected that the Bologna Process did have a role in the reforms of ITE, nevertheless, the basic contents were dictated by the unique paths of development and internal professional demands of ITE within each country. The Bologna Process – through the pressure for structural transformation – provided an opportunity for the national education systems to renew the quality and professionalism of ITE and to increase the prestige of the teaching profession. The latter has been and is meant to be achieved in the majority of the European countries by the more efficient development of teacher competences and improving the preparation for becoming a teacher. The little involvement of schools and other social groups in the reforms of ITE implies that despite the increased attention to and the growing role of education policy, ITE in most countries is still not a field that is directed by a social consensus, but it is often a narrow professional issue of the ministry and higher education institutions.

The content and structure of the learning paths leading to a teacher's degree

The third main pillar of the research was the comparison of the structure and content of the ITE programs offered by the European countries after the Bologna reforms. To this end, the representatives of the countries were asked to present the ITE programs (paths) that lead to primary, lower secondary, and upper secondary teacher's degrees.

A path is a program or the line of consecutive programs of studies that lead to teacher qualification. It was asked to present the different paths leading to teacher qualification as separate ones; and including not only the paths offered to 18 year old students, but the ones that were offered to those who want to enter into teaching later in the career and hold a disciplinary degree.

The survey gathered data from the experts on the education of three distinct types of teachers: class teachers, one-subject oriented and two-subject oriented teachers. National experts were asked to present all the different identifiable educational paths to becoming such teachers (class teachers, one-subject oriented teachers, two-subject oriented teachers). In the countries where a complete list of possible paths was impossible to give, for example in the case of Germany, we asked for the most important and typical ones to be presented.

Country experts provided data on 196 different paths, though understandably not all data was known or given for each path. The ISCED level, the path structure, the length in years and the total number of ECTS credits however were provided for each and every path, offering an opportunity for analysis. Path structure was captured by the qualification or consecutive qualifications obtained through the path. ECTS credit values for the different components of the paths have been analysed also.

Since the analysis aimed at looking at ITE structures, the base for analysis became the level of qualification(s) obtained through the path towards becoming a qualified teacher. The following versions of *qualification structure* have been identified in the 25 EHEA countries:

1. *specialized upper secondary* level course (marked "non-HE" in *Table 4* and on), only offered in Armenia,
2. *college degree*: a pre-bologna type qualification, which in most countries is equivalent in level to a bachelor's degree (marked C in *Table 4* and on),
3. *bachelor qualification* (marked B in *Table 4* and on),

4. *bachelor and special professional training*: a bachelor level and a consecutive special professional training program that does not provide master level qualification (marked B+SPT in *Table 4* and on). *Special professional training* was marked at each case when the country offered a consecutive program that does not raise the level of qualification, but provides professional preparation. Special professional trainings consecutive to a bachelors degree are offered in B(FI), B(G), CZ, DK, LU, ME, RO and CH. The name and way of the organization of these trainings differ from country to country, for example in the Czech Republic they are called "life long learning programmes", in Luxembourg they are "in service trainings".
5. *bachelor and master qualification*: a bachelor and a consecutive master level qualification (marked B+M in *Table 4* and on),
6. *bachelor plus master qualification and a special professional training:* a three step path with a bachelor and a master level qualification at the end of which a special professional training is also completed (marked B+M+SPT in *Table 4* and on). This path is usually not offered to 18 year-olds as a straightforward preparation to become a teacher, it is rather a path for a later career change in life.
7. *bachelor and master level qualification and a consecutive master*: this path is also offered for a later change in career. In this case a master level teacher qualification is built on the previous bachelor's plus master's degrees (marked B+M+M in *Table 4* and on).
8. *university degree*: a pre-bologna type qualification, which in most countries is equivalent in level to a master's degree (marked U in *Table 4* and on)
9. *(unified) master level qualification*: an undivided, or unified master program offers entrance for those with a secondary school leaving certificate and it leads to a master's degree without obtaining a bachelor's degree (marked M in *Table 4* and on). The difference between a university degree and an undivided master degree is that the latter has been introduced in the national bologna processes, (even though as an exemption from the two cycle structure,) it has been reviewed and reformed in content and has been accredited as a unified master degree.
10. *Master level qualification and a consecutive bachelor*: offered for a later career change in life, the bachelor level teacher education program builds on the master level previous qualification (marked M+B in *Table 4* and on).
11. *Master level qualification and a consecutive master*: also offered for a later career change in life, the master level teacher education program builds on the master level previous qualification (marked M+M in *Table 4* and on).
12. *Master level qualification and a consecutive special professional training:* a master degree and a consecutive special professional training program that does not provide a level of qualification (marked M+SPT in *Table 4* and on).

We used the method of cluster analysis of Euclidean distances to create groups of paths with similar patterns of structures for each ISCED level. As seen above, the possible paths to teaching offered in the EHEA countries are quite diverse, and cluster analysis is the mathematical method of finding patterns in heterogeneous groups.

The *structure of paths* by clusters and ISCED levels are shown in *Table 4.*

Table 4: *The number of paths by ISCED levels and by structures*

Qualification(s) obtained in the paths		ISCED 1	ISCED 2	ISCED 3	Total
B	B, B+S, C, non-HE	28	27	14	69
B+M	B+M, B+M+M/S	13	36	46	95
M	M, M+S, U, M+M/B	7	12	13	32
Total		48	75	73	196

As it can be seen in *Table 4*, the 25 countries offer 48 paths to primary school teachers, while the number of paths offered to lower and upper secondary school teachers is significantly more (73 and 75, respectively); thus, the selection of paths is much greater for those who intend to teach at these two levels. It can also be seen from the table that the paths were categorized by structure into three basic groups.

In *Table 4* the paths are grouped according to their structure, creating 3 major groups out of the existing ITE structures. For simplicity we called *bachelor* (B in the table) the paths corresponding to points 1-4, *bachelor plus master* (B+M in the table) those paths the structure of which correspond to points 5-9 and those paths with a structure described in points 10-12 were put to the *master (undivided)* group (M in the table).

There are 69 ITE paths at bachelor level including the two paths presented as secondary level and the 3 paths that were college degrees. 95 paths, nearly the half of all presented, belong to the second group: bachelor plus master. Complementary to the Bologna type bachelor and bachelor plus master programs the number of paths that incorporate an undivided master degree is only 32. So altogether 84% of presented path structures

are mainstream two cycled "Bologna type", this clearly indicates that the Bologna Process have been successfully realized in the structure of teacher education paths.

The proportions of the different structures by ISCED levels are well illustrated in *Figure 3.*

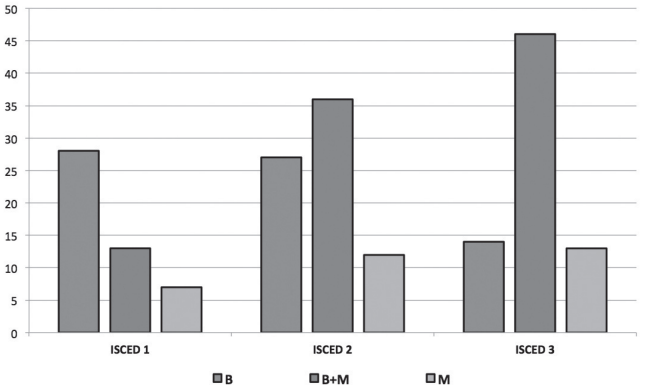


Figure 3: *The number of teacher education paths as a function of structure and ISCED levels*

We can say that the European countries typically train primary school teachers at the bachelor's level, while lower and upper secondary school teachers are trained in a master's structure built on bachelor's education. It must be noted that, lower and upper secondary schools teacher are trained together in 52% of the countries in the study, while in 32% of the countries, there are paths that are common for the two groups of teachers, but others are different. Only 16% of the countries consider lower and upper secondary teacher education so much different that there is not common path for them.

The characteristics of the paths: The outcomes of a detailed analysis of paths can be interpreted appropriately only if the socio-economic contexts in countries offering the path are taken into account. In many EU countries the general state of socio-economic development is high, teacher education has long been established in higher education and therefore the current curriculum contexts and challenges are different than in other countries that have recently joined the European Higher Education Area, where teacher education is being raised to higher education level at present, and where the socio-economic conditions are less favourable.

For being able to see if such differences affect the content and main characteristics of ITE paths, we split the countries offering data into two sub-groups. In one we put the EU members and the western European countries that are not members but are taking part in the activities of the open method of coordination on teacher policies (such as Iceland or Switzerland).[5] In the other group we put the countries that are not members of the EU, and are not directly affected by the teacher education policy of the Union.[6] The two sub-groups, for simplicity, have been marked by "EU" and "non-EU" in the *Tables 9*, *10* and *11*. *Table 9* shows within the two country sub-groups the main characteristics of paths clusters preparing teachers for work at ISCED 1. *Tables 5*, *6*, and *7* show the mean values of the ITE path clusters for the different ISCED levels.

We decided to grab the main emphasis of the educational paths simply in the division of the ECTS content between the subject knowledge, (which in the case of the class teachers is a more general knowledge content) and the ECTS spent on all the other components of the path. So we put all didactical, in school practice, elective, final assessment and other components of curricula together and presented them in ECTS in the "all but subject matter" column ("all but general content" in the case of paths for primary teachers). The total credits allocated for in school practices are marked "practical component" in the tables.

Table 5: *Characteristics of path clusters for primary teacher education (ISCED 1 level)*

Structure	Groups of countries	Number of paths	Mean length (year)	Mean values (in ECTS credits)			
				Total	Practical compo-nent	All but general content	General content
B	Ø EU	10	3.5	210	27	83	126
	EU	15	3.5	212	38	111	101
C	Ø EU	3	2.6	160	35	No data	No data
B+M	Ø EU	6	5.5	330	40	102	227
	EU	7	5.0	300	23	149	150
M	EU	7	5.2	317	18	119	198
	Total/ Mean:	48	4.2	253	31	114	139

[5] The "EU" group consist of the following countries: Austria, Belgium(Fl), Belgium(Fr), Belgium(G), Croatia, Czech Republic, Denmark, Estonia, Finland, Germany, Hungary, Iceland, Latvia, Luxembourg, the Netherlands, Norway, Romania, Spain, Sweden, Switzerland.

[6] The "non-EU" sub-group includes Albania, Armenia, Bosnia and Herzegovina, Moldova, Montenegro, and Ukraine.

Table 6: *Characteristics of path clusters for lower secondary education (ISCED 2 level)*

Structure	Groups of countries	Number of paths	Mean length (year)	Mean values (in ECTS credits)			
				Total credits	Practical component	All but subject matter	Subject matter
B	Ø EU	11	3.6	218	25	96	121
	EU	16	3.8	227	37	84	142
B+M	Ø EU	11	5.4	327	35	144	184
	EU	25	5.0	302	20	102	200
M	EU	12	5.8	348	17	110	238
	Total/ Mean:	75	4.7	283	26	106	177

Table 7:
Characteristics of path clusters for upper secondary education (ISCED 3 level)

Structure	Groups of countries	Number of paths	Mean length (year)	Mean values (in ECTS credits)			
				Total credits	Practical component	All but subject matter	Subject matter
B	Ø EU	11	3.6	218	25	97	122
	EU	3	4.1	250	31	180	70
B+M	Ø EU	11	5.4	327	35	144	184
	EU	35	5.4	323	21	79	244
M	EU	13	6.0	360	30	69	291
	Total/ Mean:	73	5.1	310	26	105	205

As shown in *Table 5* college degrees for primary teachers only exist in the "non-EU" countries. These degrees with the implementation of the Bologna process will very likely turn into Bachelor's degrees. It is interesting to note that Bachelor's degrees are a year longer in "non-EU" countries than college degrees, so this suggests that the implementation of the Bologna process goes along with lengthening the primary teacher training programs.

Regarding the number of practical credits per semester, only the means of the EU undivided master's level paths differed markedly from those of the overall mean (around 30 credits).

It can be seen in *Table 5* that in bachelor's and in EU B+M trainings the credit values of general content and all other content are similar. In non-EU B+M type paths and in undivided master's level paths balance is replaced by drastic shift: in these cases, the sum of all credits in the general content is twice as much as the number of the rest of the credits that prepare for pedagogical work. This means that the lengthening of education is results in the one-sided increase of the number of credits in the general content. (The only refreshing exception is the paths in the EU B+M structure, in which case, despite the great number of total credits, about the same number of credits are required in the pedagogical and in the general content.)

The findings are similar with respect to the characteristics of paths training lower secondary school teachers, shown in *Table 6.*

The length of education of lower secondary school teachers is about one semester longer than that of primary school teachers. The number of credits spent on practice does not increase proportionately with the increased duration of education; in fact, it decreases by five credits in comparison with primary teacher education. The number of credits spent on practice is the lowest in the undivided master's cycle at this level too.

Longer education as compared to primary teachers does not mean an increased number of credits spent on teacher preparation ("all but subject matter" credits), either. In all forms of education, the number of credits spent on teacher preparation decreases as compared to primary teacher education paths, while the number of credits in subject matters increases. It is typical that regardless of the structure of the path, the means of credits allocated for subject matter are about twice as much as those allocated to ensure teacher professional preparation.

The trends are very similar in the ITE of upper secondary teachers (*Table 7*).

The mean duration of paths of training upper secondary school teachers is about 4 months longer that that of lower secondary school teachers. Again, the increased duration of training does not mean an increased number of credits spent on practice or on teacher preparation; in all cases, it serves the rise only in the number of credits of subject matter. In fact, significantly fewer credits are spent on teacher preparation in undivided master's and EU B+M paths than in any other teacher education path clusters. This is important in light of the fact that the typical qualification criterion for teaching in upper secondary schools is master's level education in Europe.

In sum, the Bologna type education structure – bachelor's and two-cycle bachelor's plus master's levels – has become dominant in the surveyed European countries. Bachelor's is the dominant ITE path structure for primary teachers, divided (bachelor's plus master) structure is typical for lower and upper secondary teachers.

The data shows that in all ITE paths (all ISCED levels) about 110 credits are allocated to professional preparation for becoming a teacher – in addition to the credits of the subject orientation –, including a usually one semester long (30 credits) in-school practice. This means that usually two semesters remain for the preparation for the teaching profession, in which the acquisition of the complex teacher competences is a challenge. This is

especially true of the development of skills and attitudes, which are known to be time-consuming. Consequently, preparation of teachers can only be successful where the pedagogical approach, values, and the the ideal of a good teacher are the shared for every teacher educator, in all parts of the program, and the group of teacher educators cooperates as a team.

The ITE programs of ISCED 1-2 are strictly separated from those of ISCED 3 in only 16% of the 25 European countries surveyed.

Conclusions

The study presented in this chapter provided compelling data on the fact that the Bologna Process is no longer a matter of choice; it is a European (in fact, a Eurasian) reality. The transformation sweeping through Europe resulted in a dominantly B, B+M structure.

According to the opinions of the countries, the primary motive behind the Bologna reforms was the need for professional renewal; the second motive was making teaching as a career more attractive, the third one was improving the preparation of the students in subject methodology, while deepening subject knowledge was mentioned only as the tenth in the list of motives. In contrast, the analysis of ITE systems and paths has revealed that the increasing duration of ITE in Europe resulted in allocating credits to subject matter, often even at the expense of practice and training for becoming a teacher. It is typical for paths preparing to teach at higher ISCED levels to require a master level qualification, which, in reality, provides greater subject matter preparation and less practice and professional preparation.

The ITE reforms linked to the Bologna Process have taken place in waves, but the great wave of the structural transformation in general has been fulfilled in Europe, fine-tuning is taking place currently. There is hope though, that the contradiction above will be resolved, since most of the countries indicated that the priority of present reform is strengthening teacher preparation.

The very existence of this research clearly shows that the system of education within the European Higher Education Area is already transparent and comparable. This creates the possibility for further, deeper research and for starting common, multinational ITE programs.

II.
Initial teacher education in Hungary – The opinion of teacher educators

Before presenting the situation of ITE in Hungary, I must address the difference between the conceptual frameworks used in Hungarian and English languages. As opposed to the Hungarian terminology and thinking, "teacher education" is a single concept in the English language and in European thinking. On the contrary, in Hungarian, the concept of the teacher only refers to lower and upper secondary teachers, while the term "pedagógus" (pedagogue in English) refers to all kinds of teachers. (For example: 'Tanító' means primary teacher, 'tanár' means subject teacher, 'gyógypedagógus' means teacher in special needs education, while 'óvópedagógus' means pre-school teacher.) Due to this difference, in the following description of the Hungarian results, the expression 'subject teacher education' will refer only to the ITE of lower and upper secondary teachers.

1.) CHANGES IN THE ENVIRONMENT AND PERSPECTIVE OF INITIAL TEACHER EDUCATION IN HUNGARY SINCE 1989

Changes in the environment

The changes in *higher education* were most influenced by the consequences of the change of the political system in 1989 and by joining the Bologna Process.

At the time of the fall of the socialist regime, Hungarian higher education had two distinct institutional forms: college and university. Colleges were practice-oriented, awarding college diplomas after three or four years of studies in different vocations, while universities awarded diplomas in science oriented university after five years of studies (six years in medicine). In this system of education, the students after graduation from upper secondary schools, in the entrance examination process of higher education decided the level of diploma they wanted to receive. Upgrading a college diploma to a university diploma was quite usual in some disciplines (e.g. in subject teacher education), while in other areas, it was not always possible (e.g., primary teacher, pre-school teacher). Only those could apply for doctoral studies who held a university diploma.

Higher education was regulated together with public education by a framework law, namely, Act I of 1985 on Education. Below the level of laws, a number of decrees and minister's announcements determined the operation of institutions and the system of education in detail.

As a result of the fall of the regime, the system of institutions and the operation of higher education in Hungary were transformed. The fundamental rules of operation were laid down by the Act LXXX of 1993 on Higher Education, the first independent law on higher education. The differentiation between the university and college forms remained, but institutions in private and church property emerged, and institutional autonomy regardless of ownership was guaranteed by law.

An expansion in the number of institutions and students in higher education started in the 1990s. The state wished to handle the expansion and the fragmentation of the institutional structure by the wave of integration of state owned institutions in 2000. As a result, regional universities were formed by the integration of previous colleges and universities (e.g., University of Szeged, University of Pécs). Nevertheless, as a result of the expansion of the private institutional network, the number of institutions still tended to increase. Similarly to the emerging system of mass higher education in Europe, student population in Hungary increased fourfold between 1995 and 2004.[7]

Hungary introduced the Bologna type, multi-cycle educational form within the framework of Act CXXXIX of 2005 on Higher Education. After intensive cooperation with the disciplinary faculty consortia, the contents of bachelor's

[7] The registry of the Educational Authority served as a source for the number of institutes of higher education, while the statistical data of the entrance examinations served as a source for student population.

and master's level trainings were developed, and for each program a so called 'program and outcome requirements' was created that replaced the previous, solely input-based qualification requirements. The program and outcome requirements were set in a ministerial decree,[8] including the main professional elements of education, the accompanying minimum and maximum credit intervals, and the expected learning outcomes in competences. This was the basis of the transformation and re-accreditation of all programs and institutions. The aim of all this was joining the European Higher Education Area.

Though formulating program and outcome requirements can be considered as a step forward, the outcome approach determining the content, the assessment, the methodology of programs has not become widespread in higher education practice ever since. Unfortunately the accreditation and financing of higher education programs remained input-based, thus, there has not been real motivation for re-thinking the daily practices from an outcome-based perspective in Hungary.

The transition to the three-cycle Bologna type education pulled down the rigid wall between colleges and universities by enabling both colleges and universities to accredit bachelor's and master's programs. This way, colleges specializing in certain vocational fields, could start master's education and even set up doctoral schools.

Regarding the changes in *the school system*, the most important ones were – similarly to higher education – expansion and the differentiation within the institutional system. "In the 1990s, demographic decline caused a strong relative expansion: the proportion of pupils entering upper secondary education from the given age cohort increased significantly, while the total number did not increase. This shows the expansion of the programs offering academic high school diplomas (maturas) and the reduction of vocational school programs dramatically." (Halász 2002: 98) Thus, there was an absolute expansion, a real increase in numbers entering higher education, while the proportion of students with high school certificates increased without an increase in the number of students entering upper secondary schools, making expansion possible in higher education.

The traditional Hungarian school system consists of an 8 year long primary school and a 4 year long secondary school. One of the most important elements in the transformation of the school system was the emergence of the 6 and 8-year gymnasiums (6+6 and 4+8 years) in addition to the traditional school system of 8+4 years. The proportion of students studying in the former types of schools was continuously increasing within the whole population of gymnasium students (Halász 2002). The differentiation of the institutional system is further indicated by the emergence of schools offering bilingual education, language preparatory courses, and schools based on reform pedagogy principles.

The National Core Curriculum (NCC), whose first version was published in 1990, aimed to determine the contents of basic education and set them in a statute. In addition to determining the contents of basic education centrally, it also gave schools the right of choosing the methods, means, educational material, and requirements, that is, a freedom of a local curriculum. As opposed to the previous central prescriptions, this regulation greatly increased the freedom of schools and teachers, while it aimed at guaranteeing the core contents of the pupils' general knowledge in the whole country.

Although several versions of NCC have been published after consulting the parties involved to a greater or lesser degree and with different stances, after the turn of the millennium, competence-orientation appeared as a fundamental requirement. Competence-based education – in accordance with the transformation of the pedagogical approach in Europe – aimed, on the one hand, to develop aptitudes and skills, in addition to the gaining knowledge; on the other hand, it wished to shift the emphasis in the pedagogical work from teaching to student learning and to developing pupil competences (Perjés–Vass 2008; Szebenyi 1994).

The implementation strategy of NCC was finished in 2007, which included the importance of keeping ITE parallel and consistent in content and competences to NCC. "The key competences and teacher competences became structured, priority development tasks became expanded. The integrative approach of the National Core Curriculum became stronger; the interdisciplinary tendencies appeared in ITE, too. Emphasis shifted from the methodology of teaching to the planning, development, and evaluation of learning. This also affected the practice of ITE." (Vass 2008)

The new draft of NCC appeared in February 2012, which tips the previous balance between central and local curricula in public education toward centralized curricula. The effects of the 2012 transformation of NCC on ITE are not yet known at the time of finalizing this essay.

The general transformation of society in Hungary also brought new expectations for schools and ITE. After the change of the political system, learning and knowledge became strikingly devalued as compared to money and the accumulation of material goods. Parallel with this, there was no change in the already decreasing trend of the moral and material appreciation of teachers; the prestige of schools and their role in ensuring a good future became even fainter.

The situation and role of the families have also changed as a result of the changes in economic and social circumstances and in social values. Due to the high divorce rate, there is an increasing number of broken families, and

[8] On the basis of the Ministerial Decree No. 15/2006 on the program and outcome requirements of bachelor's and master's degree programs.

due to the greater attention paid to the acquisition of material goods, less time spent together and decreased quality and amount of communication can be observed in the families.

Notwithstanding, as compared to the conditions before 1989, the international range of learning, working, and business opportunities have infinitely opened up in this globalizing world. Technological development – multiplying speed and wealth – radically transformed communication, the flow and handling of information, and the forms and instruments of the schools and entertainment (Friedman 2006).

Because of all this, the social expectations of schools have changed. There are more tasks falling on the schools as the families undertake fewer roles, while schools become less attractive as opposed to the media and the internet that are available and present everywhere. Creating and maintaining student motivation, motivating students for learning and performance is a challenge for schools while schools no longer stand as the sole sources of knowledge in today's world. The changes in the role of the schools also change the school's expectations of ITE.

The waves and approaches of initial teacher education reforms in Hungary[9]

Since the change of the political system, there have been three major waves of transformations in ITE in Hungary: standardization of the contents in 1997, Bologna reforms in 2005, then, at the closing of the manuscript of this book, initiation of undivided ITE programs in September 2013. Since the legislative framework and the practice of the last transformation has not been fully experienced yet, the following paragraphs will concentrate on the first two reforms.

The first wave of ITE reform after 1989 is linked to the Government Decree 111/1997 on the Qualification Requirements of Teachers, preceded by several years of professional consultations. The essence and novelty of the decree was that the contents of teacher professional preparation, that were previously different for college degrees and university degrees, were made uniform across the two forms of education and across the different institutions; so in other words it standardized the fundamental elements of the common modules of ITE.

The real outcome of the professional consultations was the development and general acceptance of the approach – as also seen in the decree – according to which teacher preparation is not dependent on the age group of the pupils, but is general, therefore, it is not justified to differentiate teacher education at the lower and upper secondary levels – as opposed to subject matter – by content, proportions, and output.

The uniformity of teacher qualification was mostly justified by the institutional differentiation described in the section on the schools. With the new system of 6 and 8 year long gymnasiums, the rigid structure of three divisions of the school system (called in Hungarian 'lower primary' – age 6-10, 'upper primary' 10-14, secondary – 10-14 years of age) broke up; and created a rational demand for teachers whose teacher preparation was general and not linked to any particular age-group of the pupils.

Another justification for the reforms was – as we call it today – the quality assurance of ITE at the systemic level. As a result of the uniform definition of quality requirements, elements serving high quality preparation, like the regulation of practice, comprehensive examination, and the introduction of the teacher qualifying exam, entered all institutional practice – though previously these were present in t only a few institutions. Furthermore, defining the content elements and their proportions in teacher education also served the quality assurance of ITE.

This was even more necessary, as ITE in the fields of humanities and sciences had different traditions at the time of the change of the political system. Disciplinary education and teacher education at the faculties of humanities were conducted together until the reforms at Eötvös Loránd University (ELTE) between 1990 and 1992.[10] This meant that until the reforms, for example nobody could become a historian without receiving a teacher qualification as well. As a result, there were masses of uninterested and unmotivated students in ITE, and the system was overburdened and wasteful of its resources. It was a further disadvantage that nobody knew who was planning to become a teacher and who wanted to work in the discipline only. From the humanities ELTE reform on the teacher education module lost it's obligatory status and became an optional to disciplinary majors.

[9] I am going to present the transformation of initial teacher education in this social environment in the order of legal changes, basically, on the basis of the collection of documents compiled by György Hunyady (Initial teacher education in the Hungarian Bologna System) and of the professional consultations with Katalin Rádli, Principal Advisor responsible for initial teacher education in the Ministry. In order to understand and analyze the processes, I also relied on the papers and lectures in the topic by Zoltán Báthory, Ilona Bollókné Panyik, László Brezsnyánszky, György Hunyady, Györgyné Hunyady, Orsolya Kálmán, Elemér Kelemen, Magdolna Kimmel, Iván Falus, Mária M. Nádasi, Nóra Rapos, Judit Szivák, László Trencsényi, and Zoltán Vastagh.

[10] The Faculty of Humanities of Eötvös Loránd University is the largest training place for the disciplines of the humanities in Hungary. After the change of the political system, and years before the initiation of the Bologna reforms in Hungary, under the leadership of György Hunyady, a credit system was developed and initial teacher education – which was compulsorily associated with the humanities majors – became an optional choice of the students. The reform in the Faculty of Humanities thus preceded and laid the foundations of the legal reforms of both initial teacher education and higher education in Hungary.

As opposed to this, there is a long tradition of separating the study paths of students who are teaching and doing disciplinary studies in sciences in Hungary. The advantage of the system is that teacher preparation is not wasteful and unnecessarily overburdened; its disadvantage in Hungary is, however, that it becomes a possible study path for those who drop out from or do not perform well in the sciences field (where the dropout rate is traditionally very high). The reason behind this is that the social prestige of the teaching career is much lower than that of research in the natural sciences. As a summary, we can say that strong adverse selection took place in ITE in the disciplines of natural sciences in the previous decades. The Government Decree 111/1997 wished to bring the two, traditionally different systems of ITE closer to each other.

In the framework of the decree, a dual system of teaching practice (field experience) was developed: One is group practice of classroom observation; the other is a longer individual in-school practice teaching a subject for a longer period (15 hours). According to the decree, the former period had to be spent in a practicing school,[11] and the latter type of experience had to be gained in a public educational institute that was outside of the system of practicing schools. Despite the regulation, both group and individual field experiences were gained in reality in practicing schools, except when there was insufficient capacity.

The Bologna reforms of ITE carried on in the same direction as the reforms of the Government Decree 111/1997, but broadening its perspective. Similarly to the previous reform, the development and implementation of an ITE structure that matched the Bologna system was again preceded by long and intensive professional consultations between 2003 and 2010. Basically, the professional debate took place in the Teacher Training Subcommittee of the National Bologna Committee and in the professional forums (debates) accompanying the reform. The teacher education model developed by ELTE (the so-called ELTE-model) had a fundamental impact on the debate (H. Nagy 2009).

The main feature of the reform is that a single ITE program was created, a so called teacher education master degree. The existence of the teacher education master degree, the only one program where one can obtain teacher qualification was created in a way to give a specialization within the single master degree to the disciplinary subject matter. This approach clearly shows that the preparation to the teacher profession received the emphasis while the subject matter became a simple orientation within the teaching program. Thus, the unifying nature of the Government Decree 111/1997 on the Qualification Requirements of Teachers was realized not only across the pupils' age groups, but across the levels of training and the direction of subject preparation.

As a result of the Bologna reform of ITE in Hungary, a new system developed in which, after graduation from the secondary school, one could only apply to disciplinary bachelor's degree programs and teacher qualification could only be obtained at master's level, building upon the disciplinary bachelor's degree. Since in the school tradition of Hungary, teachers typically have two specialties, and bachelor's trainings are directed toward one subject, it was necessary to take care of the disciplinary foundations of second subject matter. For this reason 50 ECTS minors of second disciplinary studies were incorporated into disciplinary bachelors. Alternatively, in possession of a bachelor's (or a previous college) degree, one can enter higher education only for a 50 credit subject minor in order to lay the disciplinary foundations of teaching the second subject.

It is also an important feature of the Bologna type ITE system that decision for choosing the teaching career was shifted from the age of 18 to the age of 21, the lowest age limit for applying for the master's degree.

Teacher major was placed at the master's level among the Bologna cycles. The reasons for this was to allow enough time for the applicants to consider their choice of a teacher's profession, to enable them to get acquainted with the teaching profession and lay its foundations by earning 10 credits at the bachelor's level within the frames of pedagogical and psychological studies, and to gain some experience whether or not they are suitable for the teaching profession. When entering the master's level studies, the students must choose between disciplinary masters and ITE masters; consequently, the professional motivation for teacher education is ensured by the system. Finally, the high quality and the system of requirements of master's training give teacher education a prestige that meets teacher's social role and importance.

Although at the expense of some compromise, the teacher master degree could preserve the dual subject orientation required and appreciated by the schools. When developing the proportion of credits devoted to the preparation for the subjects, due to the basically one-discipline nature of the bachelor's training, different amounts of credits were assigned to the two subjects. In order to be able to apply for master's level teacher education program in two subjects, the students

[11] Practicing schools are public educational institutes that belong to the higher education institutions where initial teacher education is offered. It is part of the responsibilities of these schools to provide an opportunity for student teachers in getting field experience and to give high quality support to them. As a rule, training schools are also centers for methodological development, they are centers of excellence in ensuring excellent leaning outcomes, where both the teachers and the students are selected. Teachers often take part in offering ITE methodology courses also. The construction makes high level cooperation possible between the university and the school, but does not make it possible for the teaching candidate to get to know everyday school challenges (special educational needs, multiple disadvantages, etc.).

have to collect 110 credits in the chosen major subject and 50 credits in another subject (minor), plus 10 credits in introductory studies of education and psychology. The teacher education master's program is altogether 2,5 years long, an 80-credit frame is divided between the two subject matters: at least 30 credits fall on the fist subject, and a maximum of 50 credits are assigned to the second subject, while 40 credits are provided for pedagogy and psychology and 30 credits for in school practice. In the model, subject methodological knowledge must be provided within the 80 credits of the two disciplinary modules of the master's training, at least 7 credits in each subject. The structure of the bologna type teacher education path can be seen in *Figure 4.*

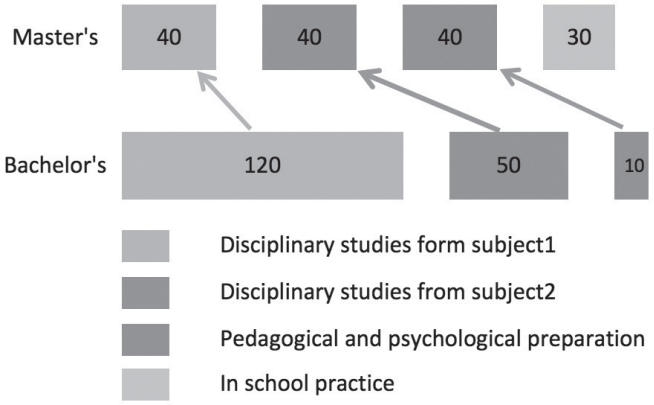


Figure 4: *The structure of the Hungarian ITE path after the bologna reform*

Combining this with the credits gained in the disciplinary bachelor's programs,
one earns minimum 140, maximum 150 credits (110+40 or 30) in the first subject,
and minimum 90, maximum 100 credits (50+40 or 50) in the second subject,
50 credits in pedagogy and psychology (10+40)
and 30 credits in school placement.

In comparison with the previous college and university level training, the completely free pairing of the subjects at the master's level was an important step forward. While previously, training took place in fixed subject pairs, the first and second subjects at the teacher education master's program can be chosen from a great diversity with very little constraints.

The introduction of a one semester (30 credits) block of in-school practice at the end of the program, after finishing all the rest of the modules, was a significant step forward in the Bologna reform. This practice was a new, a third type of practice, in addition to keeping the group and individual teaching practice prescribed in the Government Decree 111/1997 at the master's level. Since the students usually completed the two practices prescribed in the qualification requirements in practicing schools, and it equipped them with the basic skills of how to run a class of their subject discipline, the one semester long in-school placement was aimed at practicing the whole complex role of being a teacher, and were to be organized in regular schools.

While the aim of the first two types of practice is to prepare the student teacher to teach the special subject, the one semester practice is directed toward getting acquainted with complex of task of being a teacher. In the course of this one semester practice, the student teacher not only has to conduct classes, but also has to visit classes that are not in his or her subject field, has to participate in the activities of the teaching staff and in the organization and execution of extracurricular activities like keeping contact with the parents, talent development, or any task relevant to the given school.

All of the above are evidently parts of the acquisition of pedagogical skills and of the development of views, beliefs, and values. Therefore, – in accordance with the program and outcome requirements – this semester of professional practice must be supported by an accompanying seminar that provides an opportunity for the student teacher to work through his or her experiences, to strengthen his or her reflective practices, and to receive support in solving the arising difficulties.

The other novelty in the master's level teacher education program was the compulsory introduction of a portfolio as an element of final assessment. According to the definition of the program and outcome requirements, the student prepares a portfolio – a proof of his or her work during getting to know the pupils, performing his or her teaching practice. The portfolio is supported by data, is a documentation of one's own professional development realized under the supervision of the head teacher and a teacher educator. The portfolio is part of the thesis and the subject of the teacher qualifying exam. The importance of the portfolio is also demonstrated by the fact that the program and outcome requirements formulated in the decree mentions the portfolio in the first place among the parts of the thesis.

Another important characteristic of ITE reform in Hungary is that both teacher training colleges and universities may offer master's level teacher education programs if they meet the requirements of accreditation. This is the case, numerous colleges offer this teacher education master degree.

The approach of the new master degree program, conforms to and harmonizes with the European trends in regards to the fact that the program and outcome requirements formulate the aims of the training in the form of nine competences. These competences are ability to

– develop pupils' personality,
– assist and help in the development of pupil groups and communities,
– plan the pedagogical process,
– develop the knowledge, skills and aptitudes of the pupils through the teacher's knowledge of his or her subject,
– develop competences that lay the foundations of lifelong learning efficiently,
– organize and direct the learning process,
– apply various methods of pedagogical assessment,
– cooperate and communicate in the profession,
– be committed to professional development and self-education.

Formulating the goals within the system of competences was unique and pioneering among the higher education programs, and so is the fact that the institutes really strive for making the students acquire these competences in the course of their studies at master's level teacher education.

Subordinating contents under competence development, progression according to the developmental plan that is linked to it in some institutes, and the portfolio as a formative form of assessment that supports learning conform both to the outcome oriented content of the Bologna Process, and to the pedagogical approach and assessment directions that are tailored to the individual and support development. So far the master's level teacher education program, and its pedagogical and psychological modules, employed the European higher education principles and approach the best in Hungarian higher education.

Regarding the contents, we can say that there is no other subject in the palette of Hungarian higher education whose practice is developed so finely and carefully at the level of decrees, and there are only a few lines of training where the number of possibilities for the acquisition of skills, views, and attitudes would be so great: the system of multi-cycle practice, head teacher, supporting mentors and seminars, the methods of portfolio and self-analysis. All this definitely conforms to the European pedagogical approach that places the acquisition of skills and knowledge in the center instead of knowledge, and centers on the student (pupil) and development rather than on the teacher and teaching.

In addition to the progressive approach to higher education, it also conforms to the European approach to ITE that responsibility for one's own professional development was raised to the level of competences. It is also in harmony with the European approach that it was formulated in the program and outcome requirements regarding professional roles that new teachers receiving their qualification know themselves appropriately and are capable of critical reflection and self-evaluation. Thus, the two pillars of the European continuum, reflectivity and taking responsibility for one's own professional development appear in the Hungarian model emphatically.

Overall, we can say that the development of the model of master's level teacher education in Hungary took place in accordance with both the Bologna structure and the accompanying European approach to ITE.

Master's level teacher education was regulated in 2006 by Annex 4 of the Ministerial Decree 15/2006 of the Ministry of Education on the learning requirements and learning outcomes of the bachelor's and master's degrees, and it was introduced in Fall, 2009, after the first BA diplomas were issued within the Bologna system. The first students receiving a master's level teacher's diploma after two and a half years of studies graduated in February 2012.

Although there was no time to ascertain the efficiency and success of the training yet, the reform and its realization has been surrounded by disputes. In the course of the debates, the most frequently mentioned "charges" against the reform were:

– the significant difference between the volume of credits of the two kinds of subject orientations;
– the insufficiency of the number of credits in the second subject matter;
– the small number of applicants willing to chose ITE at master level;
– the too complicated and unclear regulations;
– due to the one-semester long practice, the time of receiving the diploma is not adjusted to the academic year of public schools;
– the overall pedagogical and psychological orientation of the program.

These charges could be responded to best by following the career of those who receive their qulaification, that is, studying their success in getting a job and in their teaching, and by comparing the Hungarian forms of teacher training with the forms found in Europe.

Comparison of the master's level teacher education to the European trends, comparing its characteristics with the European average could reveal relevant information in the revive debate after the Bologna reforms. *Table 8* shows the comparison of the path of the master's level teacher education program built on disciplinary bachelor's program and the cluster means of the European paths belonging to ISCED 3 teacher education.

Table 8: *Comparison of the Hungarian Bologna type ITE path and the ISCED 3 European paths cluster average*

	Number of paths	Dominant structure	Average length (year)	Total credits	Total disciplinary credits	Total non-disciplinary credits	Practical credits
ISCED 3 European average	73	B+M	5.1	310	205	105	26
The Hungarian Bologna type ITE path	1	B+M	5.5	330	236	94	30

On the basis of this comparison we can say that master's level teacher education in Hungary is of higher standard than the average European upper secondary teacher education (ISCED 3) paths in its disciplinary preparation, although it trains not only upper (ISCED 3), but lower secondary teachers as well (ISCED 2). Thus, the longer than European average training is "spent" on subject knowledge and on a slightly longer than EU-average in-school practice. The Bologna type ITE in Hungary falls behind the European average in only one respect, namely, the number of credits on teacher preparation, that is, in pedagogy, psychology, methodology and other subjects outside the disciplinary field. The above data do not seem to support the insufficiency of the volume of the disciplinary credits or the accusations of the dominance of education and psychology.

In sum, we can say that master's level teacher education in Hungary was created in compliance with the teacher education reforms of the EU countries.

The above data showed the changes in ITE, that is, in the first phase of the continuum of teacher education in detail. However, the second phase of the continuum, *the induction period* (or initial support system) is still not developed in Hungary; even its existence is in question.

A so-called "gyakornok" (intern/probationer) status was introduced[12] for newly qualified teachers employed in public schools from September 1, 2007. According to the decree, in state maintained schools, newly qualified teachers can be employed only in an intern status for the first three years, if their contract is for an unspecified duration. At the end of the internship period, the employer grades the intern as either "passed" or "not passed" based on the requirements defined in the Internship Regulations of the school. In the former case, the intern becomes a public employee for an unspecified period, in the latter case, his or her employment is terminated. The requirements imposed on the intern consist of two parts: general requirements and requirements related to the job. The law ensures the support of a professional mentor for the intern; the job of the mentor is to follow the activity of the intern, to assist the new teacher meet the requirements of internship, and to evaluate the work of the intern at the end of each semester. The regulation orders salary supplement for the mentor, while the upper limit of classes per week for the intern is the generally compulsory number of classes per week.

The above regulation can be considered as a hopeful first step toward the induction support system, but in its present form, it gives an opportunity for the school leader to terminate the employment of the new teachers who do not perform well more easily, rather than supporting newly qualified teachers. The present regulation cannot be considered as a support system because of several reasons. First of all, the intern status does not apply to all teachers – as formulated in the European expectations –, only to those newly qualified teachers who are to be employed for an unspecified period in state maintained schools. Second, the decree does not define the support system to be provided for the interns, and does not provide the conditions for such a system. Although the mentor as a person does appear in the decree, but the mentor's person and qualification requirements are not defined, the mentor's duties are listed without the constraints of aims, training, and quality assurance.

The regulation results in various levels of support for the interns in practice, mentors don't get paid are not receiving a reduction of teaching hours either, and are only nominated if the school leaders find it important. There is no overall monitoring of the system whatsoever at present.

Another challenging aspect of the present policy is that it is not organically built on or linked to ITE, it does not aim at building on and developing competences nor is it preparing for self reflection or continuous professional development; therefore, it cannot achieve the strategic aim of an induction system, either.

Consequently, if the demand for the development of a continuum of teacher education arises in Hungary, the transformation of the existing form of support into a systemic and efficient induction support is still a task to be carried out.

The *phase of continuous professional development* in Hungary belongs to the notion of further training of teachers. This expression, however, does not reflect the EU approach according to which teachers are responsible for and active facilitators of their own development. In the Hungarian concept of further training, teachers are more the objects of education than the subject of their development.

[12] Government Decree 211/2007 to amend Government Decree 138/1992 on the implementation of Act 33/1992 on public employees' legal status in public education institutions (Chapter 4/A, containing provisions regulating the training period was added).

It has become quite obvious by now that the continuing education reform of 1997 regarding teachers[13] was progressive and offered systematic motivation for the teachers to participate in further trainings. It introduced the requirement for 120 hours of training for the teachers in every seven years, it required all schools to prepare a further training plan for five years, and it provided a per head financing for schools. Since its introduction, however the adequate funding has decreased significantly. Also, a reform with more emphasis on the real development of classroom practices and less on of attendance at trainings would be preferable.

A present the coherence between the phases of the continuum is not ensured at the present. There are separate legal regulations and regulatory principles for ITE, public education, employment, and accreditation and quality assurance of trainings; there are only few common regulatory principles across the phases.

2.) PRESENTATION OF THE STUDY ON ORGANIZATIONAL COMMUNICATION IN INITIAL TEACHER EDUCATION

A study was started in institutes of ITE in Hungary in the Spring of 2011, surveying the attitudes toward master's level teacher education and the Bologna reforms, and investigating the system of interpersonal relationships of teacher educators. The research had two aims: The first aim was to assess the acceptance and support of and the interrelationships among the different views on ITE, unfolding in the professional debates of the preceding years. The second aim was to reveal how these views and systems of views are linked to organizational and professional features and roles.

The coordinated cooperation of the various actors is a precondition of the efficiency and success of teacher education, a kind of training in Hungarian higher education that yields the most interdisciplinary and greatest number of diplomas. Based on this assumption, the other aim of the study was to get to know the interpersonal network of the teacher educators in the participating organizations, and this way, to reveal the main characteristics of the organizational communication in the institutions of ITE.

This means that instead of studying the structural and content issues – as is more usual –, this investigation revealed the main characteristics of the main role players of ITE in Hungary, namely, those of teacher educators and their institutions. Since interpersonal relationships, and attitudes in particular, are known to change very slowly and are difficult to change upon external influence, the aim of this research can also be formulated as the study of the social psychological features of ITE that are independent of its momentary structural and content aspects.

The core of the study was a structured survey including open-ended, close-ended, multiple choice, and scale format questions. After the rectors of the institutions in the servey approved the questionnaire, they were given to the respondents by interviewers. Using interviewers, on one hand made it possible to increase sample size, and on the other contributed to the fact that the respondents could state their opinions impartially and sincerely[14]. In addition to the questionnaires, a thematic qualitative interview was conducted with at least one of the leaders of every institution in order to get to know the institutional organizational and regulatory context.

In accordance with the aims, one of the areas of the investigation was mapping the scheme of views of the teacher educators. This attitude measurement was based on a number of structured questions in a scale format, alternating with open-ended and close-ended questions about

- how current teacher education worked,
- what the most important challenges of schools were,
- how the concept "good teacher" was interpreted personally by the respondents,
- what their opinions were about the teacher candidate students,
- the respondents' pedagogical approach,
- the knowledge of the respondent on international practices in ITE,
- about the aims of the Bologna reform of ITE and whether they agreed with them,
- about their ideas of the future, and about their personal willingness of being active in the matters of ITE.

The other pillar of the questionnaire was the series of questions aimed at getting to know the interpersonal relationships within the organization. These questions explored the interpersonal relationships of the respondents in relation with ITE, inquiring into their main characteristics:

- the direction of contact (who is contacting whom),
- the information-flow (who gives information to whom),
- the importance and pleasantness of the relationships
- how charged the relationships are with disputes.

[13] Government Decree 277/1997 (XII. 22.) on in-service teacher training, post-professional exam, and the payments to participants of in-service training and their exemptions

[14] The author of the study is the Head of Department of Higher Education at the Educational Authority, therefore, it would have raised ethical issues if she had asked the respondents in person about their views on the reforms of education policy.

The theoretical basis and the aspects of analysis will be shown after the presentation of the results on the attitudes and before presenting the data on the system of interpersonal relationships.

In selecting the *sample*, we started off from the main characteristics of the group of teacher educators, in order to be as representative as possible. Teacher educators are primarily connected to an institution, to a scientific discipline; and they also play various roles in ITE. The composition of the sample of approximately 150 respondents (limited by our possibilities) was determined along these three dimensions in the following way.

According to the register of the Educational Authority, ITE is offered in 36 institutions of higher education in Hungary. Twelve of them are maintained by churches; many of which are definitely small and concentrate on educating religious teachers, while five institutions are private. Both private and church-run institutions tend to educate teachers on small scale compared to state-run institutions. Due to the special aspects reflected in the organizational culture of the ITE in religious studies and those of church- and private-run institutions, and due to their smaller scale, the study was limited to state-maintained institutions. Although the issues of financing, time, and coordination were taken into consideration, we tried to include as many institutions as possible when selecting the state-maintained institutions of ITE. As a result, all of the major institutions were included in the sample, they are the following: Eötvös Loránd University (ELTE), the University of Szeged (SZTE), the University of Debrecen (DE), the University of Pécs (PTE), the University of Miskolc (ME), the Budapest University of Technology and Economics (BME), Eszterházy Károly College (EKF), the College of Nyíregyháza (NYF), and the University of West Hungary (NYME). The map in *Figure 5* shows the geographical locations of the ten teacher education institutions of the sample.

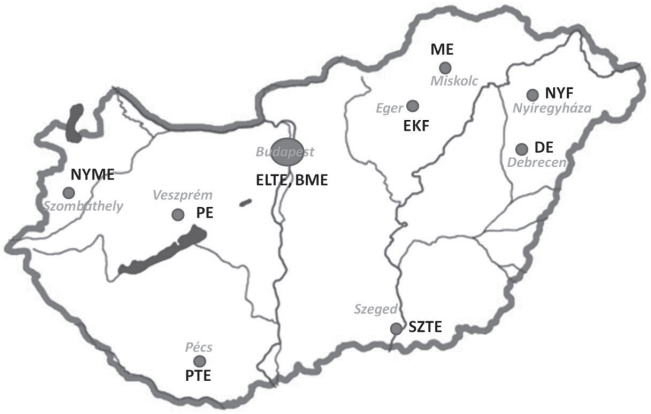


Figure 5: *Geographical locations of the studied teacher education institutions*

According to the admission data, our sample of institutions train about 78-86% of the students admitted to master's level teacher education, that is, about four fifth of the future teachers (see *Table 9*).

Table 9: *Number of students admitted to master's level teacher education: total and in the 10 studied institutions*[15]

Year	Admitted to HE	Admitted to ITE	Admitted to ITE by the 10 institutions	Proportion of the 10 institutions
2009	109 336	3 924	3 370	86%
2010	114 068	4 473	3 693	83%
2011	115 183	5 219	4 051	78%

Source: Admissions database of Educational Authority

The second dimension along which the composition of the sample was determined was the *function of the respondents* in ITE. It was easy to differentiate the following groups:

– *coordinators:* people working in institutional coordination who are responsible for master's level teacher education, rectors (presidents), deans, personnel in educational management;
– *heads of modules*: teachers who are responsible for the content material of a module of teacher education or of a discipline (subject);
– *subject professors:* teachers who take part in disciplinary or pedagogical and psychological preparation;
– *subject methodologists*: teachers who provide didactic training irrespective of the subject (disciplinary field); and
– *school teachers:* head teachers and mentors in schools, who help the development of students in the various forms of practice.

The everyday activity, system of relationships, and system of views of the teacher educators in the role of subject professors of higher education can greatly be influenced by the discipline in which they work; therefore, the third dimension along which the composition of the sample was determined was the *field of discipline*:

[15] The data in the Table regarding the admissions to master's level teacher education includes not only the number of those entering teacher education the first time, but also the number of those who are already in the teaching profession, but wished to obtain another teacher's diploma or wanted to raise their level of qualification. It is important to note that the number of those already in the profession was already greater than that of the new students in 2009–2011.

– *humanities,*
– *sciences,*
– *education and psychology*.

In order to cover the whole of the sample, the non-higher education teacher groups were preserved in the field dimension with the same content as the function dimension:
– *coordination*;
– *school (teachers).*

When selecting the respondents, we aimed at having representatives at each institution from each field and function in the groups of teacher educators, possibly in a balanced proportion. The actual respondents were recommended by institutional leaders of teacher education. The respondents selected by disciplinary field and function by the institutes were interviewed as they could be reached. That is, there was quota used within a non-probability procedure of sampling.

The distribution of the respondents selected into the sample are shown by institution, field, and function in *Table 10.*

Table 10: *Distribution of respondents by institution, field, and function*

		Field					Function				
Institution	Total	Science	Human.	Edu. and psy.	Coord.	School	Subject prof.	Subject method.	Head of module	Coord.	School
Eötvös Loránd University (ELTE)	20	4	6	5	3	2	6	1	8	3	2
University of Szeged (SZTE)	12	2	2	4	2	2	2	2	4	2	2
University of Debrecen (DE)	13	2	4	3	2	2	5	1	3	2	2
University of Pécs (PTE)	17	3	7	2	2	3	5	2	5	2	3
University of Miskolc (ME)	14	3	4	3	2	2	6	1	3	2	2
Budapest University of Technology and Economics (BME)	9	2	2	4	1	0	4	1	3	1	0
Eszterházy Károly College (EKF)	19	4	7	2	4	2	4	4	5	4	2
College of Nyíregyháza (NYF)	15	4	1	3	5	2	1	2	5	5	2
University of West Hungary (NYME)	14	3	3	4	2	2	6	2	2	2	2
University of Pannonia (PE)	12	3	4	3	2	0	6	0	4	2	0
Total	145	30	40	33	25	17	45	16	42	25	17

When the response sheets of the attitude measuring device were returned, principal component analysis was performed, and this way, attitude-groups were created; the proportions of these attitude-groups by institution, field, and function were then analyzed. The data in interpersonal relationships were represented and analyzed by social network analysis; the concordance between the system of views and the position in the relationship network were studied by analysis of variance.

3.) A COMPREHENSIVE REVIEW OF VIEWS OF HUNGARIAN TEACHER EDUCATORS

When studying the teacher educators, in addition to the attitude measuring device and the study of social relationships, open-ended and close-ended questions were also asked in the following three supplementary themes: (1) opinions regarding schools and the teaching career, (2) opinions regarding the realization and the reform of ITE, (3) evaluation of the respondent's own activity as a teacher educator.

Views regarding the present challenges of schools and the characteristics of a good teacher

The study of the opinions regarding schools and the teaching career provides a background to mapping views on ITE. It is a justified expectation of society that the preparation of the next teacher generation is in accordance with the demands of schools, and competences of new teachers entering the teaching profession are in harmony with the competences necessary for the tasks to be performed in schools.

Therefore views of teacher educators on the present challenges of schools were studied, together with the sources of their information on schools, in other words, we asked about the relationship between teacher educators and schools.

It is another rational expectation of ITE that it should direct the students toward an ideal image of a teacher. It is important to know what kind of ideal image teacher educators have of the teaching profession and of the characteristics of a good teacher, since they project this image to the student-teachers in their everyday work. To this end, we also collected information about the characteristics of a good teacher according to the teacher educators.

According to the survey, *teacher educators gather information on the school system* mainly through their own work experience, through teaching in schools, through school visits, and through professional experience while serving in special services, committees, or as practicing school maintainers. This answer to this open-ended question was given by 44% of the respondents. The second source having an effect on the views of the teacher educators, which was almost as important as work experience, included the media, the press, and the Internet: 43% of the respondents named this as their main source. 26% mentioned getting their orientation from the professional literature, conferences and meetings, while 25% obtained information on schools from the experiences of teachers and school directors in their acquaintances. Information from the feedback of their present and previous students was less important: 14% of the respondents mentioned this factor.

The trends indicate that not even the half of teacher educators have direct regular experience in schools, therefore, the views of the majority of teacher educators can be influenced easily on the challenges of schools and the expectations of ITE. In accordance with the European findings, it seems that in Hungary also, the world of teacher educators in higher education and that of schools need to get closer to each other. The low rate of feedback from own students implies that it is necessary to attend to the study of the efficiency and success of ITE in order to improve quality assurance.

The most important present challenges of schools according to the teacher educators in the survey were investigated by open-ended and close-ended questions, too. In the open-ended questions, eight percent of the respondents said that they had no information on this issue. The respondents identified six important challenges; although their frequencies of occurrence were not identical, they were similar. In order of frequency they are the following.

Unprivileged situation of teachers: lack of appreciation of teachers, adverse selection of teachers, lack of teacher career scheme, teachers not taking responsibility, absence of professional supervision (inspectorate), lack of adequate teacher replacement, need for improvements in teacher education, lack of knowledge – Frequency: 36/133;

Lack of motivation of pupils: difficulty of motivating pupils to study, lack of respect for knowledge – Frequency: 35/133;

Falling behind and social inequality is not realized, education should promote genuine equal opportunity for the Roma and the disadvantaged, the lack of real integration, the lack of an individual student-centered, differentiated, and adaptive system – Frequency: 30/133;

Problems of the schools: lack of resources, permanent transformation of the school system, forced integrations, difficulties in ensuring talent development and catching up programs next to each other, intervention of the school maintainers into the everyday lives of the schools, the need to improve the efficiency and success of the school – Frequency: 28/133;

Transformation of society: absence of stable values, lack of social consensus in the field of education, bringing actual political issues into the system of education, uncertainty about the nature of modern knowledge, competition elicited by the Internet/media – Frequency: 23/133,

Ensuring the knowledge level of pupils: ensuring real development of skills, lack of preparation for marketable professions, difficulty in raising the level of knowledge of pupils in the school – Frequency: 20/133.

With much less frequency, two more factors were mentioned in addition to the above (frequency of 6/133 in both cases): the transformation of the role of the families as a challenge of schools (thus, the distemper of the families, the decreased time and attention devoted to child-rearing and discipline, the necessity of handling conflicts and aggression in schools, the lack of cooperation of the families with the schools), and demographic decline.

In case of the close-ended questions after the open-ended questions, we asked the respondents to indicate on a five point scale how important they found the resolution to the challenges given (1 – not important, 5 – the most important). The responses are given in *Figure 6,* where the horizontal axis lists the given challenges, the means are written in the respective columns, and the error bars indicate standard deviation.

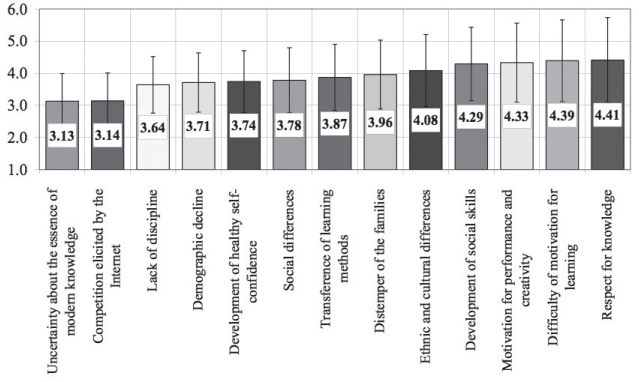


Figure 6: *Means of responses to the question how important the following challenges are (on a five point scale, where 1 – not important, 5 – most important challenge) (Error bars indicate SD)*

It can be seen in the figure that the most important tasks are related to the attitude and values of the children: respect for knowledge (mean: 4.41), ensuring motivation (4.39), motivation for performance (4.33), and development of social skills (4.29).

According to the teacher educators, the smallest challenges in the schools today are the uncertainty about the essence of modern knowledge (mean: 3.13) and the competition elicited by the Internet (3.14). These two low values – and their absence form the responses to the open-ended questions – imply that these phenomena and the recognition of their interrelationships has not yet been faced by teacher educators in Hungary, although international evaluations find them fundamental for education.[16]

After the views on the challenges of schools, it is worth reviewing the ideal image of a good teacher. This area was also studied first by open-ended, then by close-ended questions. There are two strikingly high frequency answers to this open-ended question: the importance of thoroughly founded knowledge of the disciplinary subject (frequency: 100), and the possession of appropriate personality characteristics (97). The latter answers were detailed as empathic, accepting, liking children, self-confident, and authentic.

These two factors were followed by pedagogical preparedness with much less frequency (frequency: only 56). Responses in connection with pedagogical preparedness can be divided into two subgroups according to a rather conservative (frequency: 30) and a rather progressive (26) characteristics of pedagogical views exposed.

The replies were assigned to the conservative group if they were related to the acquisition of pedagogical knowledge, to the transfer of knowledge, and to the demand for knowledge, while the progressive subgroup included answers mentioning facilitation of the pupils' development, differentiated learning, self-reflection, and self-development. Of the 145 teacher educators of the most important ITE institutions, the aptitude for differential development was mentioned by only 4 respondents, the importance of reflection in the teacher's work by 5, and self development was mentioned by only 7 persons. This implies that the 'European views on teacher education has not become widespread and does not permeate the thinking of teacher educators in Hungary yet.

After pedagogical readiness, the most frequently mentioned characteristic of a good teacher was having a wide methodological repertoire (frequency: 29). It must be noted that the intellect of the teacher was written by only 7 persons, which allows for the conclusion that the adverse selection afflicting ITE for a historically long period influenced the system of expectations regarding a good teacher of teacher educators, too.

The respondents were asked to rate the importance of the characteristics of a good teacher on a five point scale (1 – not important at all, 5 – very important) in close-ended questions. The results are shown in *Figure 7.*

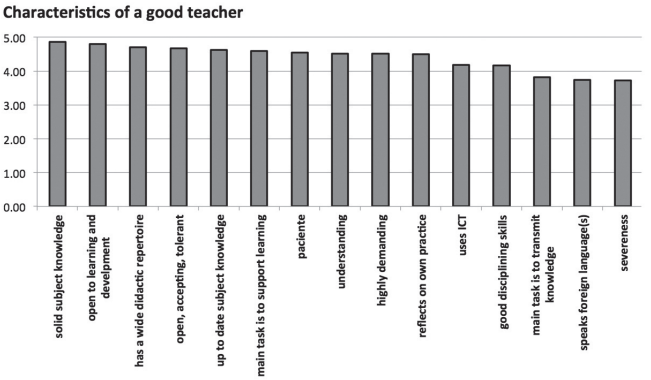


Figure 7: *Opinions regarding the importance of the characteristics of a good teacher (On a five point scale: 1 – not at all important, 5 – very important)*

[16] See, e.g., the publication of OECD Trends Shaping Education 2010 (www.oecd.org/edu/ceri/46447355.pdf), especially the sections on 'The changing world of work' and 'ICT: The next generation'.

As can be seen in the figure, according to the opinions of the teacher educators, the most important characteristic of a good teacher is thoroughly founded subject knowledge. The definitely small standard deviation (SD: 0.50) implies that the various groups of teacher educators agree quite well on this. Subject knowledge is followed by readiness to learn and develop, which, however, did not emerge in the open-ended questions; as we have seen, self-development was mentioned by only 7 respondents. Apparently, teacher educators are aware of the importance of learning skills and self-development, but they do not list these features as important on their own. Using a variety of disciplinary methodology was quite highly ranked among the open-ended questions, and was reinforced by the mean ratings of the close-ended questions, too. The personality characteristics whose importance was comparable to subject knowledge in the open-ended questions, ranked in the middle of this list.

It is somewhat of a contradiction that the basic task of transmitting knowledge, representing the conservative pedagogical approach received a mean value of only 3.81, and thus made it near the bottom of the list, while in the responses to the open-ended questions, its frequency was greater than that of pupil development or promoting the pupils' learning. All this indicates that the teacher educators recognize the importance of these characteristics, but they do not think in these categories on their own, in other words progressive approach has not become their own.

Speaking foreign languages ranked the last but one in the list of important characteristics. The mean importance of speaking foreign languages and that of strictness at the bottom of the list were somewhat detached from the importance ratings of the previous characteristics. Neither strictness, nor speaking foreign languages seem to be valuable in themselves according to this mean of opinions. The latter is difficult to interpret in view of our irreversibly globalized world, as in lack of knowledge of foreign languages and of a mind open to other cultures it is inconceivable to prepare the growing generation effectively for the dangers and possibilities of the world's global economy, labor market, and society. Similarly to what has been said about the Internet and the competition elicited by handy ICT tools, this confirms that teacher educators do not anticipate very much the strategic challenges of education.

In the questionnaire, we also asked what the representatives of the different fields thought about the characteristics of a good teacher. The direction of the responses were rather schematic: The teacher educators thought that according to the teachers of a discipline, knowledge of the disciplinary subject is the most important (frequency: 109), according to the experts in subject methodology, a wide repertoire of methods (frequency: 99) and a high level of knowledge of the discipline (frequency: 33) are the most important, while according to the teachers of the pedagogical and psychological fields, pedagogical skills are the most important (frequency: 84). Overall, the head teachers of training schools elicited the most balanced impression in the teacher educators: the respondents thought that subject methodology is the most important for them (frequency: 65), but knowledge of the discipline (38) and pedagogical skill (33) are also significant.

After the review of the opinions of teacher educators regarding the challenges of teacher education and the characteristics of a good teacher, we can say that they are not completely coherent. The most important challenges of schools that can be addressed within ITE are related to the individual characteristics and motivation of the pupils and to the treatment of groups falling behind. The answers to these challenges may be identified by the continuous development of teachers' pedagogical and psychological skills, nevertheless, teacher educators think that the most important expectations of a good teacher are excellence in subject knowledge and a healthy and capable personality. The ability to differentiate in the teaching activity and a reflective and self-developing practice that seeks innovative solutions to the new challenges of society were not mentioned in a great number among the characteristics of a good teacher.

Views regarding the realization of the Bologna reform in initial teacher education

Keeping in mind the opinions regarding the challenges of schools and the ideal image of a good teacher, it is worth reviewing the evaluations of the Bologna reform leading to master's level teacher education from several aspects:

- knowing international tendencies,
- evaluation of how things work currently,
- the up-to-date nature of the existing curricular materials in ITE,
- the motives for the reforms,
- the degree of agreement with the reforms,
- ideas about the future of ITE, and
- the degree of personal involvement in ITE.

The respondents were asked in this study about *their knowledge of current literature on ITE of the OECD or West European countries*. About half of the respondents said they had heard about some ideas, the other half said the opposite. Only 36% of the respondents knew foreign tendencies; the most appealing direction for them was the practice-oriented, competence-based models that facilitate independent learning. The teacher education models of the West European countries were mentioned only occasionally, and even the Finnish model was appealing to only 4 respondents.

From the answers one can assume that teacher educators in Hungary have no in-depth information about and do not know the practices and models of the European countries. Nevertheless, or because of this, the respondents thought that if there was an independent comparison of ITE of the European countries, Hungary would score 2.99 on a five point scale (SD=1.39), that is, a low middle result. Thus, the self-esteem of this group is rather low, despite having no information about international level of development.

The respondents were also asked *if initial teacher education worked well in their institution,* and were asked to *give their reasons*. There were almost twice as many positive responses to this open-ended question than negative ones. 61% of the responses indicated a positive change; the most typical answer was that ITE works well, because the direction of development is correct (frequency: 45), because organization has improved (frequency: 35), and the content has been renewed (frequency: 18). The opposite statement, namely, that ITE does not work well, was made by 32% of the respondents. Within the opinions of those who found that ITE does not work well, the most important of the explanations was that the two-cycle structure is problematic (frequency: 18), that the internal content proportions of teacher education is wrong (frequency: 18), and that the organization of teacher education had become worse (frequency: 11). 7% of the respondents emphasized that the overall direction is good, but there is a need for fine tuning.

The respondents were also asked to rate all this on a five point scale: the mean rating was approaching good (3.8, SD: 0.87). Asking about some aspects of how things worked, an even more positive overall view was given by the teacher educators: The up-to-date nature of the material was rated 4.19 (SD: 0.98), the coordination of the operation scored 4.12 (S: 0.99) on five point scales. The ratings were slightly more positive than the average in reference to their own institutions, while rating the way ITE operated, they were slightly more reserved (mean: 4.04, SD: 0.82). All this suggests that teacher educators are basically satisfied with how teacher education works at the present, they do not think it is in a critical condition and would need urgent fix. They assume backwardness only in comparison with some obscure view of the situation abroad, which can be explained by the traditional experience of a lag in development in East Central Europe.

There were questions targeting at how teacher educators evaluated the modernity of the contents of the existing disciplinary curriculum of teacher education. Teacher educators valued their own institutional programs more positively, the mean was 3.95 (SD: 1.43), in comparison with the content of the partner institutions, which was slightly less, 3.85 (with a definitely large SD: 1.85). Again, in international comparison, the modernity of contents was regarded significantly less modern, 2.53. The last mean had an exceptionally large standard deviation (2.02), showing that there were large differences at the levels of both institutions and individuals.

The modernity of the contents in the pedagogical and psychological field were also asked to be rated. Falling behind the rating of disciplinary contents, the modernity of their own institutional programs pedagogical and psychological content mean was 3.52 (high SD: 1,85) That of partner institutions was 3.24 (high SD: 2.05), while in international comparison, the mean was 2.32 (high SD: 2.11).

The responses to the questions regarding the modernity of subject methodology were regularly rated as better than that of the pedagogical and psychological content and worse than that of the disciplinary content. For own institutional programs the mean of modernity rating was 3.69, (high SD: 1.69), for partner institutions the mean ratings was 3.30 (high SD: 1.97), while compared to international practice the mean was 2.36 (SD: 2.07). The majority of the respondents (68%) said hat the contents of subject methodology had changed, in favor of the contents (58%), both in themes and in approach (52%).

Changes in education and psychology was perceived positively according to 79%, the contents of education and psychology changed in teacher education, and 69% thought that these changes were for the better; 88% thought that the changes affected content, themes, and approach alike.

Open-ended questions also inquired about the reasons of how the respondents rated the material of education and psychology. Almost one third of the teacher educators, 44 respondents said that they had no information about the area, or gave no answer. 69% of those who did answer, however, were positive about the changes in the contents of education and psychology, mostly in using the scientific findings (frequency: 43) and in conforming to the needs of schools (frequency: 23). The minority (31%) of the respondents thought that the contents were not changed. The strongest criticisms were that they did not meet the demands of schools (frequency: 14) and they were not student-friendly (frequency: 7). All this allows for the conclusion that judgment of the contents is sometimes based on prejudice, rather than experience.

In sum, the contents of the material of teacher education were not rated very high by the teacher educators in comparison with the content and material of other disciplinary fields. The ratings varied between medium and good. In comparison with the partner institutions, the these contents were seen as similar, while in international comparison they were definitely poor, despite the fact that they had scarce knowledge about the tendencies abroad, so they could not have based their judgments on experience. Among the fields, the contents of education and psychology received the lowest ratings, followed by subject methodology, while disciplinary contents were

appreciated the highest. Thus, overall satisfaction with ITE falls back in the area of contents so it seems from the opinions of the teacher educators that there is need for further modernization.

The respondents were also asked if there were professional forums of teacher education in their institutions. The majority of the answers were affirmative (mean score was 1.09, where 1 meant yes, 2 meant no), and referred to teacher education in general. 57% of the respondents indicated that they always participated at these forums, and they judged the usefulness of these forums on the average as 4.11 on a five point scale (where 1 meant not at all useful, 5 meant very useful). It was also asked if there were any feedbacks about the success of the realization of teacher education in their institution: 62.5% said yes, but less than one third (30%) said that it was regular.

The *motives of the reforms* were studied by both open-ended and close-ended questions. The greatest proportion of the open-ended questions were related to raising the quality as the aim (27%), followed by the introduction of the Bologna reform (21%), by the reinforcement of pedagogical and psychological preparation (13%), and creating student motivation (11%). Only 12% of the respondents said that they did not know what the aims of the reform were.

The close-ended questions were formulated in the same structure as in the European study, so the data can be compared with the European findings. The comparison can be seen in *Table 11.*

Table 11: *Motives for the Bologna reforms in initial teacher education in Hungary and in Europe, in order of average importance*

Motives for the reforms	Hungarian mean	Hungarian rank	EHEA rank	EHEA mean
Greater coherence between theory and practice	4.22	1.	9.	3.28
Quality assurance, raising quality	4.18	2.	5.	3.38
Demand for professional renewal	4.16	3.	1.	3.85
More in-school practice	4.16	4.	14.	2.85
More methodological preparation	4.09	5.	3.	3.46
Appreciation of the teacher profession	4.06	6.	2.	3.52
Strengthening reflectivity	4.04	7.	13.	3.12
Greater coherence among the subject, methodology, education and psychology	3.99	8.	4.	3.40
More pedagogical and psychological preparation	3.91	9.	6.	3.35
More disciplinary preparation	3.76	10.	10.	3.19
Strengthening research-based learning	3.54	11.	8.	3.31
On the basis of research	3.54	12.	12.	3.15
Promotion of school as a learning environment	3.48	13.	11.	3.19
Strengthening group work	3.42	14.	15.	2.65
Better involvement of stakeholders	3.22	15.	16.	2.62
Introduction of the Bologna Process	2.57	16.	7.	3.32

It can be seen in the table that the Hungarian teacher educators ranked professional goals and the various aspects of renewal at the top of the list. Actually, quality and professional renewal was brought to teacher education in Hungary by increasing coherence and expanding the amount and orientation of practice. While in the appraisal of the teaching career and profession was the second in the European evaluations, they were only in the middle range in Hungary, probably because no reform of teacher education can compensate for the negative effects of the very low average wage of teachers.

Strengthening methodological preparation and the provision of greater coherence among the disciplinary, methodological, and pedagogical-psychological preparation fell back as compared to the European average, while the importance of the strengthening of the disciplinary preparation was exactly the same as in Europe; the importance of this bunch of aim scored higher in Hungary than in Europe. The motives that were less important in Europe ranked lower in Hungary too.

There was an important difference in the evaluation of the motives for the introduction of the Bologna Process between the judgments in Europe and in Hungary, namely, it ranked in the middle in Europe, but ranked last in Hungary. Since the two-cycle structure determines the divided nature of master's level teacher education, we cannot say that it had no effect on the reform of initial teacher education. This would contradict the fact that in response to the open-ended questions, the realization of the Bologna reform was mentioned as an important factor by many respondents. The probable reason of the apparent contradiction may be that the realization of the Bologna cycles was less pronounced in comparison with the realization of the professional aims throughout the negotiations of the reform. Although the reform was elicited by structural changes, the further aspects of its implementation were professional aims that were not connected to the Bologna Process; rather, they aimed at continuing the trend of development that started with the qualification requirements of 1997.

Overall, we can say that the motives of the reform fit the European tendencies, but are coloured by special characteristics and attitudes in Hungary.

According to 60% of the respondents, the aims of the reform are seen differently by the different groups or representatives of the disciplines, subject methodology, schools, and the pedagogical and psychological fields. The respondents thought that for the representatives of the disciplinary fields, the aims of the reform was the maximization of disciplinary preparation (frequency: 47) and increasing the proportion of the discipline even at the expense of other fields (frequency: 16). The teacher educators assume of the participants of methodology that their aim is to strengthen methodological preparation (frequency: 42) and to maximize disciplinary preparation (frequency: 11). Similarly, teacher educators assume that teachers of education and psychology wish to strengthen pedagogical and psychological preparation (frequency: 38), and in addition to raising the quality of education (frequency: 13), they are basically satisfied with the reform (frequency: 10). The teacher educators had no clear, mature opinion about the system of aims represented by the schools; only the general aim of the introduction of the Bologna Process was relatively high (frequency: 18) among the various, low frequency responses. The respondents thought that for the administrators of teacher education, the reform is just an extra burden, making work more complicated.

The respondents thought to identify very similar aims among the current goals of the individual fields. That is, the current aim of the disciplinary fields is raising the importance of the discipline, increasing the number of disciplinary credits and the right to have a say in decision making in ITE (frequency: 45). The aim of subject methodologists is also to increase the role of their field (frequency: 37), the aim of the pedagogical and psychology field is to preserve the system, because in the opinion of the respondents, they are satisfied with the reform (frequency: 31). According to the respondents, the aim of the head teachers at the present is to achieve better preparation for practice, while that of the administrators is to simplify the system the decrease workload.

The *degree of agreement with the reform* was present both in the open-ended and in the close-ended questions, and the answers to them can easily be compared with those given to the first factor of the attitude measuring device. Half of the responses to the question "Are the disciplines you know satisfied with the model of master's level teacher education?" were affirmative, half of them were negative.

The respondents could express their opinions in response to the question "How committed are you to master's level teacher education?" on a five point scale. The opinions of the teacher educators were more in favor of commitment (mean: 3.35, SD: 1.28). In the open ended explanations, the supporters said they were in favor of master's level teacher education because they agree with the direction the reform (frequency: 23). The most frequent responses of the opponents was that the structure of teacher education is ineffective in its present form because the internal proportions of the curriculum are bad (frequency: 26); there was a close to neutral standpoint, stating that the overall direction of master's level teacher education is good, but fine tuning is needed (frequency: 9).

All these results from the opinions of the teacher educators fail to show the necessity of the withdrawal or complete reconstruction of the Bologna reform in ITE that is about to happen in Hungary.

Regarding *the future of initial teacher education*, the respondents gave their opinions about the probability of the appearance of four forms of education on a five point scale where 1 meant "improbable" and 5 meant "certain". In June, 2011, teacher educators thought that it was the least probable that the Bologna type and undivided system of teacher education would co-exist in an optional form (mean: 1.98, SD: 1.32). It was considered slightly more probable, but still quite improbable that master's level teacher education would be preserved (mean: 2.13, SD: 1.22), or that teacher education would be undivided in some cases and divided in some others (mean: 2.15, SD: 1.54). They found it the most probable that undivided, dual-major curriculums of teacher education would be implemented (mean: 3.04, SD: 1.5). The enormous uncertainty regarding the future is reflected in the fact that even the most probable idea of teacher education received a rating of only the middle on the five point scale, barely over the neutral value of 3. (It is also interesting to note that since the time of the survey the new regulations were put in effect that keep the bologna type master level ITE program coexisting with the new undivided programs till 2016, so the option that was considered the least probable came true.)

Together with the lack of a clear vision of the future, pessimistic expectations could also be traced. Namely, when we asked respondents to rate the performance of the present students of master's level teacher education they rated 3.59 (SD: 0.94) on the average, while for the previous system's university level students in ITE were rated lower (mean: 3.26, SD: 1.57), and the performance of the future student entering ITE in 2015 were predicted to be the lowest (mean: 3.03, SD: 1.84).

Despite the pessimistic view of the future, the respondents rated their own degree of personal involvement in teacher education very active, scoring 4.2 on a five point scale. Of the various forms of activity and inactivity, the most typical answer was "participation in the shaping of teacher education with development of the teaching material and with other suggestions", followed by "I'll wait to see the decision regarding the future of teacher education", "it is not up to me how teacher education will develop", and "I actively participate in the debates about shaping ITE". The statement "the developments of teacher education are indifferent to me" received the lowers scores.

Views regarding the respondents' own activity as teacher educators

There were some questions regarding the respondents' own activity as teacher educators. 90.8% of the respondents considered themselves teacher educators, which is a very high percentage in view of the fact that 17% of the respondents had a job in institutional coordination and another 31% were disciplinary teachers (in fields of subject, pedagogy, or psychology). In addition to the role of teacher educator, when naming other identities, two thirds of the respondents mentioned scientific or researcher identity (103 persons), 73 respondents named roles of leadership and coordination in general, 56 mentioned the role of subject professors, and 46 mentioned public activity in general. Typically, the respondents considered their researcher identity the most important, followed by subject professor identities.

The respondents attributed an average importance of 4.25 on a five point scale (1 – non at all important, 5 – the most important) to their tasks as a teacher educator, so mit seems they considered this activity as definitely important. They rated the difficulty of the teacher educators tasks as moderately difficult (mean: 3.14), on a five point scale (1 – non at all difficult, 5 – the most difficult). The teacher educators in the survey highly rated the depth and freshness of the content of their taught ITE courses on a five point scale (1 – not good at all, 5 – very good) the mean was 4.51. In contrast, the respondents rated the pedagogical skill-developing effect of their own activity as teacher educators lower (mean: 3.96), while the mean rating of the level of methodology and variety of instruments they used in ITE courses was 4.13.

All this shows that the respondents consider their teacher educator activity among their other tasks as definitely important. They rated the professional contents in their own practice as being more modern and up-to-date than those of other disciplines that are farther away from them; they also thought that they were using a broad range of methods, but were developing the pedagogical skills of the students only moderately.

Regarding their pedagogical views, the respondents were also asked if transmission of knowledge or promotion of learning was more important in their own teaching activity. The majority of the respondents (79%) said both were equally important. Regarding their own practice the majority of the respondents (73%) said again that both were equally promoted by them. However, when the question of how this issue was present in the practice of their colleagues was answered, 40% of the respondents indicated transmission of knowledge as more important, and less than half (49%) of them though that both were equally important for their colleagues as well. This shows that the teacher educators are aware of the modern pedagogical approach that is expected of them, they also believe to implement it in their own practice, but are not convinced about the penetration of the modern approach in the totality of teacher education.

Conclusions

Less than a half of the respondents have information about the present status of schools through their own professional working relationships. The majority gain information from the media, professional forums, and teacher acquaintances, thus, the views teacher educators have of the challenges of schools is often indirect and can easily be influenced.

Teacher educators see the lack of appreciation and lack of motivation of teachers, the difficulties of motivating the pupils, and the lack of resolution of social inequalities within the educational system as the greatest present day challenges of schools.

According to the teacher educators, the most important characteristics of a good teacher are the following: high quality subject knowledge, and empathy, openness, acceptance and authenticity in their personalities. Pedagogical preparation is less important in the ideal image of a good teacher of the teacher educators, and behind the relatively low importance we can find two different attitudes. One of them considers pedagogical preparedness as the acquisition and transfer of knowledge, the other regards pedagogical preparedness as complex and differentiated development of the pupils, based on the teacher's self-analysis and self development. The ability to differentiate, reflective and self-developing pedagogical practice, searching for innovative solutions to present challenges were not mentioned among the characteristics of a good teacher in a great number.

We can thus conclude that there is a discrepancy between the need arising form the challenges of schools as perceived by the teacher educators and the teacher educators' ideal image of a good teacher. It would be possible to meet the challenges identified in the schools by continuously developing the pedagogical and psychological skills of teachers; nevertheless, excellent subject knowledge and healthy and capable personality are at the top of the list that is expected of a good teacher, according to the teacher educators.

Teacher educators are basically satisfied with the present institutional operation of teacher education after the Bologna reform; they do not see it as either critical or as something that should definitely be transformed. They assume backwardness only in comparison with some obscure view of foreign countries' situations. The overall satisfaction with teacher education falls back to a moderate level with respect to the contents of the materials taught; thus,

the opinions of the teacher educators imply that there are still more things to be done in the revision and modernization of the contents.

Regarding the motives of the Bologna reform of ITE, they fit the European tendencies, but are coloured by Hungarian characteristics and attitudes. According to teacher educators, professional aims and raising quality are clearly at the top of the list of factors determining the Bologna reform of ITE in Hungary. By raising the quality they mean mostly increasing coherence and expanding the amount and orientation of practice. The next most important aims of the reform were strengthening of the pedagogical and psychological approach, and generating the motivation of the student teachers.

Based on the present study, the main characteristics of the challenges of schools, the ideal image of a good teacher, and the reform of ITE are summarized in *Table 12.*

Table 12: *The most frequent answers regarding the challenges of schools, the ideal image of a good teacher, and the aims of the reform of teacher education, based on answers to open-ended and close-ended questions*

Relevant challenges for teacher education in the school	Ideal image of a good teacher	Aims of the Bologna reform of teacher education
Creating respect for knowledge in children Motivating students for performance Supporting and raising pupils falling behind	Subject knowledge Empathic personality who loves children Pedagogical competence (knowledge, rather than differentiating, reflective practitioner)	Raising quality: Strengthening coherence Practice-orientation Promoting pedagogical and psychological preparation Creating student motivation

In order to motivate the pupils, to develop a respect for knowledge in them, and to avoid their falling back, the individual and differentiated development of the children is unavoidable, and so is the stock of pedagogical methods that can renew itself repeatedly, but that hardly plays any role in the ideal image of a good teacher. Consequently, there is a lack of coherence between the challenges of schools and the ideal image of a good teacher, yet the reflective, differentiating, and competence-based development of pedagogical and psychological preparation is one of the main trends of the Bologna reform. This means that the reform of teacher education is in harmony with the expectations brought forth by the challenges of schools, but is in contrast with the views teacher educators have of a good teacher.

This contradiction with the image of a good teacher seems to be manifested in the disagreement with the reform and the division of opinions. Half of the respondents agreed, and half of them disagreed with the Bologna reform of ITE both in the open-ended and in the close-ended questions. The mean support of the reform was slightly positive, scoring 3.35 on a five point scale, with a relative large standard deviation. Based on all this, we cannot say that the opinions of the teacher educators support the withdrawal or the complete deconstruction of the Bologna reform in ITE.

Together with the lack of a clear vision of the future of ITE in the circle of the respondents, pessimistic expectations could also be traced. Nevertheless, the respondents considered their own personal involvement in teacher education as positive. This was reinforced by the fact that the great majority of the respondents considered themselves as teacher educators, and found their activity as teacher educators definitely important even among their various other tasks.

The respondents rated the professional contents they themselves used during teaching as much fresher and more modern than those used by other, more distant professions, and they also thought that they were using a broad range of methods in their own teaching activity, but were developing the pedagogical skills of the students only moderately. Similarly, the teacher educators are acquainted with the modern European approach of pedagogy as an expectation, and believe to apply it in their own practice, but are not convinced about the penetration of the modern approach in the totality of teacher education.

4.) THE DETAILED REVIEW OF THE VIEWS OF TEACHER EDUCATORS

The systems of views of teacher educators

An attitude scale was used to map the scheme of views of the teacher educators, containing items in the following 26 areas related to the Bologna system and the master-level ITE program:

- the level of knowledge of students coming from secondary schools,
- the secret of efficient preparation in the secondary schools,
- the reasons of choosing the teaching profession,
- mass education and talent development in the Bologna system,
- the relationship between the introduction of the Bologna type master's level teacher education and the decline of choosing the teaching profession as a career,
- facilitating applications for ITE,
- the relationship between choosing the teaching career and the divided and undivided structures of teacher education,

- the relationship between the diploma obtained in the first cycle of the Bologna system and ITE,
- the national or international nature of ITE,
- suitability for the teaching profession,
- the image of the teacher-scientist,[17]
- disciplinary bases of the second subject in master's level teacher education,
- the asymmetry of credits allocated to the two subject matter in ITE,
- the role and proportion of pedagogical and psychological preparation within the master's level teacher education,
- the duration of pedagogical and psychological preparation,
- the role of methodology in teacher education,
- the unified preparation of teachers teaching different age groups in master's level teacher education,
- the coherence and hierarchy of the contents of teacher educations,
- the leading and directing role in teacher education,
- the content and necessity of the coordination of the single ITE programs,
- the relationship between disciplinary programs and teacher education,
- the relationship between the Bologna type structure and the previous structure of teacher education,
- a single teacher education program comprising different subject orientations,
- the transparency of master's level teacher education,
- the duration of ITE, increased by one practical semester,
- obtaining a qualification at the end of the first semester (due to the length of 5 semesters)

There were five questions in each of the above areas, one summary and four further items specifying some aspect of the question. The statements used in the attitude questionnaire were derived from the arguments expressed by teacher educators at national forums, lectures, and discussions on master's level teacher education between 2010 and 2011. When composing the items, we took care to include ideas both supporting and criticizing Bologna type teacher education in every subtheme, and also to represent the various points of views proportionately and in the same orientation as they were present in the arguments. Thus, in accordance with the proportions found in the discourses, there were more of the critical statements.

[17] The 'teacher-scientist' is a Hungarian concept symbolised by well known and respected famous teacher personalities who were scientist and teachers, promoted their scientific field amongst their students and created centres of excellence in their upper secondary schools. Many of them taught future Nobel prize winners of science, who regarded them as the idol inspiring them in their childhood.

The respondents had to indicate the level of their agreement with a total of 130 statements clustered by the above topics on a five point scale. Due to its length, the attitude measure was divided into two parts within the questionnaire used in the study.

Principal component analysis was used to show the intercorrelation among the level of agreement or disagreement with the statements in the attitude measure. As a result, seven factors were identified, that is, seven groups of views could be found with which the level of agreement or disagreement changed together. The existence of seven factors was supported by the fact that in addition to the principal component analysis, factor analysis also revealed seven factors, the contents of the first two factors of which was basically the same as those of the factors emerging in principal component analysis. The study and the analyses were conducted on the factors emerging in principal component analysis.

The items in the attitude measure contained statements both supporting and criticizing the Bologna Process, thus, the emerging factors obviously had negative loadings. In order to handle the accepted and rejected statements together, the scores of the items with negative loadings were reverse-scored. The Cronbach's alpha values of the thus emerging factors were invariably high. In order to raise these values further, and to clean factors, the items whose omission resulted in a higher level of Cronbach's alpha were deleted.

The results presented here refer to the factors emerging this way; the factors are presented in detail in the *Appendix 1.* The statements in each factor are given in the order of their loadings, and the reverse-scored items are written in grey. In cases of all items, the loadings and factor means for the whole sample are shown in the tables (in cases of reverse-scored-items, factor loadings were calculated after recoding). The factor mean shows the degree of agreement with the statement. The items of Factor 1 are shown in *Appendix 1.*

The *first factor* indicates a scheme of views that opposes the Bologna structure and idealizes the past. The items with the heavies load in this scheme of views formulate the advantages, clarity, and transparency of the undivided structure and those of the previous, traditional system of ITE. It appears as an advantage of the undivided structure that it prepares for the teaching career from the very beginning, progress is not interrupted by the burden of a final exam at the end of a bachelor's degree and that of an entrance exam into master's level teacher education. Thus it is clear immediately after graduation from high school who prepares to become a teacher. The idea that the previous undivided system of ITE was useful and effective, and that it was a pity to disturb it clearly appeared in this system of views. In sum, this system of views idealizes the past and is against changes.

The idea that the Bologna reform of ITE forced Hungarian teacher education into a foreign structure was also quite emphatic, having the third heaviest loading. Furthermore, one of the items in this factor states that nothing justified forcing Hungarian ITE into this foreign structure, and another item expresses need for the elimination of mass education. Essentially, this scheme of views disregards the changes in higher educational, educational, and the social environments, does not understand the role and justification of the Bologna Process and the necessity of the reforms either in ITE, or in higher education in general.

The criticism of the asymmetry of credits allocated to the two subjects in the master's level teacher education program is another important characteristic of the strongest, first bundle of views. There is an idea behind this that the total volume of credits for the second subject orientation is too little, that in-depth involvement in the first subject does not provide sufficient conceptual foundations for the second subject, and that it is misleading for both the students and for schools to talk about two subject orientation in the qualifications when one of them is not complete. Instead, what appears as important in this bundle of views is that the students should receive equal education in both subject matters. It is not difficult to discover a hidden conceptual approach here – in clear opposition to the European concept of the continuum of development of teachers – namely, that the outcome of ITE is a "finished teacher", and that learning and development takes place basically in ITE.

In sum, we can conclude that this scheme of views is conservative in all of its aspects. The findings show that the whole sample slightly supports this attitude (sample mean on a five point scale: 3.27, SD: 0.71). This means that the average opinion of the respondents in the sample of teacher educators slightly rejects the Bologna reform of ITE, divided teacher education structure, the Bologna system, the reform, and the "asymmetric" credits for two subject qualification. The second higher standard deviation value among the factors allows for the conclusion that teacher educators are highly divided along this bundle of views.

This is particularly important, because as the first factor of principal component analysis, this scheme of views represents the relationships with the greatest explanatory factor in the co-occurrence of views, in the variance of the views; thus, the views appearing in this factor belong together the most and their evaluations vary together the most strongly.

The statements belonging to the second factor are shown in *Appendix 2* (with reverse-scoring). The call-word for this scheme of views is discipline, which is the essence and organizational leader of ITE.

The system of views manifested in the second factor is the conviction that the efficiency of the teacher's work depends on his or her disciplinary preparation, that the essence of being a good teacher is knowing his or her subject thoroughly, preferable at the level of a scientist. This idea is so marked that five different items refer to it from various perspectives. It deserves no special explanation why this approach is an exaggerated and one-sided view.

Two additional perspectives are built on this discipline-oriented approach. The first is that the leader of ITE in the organization should be the department of the discipline. There are four items that address this issue, stating explicitly not only that ITE should be put into the hands of the discipline, but also that ITE cannot be left in the hands of the scholars of pedagogy, that the host of disciplinary and teacher preparation cannot be divided. There are two more related statements, namely, that in the development of the contents of ITE, the pedagogical and psychological contents must be adjusted to the discipline, and that coordination of ITE should be restricted to pure matters of organization of administration. It becomes clear from the statements that it is unacceptable for the representatives of this system of views to teach in a structure whose organizational responsible is outside of the discipline. It seems that for those agreeing to views expressed in factor 2 the key issue is to regain the leading role and direction of ITE in the organization.

The essence of this factor is the subordination of organization, direction, and responsibility to the discipline's interests. This conceptualization assigns a subordinate role to the field of education and psychology, it sees them as 'serving' the discipline.

Another group of items is represented in factor two, which criticizes the pedagogical and psychological studies. According to some items in this factor, the pedagogical and psychological studies predominate, are too theoretical, are determined by the history of education, and are detached from practice. Furthermore, two statements in this scheme of views even doubt the scientific parity of disciplinary and the pedagogical and psychological fields as science. It can be concluded that the second factor includes a hardcore, anti-pedagogy and anti-psychology approach.

In addition to and in logical harmony with the above, there is another perspective in the second factor, namely, that the proportion of the pedagogical an psychological studies within the master's level teacher education is too great, including also a contradictory view, that there is too little practice in teacher education. This system of views also attacks the in-school practice introduced in the fifth semester.

This hardcore approach that cried for the disciplinary control of ITE was slightly rejected by the teachers educators in the sample, at the border of indifference, having the third largest standard deviation among the factors (sample mean: 2.98, SD: 0.63).

The *third factor* comprises the views that are related to a coherent, motivating, and practice-oriented preparation. In this scheme of views,

the central element is the development of motivation both in entering the teaching profession and in the world of schools. Six items in this factor address various aspects of this: we can see in this group, for example, the role of laymen's pedagogy among the reasons for choosing the teacher profession, the advantage of master's level teacher education because choosing ITE amongst other master programs promotes commitment to the profession, the importance of increasing the prestige of the teaching career, and ensuring the freedom of entering and leaving the teacher education program. The items that belong to the third factor can be seen in full detail in *Appendix 3.*

The one semester in-school practice gets an emphatic role in this scheme of views as a positive aspect, and so does the coherence of disciplinary, pedagogical-psychological, and subject methodological content. Also providing flexible paths into teaching and knowing and connecting to the demands of schools play an important role in this bundle of opinions.

This scheme of views also contains contradictory items with respect to educating teachers for teaching different age groups together. There are more items according to which the common preparation of the teachers by pupil age group is possible and meaningful.

The continuum approach also appears in this bundle of views – although it is not very marked – with respect to the ideal of the teacher-scientist. There is a statement here, saying that one does not become a teacher-scientist when one receives his or her diploma, but only in a more mature phase of the career.

This system of views was definitely supported by the teacher educators, proven by the highest factor mean (4.21) and lowest standard deviation (0.43).

In the *fourth factor*, there are several ideas that are not closely related in their contents. The items belonging to the fourth factor are listed in *Appendix 4.*

One of the ideas is the dislike of the semester of in-school practice, namely, that the duration of teacher education with the one semester in-school practice is too long, and the time of graduation is not in harmony with the opening of new jobs in schools, therefore, it is discouraging for the students and the institutions. Related to this idea is the questioning of the importance of in-school practice as a content of teacher education. Items opposing the one semester in-school practice are the greatest in number (5). Also the rejection of the portfolio demonstrating practical development is incorporated in this factor.

Another set of ideas is the rejection of the common preparation for teachers teaching various age groups. There is an item in this factor stating that the forced unified training is necessarily both deficient and superfluous, and that the material and the methodology for the two age groups are so different that it is almost impossible to prepare the teachers together.

Another dimension of this factor argues against the single program of ITE where the subject content only counts for an orientation within the single program instead of creating as many ITE programs as there are subject combinations. The idea appears that the single master degree does not present variegation sufficiently, and the real face of teacher education is given by the disciplines.

Treating teacher education as a national issue – limiting it to within the borders of Hungary – is also an important aspect of the fourth factor. The idea that speaking foreign languages and international mobility are unnecessary, because they give knowledge that is difficult to convert across countries appears in three items.

The fourth factor shows that questioning the importance of the in-school practice, the idea of separating teacher education according to pupils' age groups, and the narrow national interpretation of the teachers' role typically go together in the opinions of the respondents.

The fourth factor got a close to neutral, slightly positive factor mean rating in the whole sample, but the standard deviation was the greatest in this factor (mean: 3.08, SD: 0.73).

The system of views present in the *fifth factor* is similar to the second factor in that its basis is a belief that the main criterion for a good teacher is profound subject knowledge, coupled with a broad repertoire of methodology in how to transfer knowledge. The items of factor five can be found in *Appendix 5.*

Behind this factor, we can find again the conservative pedagogical view, according to which the fundamental role of a teacher is to transfer knowledge to the pupils, and that of a pupil is to take knowledge in. It is expressed in numerous the statements of the factor that the essence of the teaching activity is the high level of subject knowledge and the efficient transfer of knowledge. Furthermore one item belonging to this factor states that efficiency in knowledge transmission is a talent, in fact, a genetically determined talent, while another item states that the capacity of good teaching can be well measured by the grades received in high school.

Another important element of this bundle of opinions is the promotion of choosing the teaching profession as a career, at almost any price. There are two items suggesting that it is almost indifferent what the applicant for teacher education is like, the more, the better. In order to achieve having applicants, it is unnecessary to screen them, rather, they should be supported by scholarships. This attitude covertly accepts and promotes adverse selection to the teaching profession.

This scheme of views is related to the second factor in that they both contain an item that advocates coordination of ITE in accordance with the traditions (that means disciplinary departments), and items that reflect that the teaching is determined by the native language, and thus speaking foreign languages is unnecessary.

The conceptual similarity between Factors 2 and 5 is quite clear; the difference between the two factors is that Factor 2 is more linked to the organizational aspects of ITE, while Factor 5 deals more with the role of the teacher arising from this conservative approach.

The sample mean slightly rejects the fifth factor – similarly to the second factor –, but the opinions regarding the items in this factor have a smaller variance (mean: 2.97, SD: 0.58).

The *sixth factor* is an assault fire at, and the total rejection of master's level teacher education. The criticism of the content of the training includes the inferiority of the bachelor's qualification when a second subject (minor) is chosen since not all the credits are allocated to one disciplinary field, the insufficiency of training in the second subject, the uselessness of pedagogical and psychological contents, and the inability of subject methodology to renew itself. Thus, basically every participant of ITE is criticized by this system of views.

The items in this factor argue that the institutions were also reluctant and sluggish in carrying out the reform, and the Ministry bears also a fault in being excessive and too detailed in its regulations.

The rejection of the master's level teacher education program being a single one is also incorporated in Factor 6 along with the emphasis on the disciplinary characteristics of ITE. An item in Factor 6 also deals with the lack of perspective in the teacher career; and therefore, it argues that teaching is for those who are less talented in a discipline, especially in the field of sciences.

The European view that looks at mass education as a fact and as a social and economic necessity was also rejected in this scheme of views. The only positive item, that acknowledged the reform, was the greeting of creating an option for "teacher of a subject in a foreign language". The items of the sixth factor can be seen in *Appendix 6.*

The sixth factor, summarized as "everything is wrong", was rated by the sample as neutral on the average (mean: 3.03), with a moderate variance (SD: 0.58).

The system of views of the *seventh factor* is complex (the items of the seventh factor can be seen in *Appendix 7*). Its novelty is that the demand for "producing" teacher-scientists, great teacher personalities, and teachers raising their profession to the artistic level gets an accented role in it. In connection with this, the importance of the motivation of those who choose the teacher career as a profession – usually motivated by the personal experience of having had an excellent teacher in a school – also appears.

A complex teacher-image appears in this factor, where the importance of subject knowledge, vocation, that is, the artistic execution of the pedagogical work, and the subordination of subject knowledge to the common regulators (to the demands of preparation to the teaching career) also appear.

In its contents, this factor definitely connects to the perspective of the third factor; there is a similarity and overlap between them.

In connection with the Bologna reform of ITE it is reinforced in this bundle of views that it is really not the task of bachelor's level education in the humanities and sciences to prepare the students for working in schools, and that this reform ended the previous practice of training many times more teachers than those who were really planning to teach. In this system of views, the only criticism against master's level teacher education is raising the problem of the asymmetry of the credits allocated to the two subjects, therefore the asymmetry of the qualification in the two subject matters.

Similarly to the third factor, the sample mean was slightly supportive of the seventh factor, and the variance of the opinions was low (mean: 3.81, SD: 0.47).

In sum, we can say that the teacher educators in the sample have full-fledged systems of views regarding Hungarian ITE, and the opinions with which agreement increases or decreases together can be grouped into seven factors.

Five of the seven factors (1st, 2nd, 3rd, 4th, and 6th) address the systemic issues of ITE. The third factor agrees with some aspects of the master's level teacher education developed within the frames of the Bologna reform, and formulates criteria of efficiency with respect to its realization in the institutions, while the other four factors comprise critical aspects regarding the Bologna system.

In two of the seven factors (5th and 7th), the views regarding the characteristics of a good teacher and those of the teacher's role are placed in the center. According to the scheme of views embodied in the Factor 5, the role of the teacher is to transmit efficiently an up-to-date knowledge. According to the present position of pedagogy, this conceptualization is outdated and the framework it offers is too narrow, because instead of the transfer of knowledge, the essence of the teacher's role is to support the pupil's learning, to facilitate learning skills and attitudes in addition to knowledge, and to develop the pupils' personalities through the discipline. The conceptualization of the teacher's role cannot be clearly read from the items of the Factor 7, but we can see the harmony of excellent disciplinary and pedagogical preparation of good teachers and the importance of the model-like personality characteristics in which commitment to the youth

and creative thinking coexist. The teacher-scientist with his or her versatile preparation and complex image performs his or her work at an artistic level. This view is closer to the modern pedagogical conceptualization.

The sample means of all of the items in each of the factors, that is, the average agreement with the opinion bundles in the given factor are summarized in *Table 13.* Since the respondents could express their agreement with the items on a scale from 1 to 5, sample means below 3 mean overall disagreements with the bundle of opinions, means above 3 mean agreements. The further the mean from the neutral 3, the greater the agreement or disagreement.

Table 13: *Means of opinions in the factors of the whole sample (order by extent of agreement)*

Factors	Sample mean	SD
Factor 3: Coherence, motivation, and practice oriented preparation	4.21	0.43
Factor 7: Teacher-scientists and the artful practice of the teacher profession	3.81	0.47
Factor 1: Bologna Process opposition, idealization of the past	3.27	0.71
Factor 4: Opposition to common ground preparation and practice	3.08	0.73
Factor 6: Everything is wrong	3.03	0.58
Factor 2: The discipline is the essence and organizational leader of ITE	2.98	0.63
Factor 5: A good teacher is the professional mediator of up-to-date knowledge	2.97	0.58

As can be seen in the sample means in *Table 13*, teacher educators agree the most in the items of Factor 3. This means they agree on the introduction of the one semester in-school practice being a strength of the mater level teacher education, they advocate the coherence and coordination of the contents of the program, they emphasize catalyzing role of subject methodology between pedagogy-psychology and the disciplines. Since the degree of agreement is above 4, it can be concluded that the content of Factor 3 is the baseline of common ground for the teacher educators in Hungary.

To a lesser degree, but teacher educators still agree with the idea formulated in the statements in the Factor7, namely, the concept of a teacher-scientist who is excellent in his or her discipline, but is also dedicated to educating young people, and who is capable of creative thinking. The support of Factor 7 means that teacher educators in Hungary also agree that in order to raise the quality and efficiency of schools, we greatly need teachers who take their profession as an art. The support of Factor 7 also means that according to teacher educators in the survey teachers teaching different subjects to different age groups should be trained in a common system of ITE, that the precondition for working efficiently in the teaching profession is the conscious choice of the teaching career, because only this results in dedication to the teaching career.

The respondents only slightly supported the anti-Bologna bundle of opinions represented by Factor 1, namely, that the former system of ITE was effective and successful, that it was a pity to disturb it, that a divided (B+M) ITE was foreign to the Hungarian tradition, and forcing it into teacher education only impaired the conditions.

A sample mean was almost neutral, but overall, slightly supportive of Factor 4, the hardcore scheme of views that the one semester in-school practice and the common preparation of teachers of the various age group students cannot lead to a good outcome, and that the Bologna reform was wrong not only in the broadest sense, but in its structure, contents, and organization as well.

As opposed to the above supporting views, the sample slightly rejected Factor 2 with the opinions according to which the essence of ITE lies in disciplinary education, and the disciplinary departments are the most suited leaders of teacher education. As part of this bundle of views, it was also slightly rejected by the whole sample that prevalence of the theoretical education and psychology took place in Hungary at the expense of the disciplines.

Reassuringly, the sample gave the least support to the conservative pedagogical interpretation of what the role of teachers was represented in Factor 5.

It can also be seen in *Table 13* that an overall impasse is reached in the factors regarding master's level teacher education, namely, with respect to the 1st, 2nd, 3rd, 4th, and 6th factors. The support of the fourth factor that clearly evaluates the reform positively, and the milder support of or neutrality in the other factors that oppose the reform does not show that the reform is judged unequivocally.

The characteristics of the views of the teacher educators by fi eld and function

Based on the groups of *respondents by disciplinary field*, the factor means of the teacher educators by field are shown in *Table 14*, and illustrated in the diagram in *Figure 8*.

Table 14: *Factor means of groups of teacher educators by field*

Factors	Sciences	Humanities	Education and psychology	Schools	Coordination
Factor 1: Bologna Process opposition, idealization of the past	3.55	3.41	2.80	3.55	3.14
Factor 2: The discipline is the essence and organizational leader of initial teacher education	3.25	3.22	2.44	3.09	2.93
Factor 3: Coherence, motivation, and practice oriented preparation	4.02	4.31	4.24	4.27	4.18
Factor 4: Opposition to uniformity and practice	3.26	3.06	2.81	3.25	3.13
Factor 5: A good teacher is the professional mediator of up-to-date knowledge	3.28	2.96	2.56	3.27	2.94
Factor 6: Everything is wrong	3.04	3.11	2.90	3.21	2.93
Factor 7: Teacher-scientists and the artful practice of the teacher vocation	3.73	3.88	3.72	3.86	3.86

Note: The means of groups are highlighted where the views formulated in the given factor were rejected.

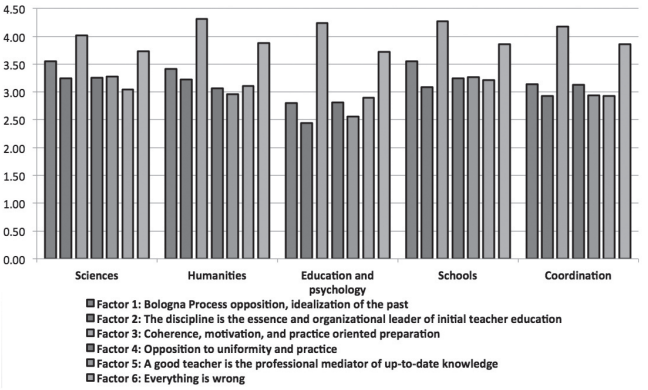


Figure 8: *Factor means of groups of teacher educators by field*

The above data show that all of the teacher educators definitely agree with the items in factors 3 and 7, regardless of the field; this means that in the present times laden with disputes, these bundles of views represent the shared attitudes. It deserves to be mentioned that the representatives of all of the fields strongly agreed with the items in the third factor: the means are above 4 in all groups.

It is also reflected in the data that we cannot talk about the general rejection of any of the factors across all fields; the means of the items of the remaining five factors are variable by field. Some factors were accepted by some fields, and not by others, and some factors were rejected by some fields, and not by others. It can be concluded that the items in Factors 1, 2, 4, 5, and 6 were jointly and more or less systematically rejected by the pedagogical-psychological and coordination fields, although to different extents, while the representatives of the sciences, humanities, and school teachers systematically supported them. The only exception is the rejection of the fifth factor by the humanities and the support of the first factor by the coordinators.

The factor means of the different fields differ the most with respect to the second factor (the difference between the sciences and the pedagogical-psychological fields is 0.805), that is, the greatest disagreement amongst teacher educators is around the views regarding the essence of teacher education and the organizational leadership and place of teacher education within the institutions. So these issues are at the core of the current disputes. This finding implies that the real problem is not with the Bologna type structure of teacher education; rather, there is a battle over and a difference

of opinion about who should direct and control ITE, this strategic branch of higher education.

Among the standard deviations of the factor means, the SD of the fourth factor is the largest (0.73), and in this factor, there is no correlation between belonging to a field and the factor mean. This means that belonging to a field does not determine significantly the standpoint taken on the views incorporated in the Factor. This means that the teacher educators disagree with each other the most with respect to the common training of teachers of various age groups and to the disapproval of the practical semester, regardless of the field they come from.

It deserves attention and further study that in case of the fourth factor, that includes the rejection of the one semester in-school practice at the master's level teacher education, the mean of the respondents from the schools is the highest. That indicates that it is the head teachers in schools who are the most against in-school practice. Anyway, this paradoxical result suggests that more intensive discourse between the higher education institutions and schools, more provision of information, and probably better financing of school tasks would be needed.

It is worth reviewing the standpoints of the different fields in cases of the 2nd and 5th factors, which emphasize the role of the disciplines. The striving for controlling the organization of teacher education by the disciplines is the strongest in the responses of teacher educators in the fields of humanities and sciences, while – understandably – representatives of the schools are neutral in this issue, while coordination and the pedagogy-psychology fields reject this bundle of opinion.

The conservative pedagogical view of the role of teachers (Factor 5) is represented by the science field together with the head teachers of the schools, the rest of the fields reject this view. It is an important difference that while the disciplines resent the coordination of the pedagogical-psychological field together, the restrictive conceptualization of the teacher's role characterizes the sciences and the head teachers in the schools only. This latter fact is surprising, and in fact, is quite regrettable. The question arises if student teachers are prepared for such a narrow and conservative conceptualization of teaching tasks in the course of their in-school practice, will it be possible to correct it in the continuum of teacher education. Looking at the question from the other side: In case of markedly different teacher educators, whose effect will have the greatest influence on the student teacher's attitude?

The sufficiently high Cronbach's alpha values allowed the performance of ANOVA in all seven factors. The results revealed that there was a significant difference among the fields in the 1st ($p<.01$), 2nd ($p_1<.01$), and 5th ($p_5<.01$) factors, while in the 3rd, 4th, 6th, and 7th factors, ANOVA was not significant statistically ($p_3=.07$, $p_4=.11$, $p_6=.33$. and $p_7=.53$). In other words, the opinions of teacher educators in the topics of coherence, motivation, and practice oriented preparation (Factor 3), opposition to common preparation of teachers and practice (Factor 4), the approach of "everything is wrong" (Factor 6), and the importance of scholar teachers vary independently of their fields.

Tukey's HSD test revealed that in the first factor, that is , in the rejection of the Bologna structure, the opinions of the respondents in the pedagogical and psychological field differed significantly from those working in the fields of science ($p<.01$), humanities ($p<.01$), and schools ($p<.01$). Similarly, in Factor 2, that stresses the role of the disciplines in directing the contents and organization of ITE, the opinions of the respondents in the education and psychology fields differed significantly from those in the fields of science ($p<.01$), humanities ($p<.01$), schools ($p<.01$), and coordination ($p<.01$). In case of Factor 5 – which conceptualizes good teachers as mediating up-to-date knowledge professionally – the opinions of the respondents in the education and psychology fields differed significantly from their colleagues in the fields of science ($p<.01$) and schools ($p<.01$).

A similar analysis was carried out *regarding the groups having various functions in initial teacher education*. Since schools and coordination can be regarded both as fields and as functions, these groups were preserved as functions; the new function categories were developed only for teachers in the fields of science, humanities, and education and psychology. In these fields, three different functions of the teachers were differentiated: head of module, subject professor, and subject methodologist. *Table 15* shows the factor means of groups of teacher educators based on their functions; the same data are also illustrated in the diagram in *Figure 9.*

Table 15: *Factor means of groups of teacher educators by function*

Factors	Schools	Coordination	Subject professor	Subject methodologist	Head of module
Factor 1: Bologna Process opposition, idealization of the past	3.55	3.14	3.13	3.58	3.27
Factor 2: The discipline is the essence and organizational host of initial teacher education	3.09	2.93	2.83	3.21	3.05
Factor 3: Coherence, motivation, and practice oriented preparation	4.27	4.18	4.17	4.24	4.23
Factor 4: Opposition to common preparation and practice	3.25	3.13	2.96	3.35	3.00
Factor 5: A good teacher is the professional mediator of up-to-date knowledge	3.27	2.94	2.83	3.08	2.96
Factor 6: Everything is wrong	3.21	2.93	3.09	3.19	2.89
Factor 7: Teacher-scientists and the artful practice of the teacher vocation	3.86	3.86	3.75	3.79	3.82

Note: The means of groups are highlighted where the views formulated in the given factor were rejected.

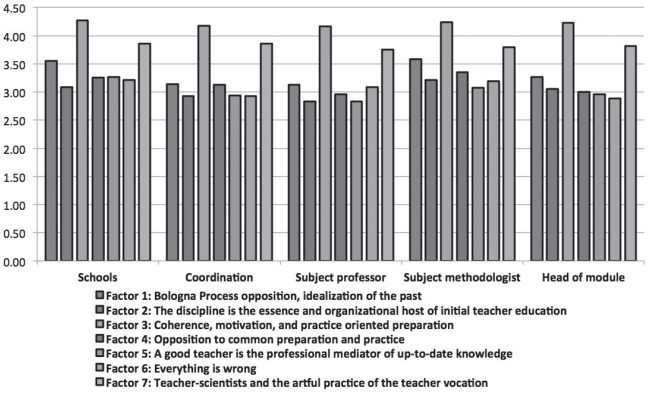


Figure 9: *Factor means of groups of teacher educators by function*

Factor means by functions of teacher educators – similarly to those by fields – show that teacher educators completely agree in the views regarding coherence, motivation, and practice oriented preparation (Factor 3), and in the ideal of teacher-scientists and practicing the teacher vocation as an art (Factor 7). This means that in teacher education, the importance of creating coherence and motivation and thorough practical preparation are supported by all teacher educators, regardless of their fields or functions. The same is true of the bundle of views on teacher-scientists, interpreting the tasks of teachers in a complex way.

All of the groups by function agree with the anti-Bologna reform of teacher education, with the idealizing views of the past, represented in Factor 1, although to different extents. If the degree of agreement is considered, it can be seen that subject professors, heads of modules, and coordinators are closer to neutrality, while subject methodologists and those in the schools clearly reject the reform. Thus, it follows from the two analyses that the subject methodologist in the fields of humanities and sciences, and the head teachers of the schools had the most negative opinions. It must be noted that the teachers of the field of education and psychology and heads of modules – as seen in the categorization by field – had a rejecting factor mean, and in this question, belonging to a field was related to the mean of opinions; it can be concluded therefore, that the subject professors in the fields of humanities and sciences may have supported this conservative system of views similarly to the subject methodologists.

Factor 2 – emphasizing the priority of the disciplines in the contents and organizational direction of teacher education – was not accepted by the groups of subject professors and those of coordinators, was judged

slightly supportive, but close to neutral by heads of modules and teachers in the schools. The loudest representatives of these views were the subject methodologists among the functional groups.

Factor 3, formulating coherence, motivation, and practice orientation, is strongly supported by all functions, categorization by function also results in means above 4.0. Thus, it is clear that this bundle of views forms the basis of consensus among the teacher educators, their stable cooperation, and the common denominator enabling development.

The greatest agreement regarding Factor 4 – comprising opposition to common preparation and practice – is in the subject methodology group, similarly to the above and with similar interpretation, and in the school group, as mentioned at the categorization by field. The supporting opinions of the coordinators in this factor would require more study and analysis. These opinions could have been influenced by the complexity and time-demanding nature of the problems of teacher education, or by the limited availability of the means of coordinating this complexity.

The responses to the outdated, transfer-of-knowledge-oriented pedagogical approach represented in Factor 5 show that there is a sharp difference between the rejecting view of subject professors, heads of modules, and coordinators, and the supporting attitude of schools and subject methodologists. It must be noted that the opinions are related to the fields in case of Factor 5, too; thus, the results by subject professors and heads of modules were diminished by the attitudes of teachers working in the field of education and psychology. Nevertheless, it still seems true that teacher educators pursuing the tasks of subject methodology and teacher educators heading practice have very outdated and narrow views in their own profession. This conceptual underdevelopment or backwardness fundamentally determines the conceptual approach of the next generation of teachers, therefore, this is an issue to be dealt with.

Interestingly, the sixth factor, according to which the Bologna reform of teacher education is wrong in general, in all of its main aspects, is supported chiefly by the respondents in the school domain in this categorization, too. This is all the more interesting, as after the bachelor's level education started in September, 2006, the first students of master's level teacher education started their five-semester studies in September, 2009 and could not have begun their one semester block of school training at the time of data collection for this study. Their opinions could be based only on those students who entered master's level teacher training already in the possession of a teacher's diploma in order to "upgrade" the level of their diplomas or to get a diploma in another subject. Thus, this sad image could be formed only on the basis of how their own colleagues organized their practice-semester and based on the meetings, forums, and debates related to the reform of teacher education. In order to interpret and explain this finding more clearly, however, more information would be need in this case, too.

The system of view represented by Factor 6 was again supported by the subject methodologists and subject professors, although the mean of the latter group was close to the neutral value of 3.0. This system of view was rejected only by the coordinators and the heads of modules, who take responsibility in this system.

The ideal of the scholar teacher and a more complex image of a teacher received general support in all groups by function, although the degree of support was not as high an in the 3rd factor.

The sufficiently high Cronbach's alpha values allowed the performance of ANOVA in all seven factors with respect to the functions, too. The results revealed that there was no statistically significant difference among the groups by function in any of the seven factors ($p_1=0.08$; $p_2=0.20$; $p_3=0.90$; $p_4=0.29$; $p_5=0.10$; $p_6=0.16$; $p_7=0.88$). This means that the opinions of the respondents in all factors varied independently of the functions in ITE of the respondents.

Characterization of the clusters of views

The values of opinion means given in the seven factors by the 145 teacher educator respondents were subjected to cluster analysis. Based on cluster analysis, two markedly different patterns of opinions were identified, with 39 respondents in the first and 95 respondents in the second cluster. The responses of the remaining 11 respondents differed from these two distinct patterns, but exhibited no typical pattern; we can say that they formed "individual" opinions in various aspects.

For each factor, the means and standard deviations of the opinions of the respondents in the two clusters and in the uncategorized group are shown in *Table 16*, and illustrated in the diagram of *Figure 10.*

Table 16: *Means and standard deviation of opinions by clusters*

	Factor 1: Bologna Process opposition, idealization of the past		Factor 2: The discipline is the essence and organizational leader of initial teacher education		Factor 3: Coherence, motivation, and practice oriented preparation		Factor 4: Opposition to common preparation and practice		Factor 5: A good teacher is the professional mediator of up-to-date knowledge		Factor 6: Everything is wrong		Factor 7: Teacher-scientists and the artful practice of the teacher vocation	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Cluster 1	2.57	0.62	2.35	0.44	4.29	0.37	2.44	0.50	2.59	0.43	2.64	0.56	3.69	0.44
Cluster 2	3.57	0.51	3.19	0.49	4.18	0.45	3.33	0.55	3.21	0.49	3.27	0.40	3.89	0.41
Uncategorized	3.20	0.74	3.44	0.69	4.19	0.43	3.21	1.28	2.24	0.31	2.31	0.64	3.52	0.78
Total	3.27	0.71	2.98	0.62	4.21	0.43	3.08	0.73	2.97	0.57	3.03	0.58	3.81	0.47

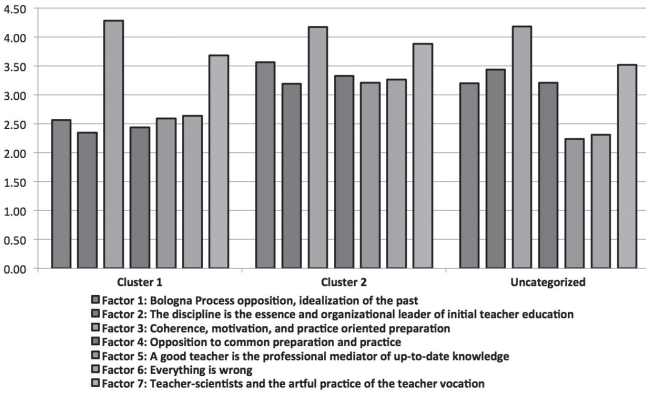


Figure 10: *Factor means in the clusters of teacher educators*

It can be seen in the table and figure that the respondents in the first cluster rejected factors that were against the Bologna system (Factors 1, 2, 4, 5, and 6), that is, they scored below 3.0, while supported factors emphasizing coherence, motivation, and practice oriented preparation and depicting scholar teachers and the complexity of the teaching vocation (Factors 3 and 7). Thus, the members of the first cluster seem to be the followers of the Bologna system. It deserves special attention that the first cluster rejects the narrow concept of the teaching profession as just passing on knowledge, represented by Factor 5. This shows that the followers of the Bologna system have a complex and progressive view regarding the role of the teachers.

The second cluster agrees with the first one in the 3rd and 7th factors; thus, cluster analysis supports that there is a fundamental agreement among teacher educators regarding the importance of eliciting motivation for the teaching career, coherent and practice oriented teacher preparation, and a less marked, but still solid agreement about the necessity of examples of teacher-scientists and raising the teaching profession to the artistic level.

In addition to these agreements, respondents in the second cluster regularly supported the bundle of views that criticize the Bologna type teacher education (Factors 1, 2, 4, 5, and 6), so we can say that the group in the second cluster opposes the reform. Of the two clusters and the uncategorized group, only the members of the second cluster supported the narrow image of an ideal teacher whose narrow job is to transfer knowledge (Factor 5), but they did this in great agreement, as the variance was relatively small.

The greatest differences between the systems of views of the two clusters were in the cases of the 1st, 2nd, and 4th factors. So the differences lie in the evaluation of the reform, in regard to the asymmetry in relation to the two subjects, in the judgment of the direction and organizational place of teacher education, and in the regard of the unity of teacher education and that of the one semester in-school practice. The difference between the mean ratings of the two clusters in judging the Bologna reform was 1.00, in the area of the direction of teacher education this difference was 0.84, while in the area of unity and the one semester in-school practice the difference was 0.9. It is interesting to note that the uncategorized persons deemed the disciplinary departments as the organizational hosts of teacher education, and considered the disciplines as the essence of teacher education – more than the members of the 2nd cluster did –, but they were the loudest opponents of the image of the teacher as only passing on knowledge (Factors 5). The factor means between the two clusters differed statistically significantly in cases of Factors 1, 2, 4, 5, and 6.

It can be concluded that almost one third of the teacher educators are in favor of the Bologna reform, they believe in the divided structure of teacher education that is a single program with respect to both pupil groups and subject orientation, in its coherently organized form enriched by one semester of in-school practice, and accept the asymmetry of the two subjects (major and minor). This group thinks that the essence of teacher education is the complex preparation for the teacher role, which is not in the transfer of knowledge, but in the complex development and motivation of children, and in the manifold and differentiated facilitation of their learning.

However, the reform generated by this group is rejected by almost two thirds of the teacher educators, they do not agree with the above listed arguments of the first cluster, and support an idealized image of a teacher whose only characteristics are excellent subject knowledge and transfer of knowledge.

The persons in the clusters were also examined *with respect to their distribution by field*. The results can be seen in *Table 17.*

Table 17: *Number and percentage of groups of teacher educators by field and clusters*

	First cluster		Second cluster		Uncategorized		Total	
Field	Number	%	Number	%	Number	%	Number	%
Coordination	8	32%	14	56%	3	12%	25	100%
Sciences	6	20%	23	77%	1	3%	30	100%
Humanities	5	13%	31	78%	4	10%	40	100%
Education and psychology	19	58%	12	36%	2	6%	33	100%
Schools	1	6%	15	88%	1	6%	17	100%
Total	39	27%	95	65%	11	8%	145	100%

As can be seen in the table, the majority (56%) of the respondents working in the coordination field belong to the second cluster, 32% belong to the first cluster, while 12% are uncategorized. This suggests that the people working in the field of coordination are divided in the judgment of the Bologna reform, although the opponents of the Bologna reform are greater in number, there is a substantial body of supporters of the reform in this group. Teacher educators in the field of sciences are basically against the Bologna reform, they belong to the second cluster, but 20% of them agree with the Bologna system. Within the humanities, the proportion of the opponents is greater than in the field of sciences, and the supporters are less, only 12%.

The majority of the respondents in the field of education and psychology (58%) belong to the first cluster, supporting the reform, but almost 40% of them are against the Bologna Process and have conservative images of the ideal teacher. The latter proportion is surprisingly and unfortunately high among the teacher educators in the field of education and psychology, who determine the views and attitudes of future teachers. The proportions are the most shocking in the case of the head teachers in the schools. Except for a single person who support the Bologna system, and another one who has a progressive image of an ideal teacher, almost 90% of the head teachers are against the reform and agree with the interpretation of the role of the teacher as passing on knowledge.

Concentrating on the columns of *Table 17*, the first cluster – supporting the Bologna reform, unity in teacher education, and the one semester in-school practice, and rejecting the disciplinary control of teacher education and its disciplinary division, and having a progressive image of an ideal teacher – is mainly made up of respondents working in the fields of education and psychology (49%) and coordination (20%), but 15% come from the field of sciences, 12% from the humanities, and there is one teacher from the schools. The largest group of the second cluster comes from the humanities (33%) and the sciences (24%), but coordination is also represented with 15%, education and psychology with 13%, and schools with 16%. The uncategorized respondents are made up of mostly people from the humanities (36%), but also from coordination (27%), and education and psychology (18%); there is one person from the field of sciences, and another one from a school.

The clusters of teacher educators by function can be seen in *Table 18.* It is clear from the data that the distribution of subject professors, heads of modules, and coordinators in the clusters roughly matches the cluster distribution of the whole sample. That is, about one third of them belong to the first cluster, and slightly less than two thirds of them belong to the second one. Subject methodologists and head teachers in the schools, however, have opinions in accordance those of the second cluster.

Table 18: *Number and percentage of groups of teacher educators by functions and clusters*

	First cluster		Second cluster		Uncategorized		Total	
Function	Number	%	Number	%	Number	%	Number	%
Subject professor	15	33%	27	60%	3	7%	45	100%
Subject methodology	2	13%	14	88%	0	0%	16	100%
Head of module	13	31%	25	60%	4	10%	42	100%
Coordination	8	32%	14	56%	3	12%	25	100%
School teacher	1	6%	15	88%	1	6%	17	100%
Total	39	27%	95	66%	11	8%	145	100%

Looking at the columns of the table, we can see that the representatives of the opinions of the first cluster are mostly subject professors (38%), heads of modules (33%), and coordinators (21%); this means that the reforms are supported not only by the leaders who had some roles in the reform.

The system of views of the second cluster is shared in the largest proportion by subject professors (28%) and heads of modules (26%), then by head teachers in the schools (16%), coordinators (15%) and subject methodologists (15%).

We received similar results in a simplified study in which the respondents could be categorized into three groups based on their responses to the items of the first factor. With this categorization, we only studied the attitudes toward the structural transformation of the Bologna reform. Those rejecting the first factor were put into the first group (persons with mean scores of less than 3), the second group's opinion means were between 3 and the sample mean scores of the supporters (individuals scoring 3 or more), and the third group consisted of those whose scores were higher than the sample mean scores of the supporters (individuals scoring 3 or more). The results of this study also showed that the supporters of the Bologna reform, that is, the first group included 30% (44 persons) of the sample, while the second and third groups (55 and 46 persons, respectively) constituted 70%.

The distribution of the three groups by field and function is shown in *Table 19.*

Table 19: *Categorization of the three groups based on their mean responses to Factor 1: distribution by field and function*

		First group		Second group		Third group		Total	
		Number	%	Number	%	Number	%	Number	%
Field	Coordination	8	32%	12	48%	5	20%	25	100%
	Sciences	4	13%	12	40%	14	47%	30	100%
	Humanities	12	30%	11	28%	17	43%	40	100%
	Education and psychology	17	52%	15	45%	1	3%	33	100%
	School teachers	3	18%	5	29%	9	53%	17	100%
	Total	44	30%	55	38%	46	32%	145	100%
Function	Subject professor	16	36%	20	44%	9	20%	45	100%
	Subject methodology	3	19%	4	25%	9	56%	16	100%
	Head of module	14	33%	14	33%	14	33%	42	100%
	Coordination	8	32%	12	48%	5	20%	25	100%
	School teacher	3	18%	5	29%	9	53%	17	100%
	Total	44	30%	55	38%	46	32%	145	100%

Data on the fields of the groups reinforce our findings: More than half of the respondents from the field of education and psychology are in favor of the Bologna reform, most of the coordinators are slightly rejective, but one third of them are supportive, while the fields of the sciences, the humanities, and head teachers in the schools are strongly rejective. Nonetheless, one third of the respondents in the field of the humanities are supportive, thus, the field of the humanities is the most divided with respect to the reform of teacher education.

Regarding the functions, similarly to the distribution of clusters, the subject methodologists and the groups of teachers are the most rejective (more than 50% of them reject the reforms), subject methodologists can be found in all three groups with equal probability, while one third of the subject professors and coordinators are supportive, less than half of them are slightly rejective, and only 20% of them are strongly rejective of the reform.

The categorization of the opinions was also performed by institutions, both by cluster and the three groups based on their mean responses to Factor 1; the results are shown in *Table 20.*

Table 20: *Categorization of the clusters and of the three groups based on their mean responses to Factor 1: distribution by institutions*

Institution	Cluster1	Cluster2	Uncate-gorized	Group1	Group2	Group3	Total
Eötvös Loránd University (ELTE)	8	10	2	11	2	7	20
University of Szeged (SZTE)	2	8	2	2	5	5	12
University of Debrecen (DE)	1	10	2	5	3	5	13
University of Pécs (PTE)	5	12	0	3	7	7	17
University of Miskolc (ME)	4	10	0	5	3	6	14
Budapest University of Technology and Economics (BME)	1	7	1	2	5	2	9
Eszterházy Károly College (EKF)	5	13	1	6	9	4	19
College of Nyíregyháza (NYF)	6	7	2	5	8	2	15
University of West Hungary (NYME)	4	9	1	4	5	5	14
University of Pannonia (PE)	3	9	0	1	8	3	12
Total	39	95	11	44	55	46	145

As can be seen in the table, the reforms are the most accepted by the teacher educators at ELTE, EKF, NYF, ME, and NYME. The most vehement opponents of the reforms are in the greatest number at EKF, PTE, the ME, DE, and ELTE. Thus, the greatest differences of views among the teacher educators are traceable at EKF, ELTE, and ME.

It is not surprising that the group of supporters is the strongest at ELTE, the institution that was the center of this reforms; still, the center of the anti-Bologna views is also at ELTE – as is evident in both kinds of categorization. The situations at EKF and at NYF are quite similar to ELTE:

Apparently, at the universities of sciences (SZTE, DE, and PTE), the opponents of the reform are more represented in the sample than the supporters except for ELTE. In fact, the size of the most rejective group (Group 3) was higher at the universities of sciences than that of the slightly rejective group (Group 2). The conclusion may be drawn from this that the progressive changes in teacher education meet with more unfavorable reception at the universities of sciences than at colleges.

Beyond the universities of sciences, at other universities, like at the BME and at the PE, a weaker criticism of the reforms prevails, while the circle of supporters is smaller than in the sample mean. At ME and at NYME, the average one third to two thirds ratio can be seen relatively clearly as the proportion of progressive to conservative views.

Conclusions

In sum, we can say that the teacher educators in the sample have full-fledged schemes of views regarding Hungarian ITE, and the opinions with which agreement increases or decreases together can be grouped into seven factors.

The strongest, first bundle of views is the Factor 1. Concisely, this factor depicts an attitude that is against the structure of the Bologna reform and idealizes the past. The items with the heavies load in this scheme of views formulate the advantages, clarity, and transparency of the undivided structure and those of the previous, traditional system of ITE. Essentially, this view disregards the changes in higher educational, educational, and the social environments, does not understand the role and justification of the Bologna Process and the necessity of the reforms either in ITE, or in higher education in general.

As the first factor of principal component analysis, this system of views represents the relationships with the greatest explanatory factor in the co-occurrence of views, in the variance of the views. Thus, the views appearing in this factor belong together the most and their evaluations vary together the most strongly in this factor.

The call-word for the system of views represented by the Factor 2 is subject discipline. An important attitude of the discipline oriented approach is that the organizational leader and host of ITE should be the disciplinary departments, that is, it is really a key issue to regain the leading role and direction.

Another important trend in this factor criticizes the pedagogical and psychological studies; furthermore, two statements in this scheme of views even doubt the scientific parity of disciplinary subjects and the pedagogical and psychological fields.

This hardcore approach that cried for the disciplinary control of ITE was slightly rejected by the teachers educators in the sample, at the border of indifference.

Factor 3 comprises the views that are related to coherent, motivating, and practice-oriented preparation. This system of views is definitely supported by the teacher educators, as seen in the highest factor mean and lowest standard deviation.

In Factor 4, there are several ideas that are not closely related in their contents. One of the ideas is the dislike of the semester-long of in-school practice, namely, that it results in a graduation period that is not in harmony with the opening of new jobs in schools. Another set of ideas is the rejection of a common preparation of teachers teaching different age group students and different disciplines. The fourth factor got a close to neutral, slightly positive mean rating in the whole sample.

According to the system of views present in the Factor 5 the main criterion for a good teacher is profound subject knowledge, coupled with a broad repertoire of methodological tools of knowledge transfer. Behind this factor we can find the conservative pedagogical view according to which the fundamental role of a teacher is to transfer knowledge, and that of a pupil is to take it in. The sample mean slightly rejected the fifth factor.

Factor 6 is an assault fire at, and the total rejection of master's level teacher education. The sixth factor, summarized as "everything is wrong", was rated by the sample as neutral on the average.

The scheme of views of Factor 7 emerges as the demand for "producing" teacher-scientists, great teacher personalities. Also teachers raising their profession to an artistic level gets an accented role in it. Similarly to Factor 3, the sample mean was slightly supportive of the seventh factor.

The contents of the seven factors can be divided into two parts, as five of them (1st, 2nd, 3rd, 4th, and 6th) address the systemic aspect of ITE, and two of them (5th and 7th), regard the supposed outcome of ITE, the characteristics of a good teacher.

The national level general agreement among the teacher educators are given by the schemes of views of the third and seventh factors. Especially the agreement with the third factor is clearly strong. Regarding the other factors, there are large differences of opinions. The greatest disagreement among the teacher educators involves the second factor, which actually regards the disciplines as the essence and as the ideal organizational leader of ITE. This finding implies that the real rejection of the reform is not due to the Bologna type structure of teacher education; but rather the rejection of the current organizational leadership of pedagogy and psychology departments in ITE. The real difference of opinions apear about who should lead and control ITE, this strategic branch of higher education.

The support of the bundles of views were studied by field (coordination, sciences, humanities, education and psychology, and schools), by function (subject professors, subject methodologist, head of module, coordination, teacher) and by institution. The results revealed that the scientific field of teacher educators is the most decisive in their views.

Looking at the opinions by field, it turned out that the opinions put forth in Factors 1, 2, 4, 5, and 6 are rejected the most by the representatives of education and psychology and coordination jointly, almost systematically, although to various degrees, while they were repeatedly supported by the representatives of the fields of sciences, humanities, and schools.

It deserves attention and further study that in case of the fourth factor, that includes the rejection of the one semester in-school practice at the master's level teacher education, the mean of the respondents from the schools is the highest. This means paradoxically that the head teachers in schools are the most against in-school practice. This suggests that a more intensive discourse between the higher education institutions training teachers and the schools, more provision of information, and probably better financing of school tasks would be needed.

The conservative pedagogical view of the role of teachers (Factor 5) is represented by the science field together with the head teachers of the schools domain, the rest of the fields reject this view. It is an important distinction that while the disciplines resent the coordination of the pedagogical-psychological field together, the restrictive conceptualization of the teacher's role characterizes the sciences and the head teachers in the schools only.

Thus, based on the categorization of teacher educators by field, we can say that the field of education and psychology, and to some extent that of coordination, are sharply separated in their schemes of views from that of sciences, humanities, and schools.

Cluster analysis of the responses resulted in the same findings. As a result of cluster analysis, two groups with markedly different opinions were identified, and a smaller group that could not be categorized, due to the diversity of their opinions that deviated from the main directions of opinions.

The respondents in the first cluster rejected factors that were against the Bologna system (Factors 1, 2, 4, 5, and 6), while supported factors emphasizing coherence, motivation, and practice oriented preparation and depicting teacher-scientists and the complexity of the teaching profession (Factors 3 and 7). Thus, the members of the first cluster seem to be the followers of the Bologna reform of ITE, who also reject the narrow concept

of the teaching profession as just passing on knowledge, represented. This shows that the followers of the Bologna reform have a complex and progressive view regarding the role of the teachers. Almost one third of the teacher educators belong to this group. The greatest proportion of respondents in this cluster comes from the fields of education and psychology and coordination.

Respondents in the second cluster regularly supported the bundle of views that criticize the Bologna type teacher education (Factors 1, 2, 4, 5, and 6), so we can say that the group in the second cluster opposes the reform. Of the two clusters and the uncategorized group, only the members of the second cluster supported the narrow image of an ideal teacher transfering knowledge (Factor 5). This cluster included two thirds of the teacher educators, mostly form the fields of humanities and sciences.

We received similar results in a simplified study in which the respondents could be categorized into three groups based on their responses to the items of the first factor. The results also showed that the supporters of the Bologna reform, that is, the first group included 30% of the sample, while the second and third groups constituted 70%.

Data on the fields of the groups reinforce our findings: More than half of the respondents from the field of education and psychology are in favor of the Bologna reform, most of the coordinators are slightly rejective, but one third of them are supportive, while the fields of the sciences, the humanities, and head teachers of the schools are mostly strongly rejective. Nonetheless, 30% of the respondents in the field of the humanities are supportive, thus, the field of the humanities is the most divided with respect to their views on the reform.

The categorization of the opinions was also performed by institutions. According to the data, the reforms are the most accepted by the teacher educators at ELTE, EKF, NYF, ME, and NYME. The most vehement opponents of the reforms are in the greatest number at EKF, PTE, ME, DE, and ELTE. Thus, the greatest differences of opinions occur among the teacher educators within EKF, ELTE, and ME.

The overview of the results support the fact that there is no consensus about the most important issues of teacher education among the parties involved in Hungary, in fact, there are fundamental differences of opinions. The most decisive components in the views of the teacher educators were their identities determined by their fields and institutions, and by their attitudes developed over the years they had spent there. Since attitudes are known to change very slowly and are difficult to change upon external influences, we cannot count on bridging these differences in the short run.

One might say that the differences of opinions regarding the structure of education and the reform are natural. The various fields and institutions were affected by the transformation of ITE differently; obviously, the development of the personal, group, and institutional interests and prestige had an effect on the developing directions of views. On the other hand, both supporting and opposing views can be identified in all cases of profound reforms; the consolidation of the conflicts and the convergence of opinions can generally be expected with time, with new tasks, with changes, and with the verification of the success or failure of the reform.

The picture received of the views of the teacher educators is problematic with respect to the two markedly different ideal images of a teacher. It is indispensable for the success and efficiency of ITE that the teacher educators develop and shape the teacher image of the student teachers by both their conscious and spontaneous manifestations in the same direction, since the slightly more than one semester provided by the 40 credits in education and psychology is not sufficient to re-shape these views. The time spent on education is wasted with respect to the development of attitudes, if the teacher educators do not agree in fundamental values and aims. It is particularly painful that the respondents in the fields of subject methodology and school teachers, who have the most "teacher like" profession, turned out to have more conservative image of an ideal teacher. The question arises if student teachers meet so heterogeneous teacher-images in the course of their studies, and see such a narrow and conservative conceptualization of the tasks of a teacher in the course of their school practice, will it be possible to correct it in the continuum of teacher education. Looking at the question from the other side: In case of markedly different teacher educators, whose effect will have the greatest influence on the student teacher's attitude?

III.
Initial teacher education in Hungary – The informal relationship networks of teacher educators

This section will complement what has been said about the teacher educators at the national level by describing the characteristics of the systems of informal relationship among teacher educators. The review of the theoretical foundations and characteristics of interpersonal relationships will be followed by a case study of an institution as a methodological example, then, in the closing section, we will show the interrelationships revealed among the characteristics of the system of relationships and between the relationships and the schemes of views of teacher educators.

1.) INTRODUCTION TO THE INTERPERSONAL STUDY OF TEACHER EDUCATORS

Theoretical foundations of the study of interpersonal relationships

"Cooperative action by a group of individuals having a common objective requires, as a necessary condition, a certain minimum of communication.[18] This does not mean that all individuals must be able to communicate with one another. It is enough, in some cases, if they are each touched by some part of the network of communication that also touches each of the others at some point. The ways in which the members of the group may be linked together by such a network of communication are numerous; very possibly only a few of the many ways have any usefulness in terms of effective performance. Which of all patterns are "good" patterns from this point of view" Will different patterns give different results in the performance of group tasks?" (Leavitt 1951: 38)

Leavitt identified four patterns of communication: the chain, the wheel, the Y, and the circle, as seen in *Figure 11.*

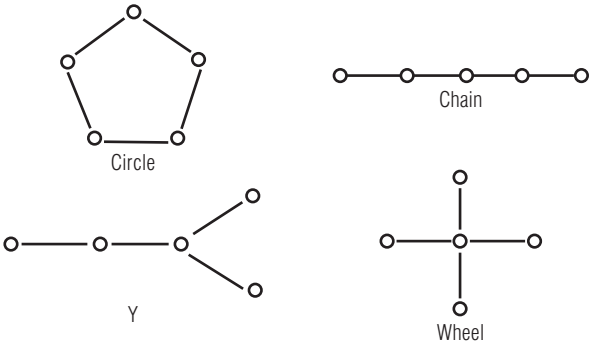


Figure 11: *Communication patterns identified by Leavitt*

The "distance" between the individuals, that is, the number of transmissions necessary for one subject to communicate with another is an important element of communication patterns. The situation of the individual is characterized by "centrality". In the patterns, a position is central if the sum of the distances from the others is the lowest, that is, if the position is closest to the others. Thus, it can be calculated that in case of the circle, there is no central position, in the case of the chain, it is the middle node, in the case of the Y, it is the node before the bifurcation, and in the case of the wheel, it is the node in the center. "… the findings suggested that the individual occupying the most central position in a pattern was most likely to be recognized as the leader" (Bavelas 1950: 728).

"The »relative peripherality« of any position in a pattern is the difference between the centrality of that position and the centrality of the most central position in that pattern. […] A review of our leadership findings will show that leadership becomes more clear-cut as the differences in peripherality within a pattern become greater" (Leavitt 1951: 47–48).

Leavitt concluded from his results that the patterns in which centrality was more evenly distributed among the positions, that is, if they were

[18] Communication is a process involving at least two persons, as a result of which the receiver learns the information the sender wishes to let the receiver know (Csepeli 2001).

independent of each other (e.g., in the circle pattern), leadership is less likely to develop, errors are more likely, but so are activity and correction, and the persons in the organization report greater satisfaction. In such organizations the persons attribute arising frustration to the inadequacy of the group, rather than to that of the environment.

In groups where there are great differences in the centrality of the positions (e.g., wheel, Y), persons in the peripheral positions typically behave like followers, depend on their leaders, accept their dictates, and because of their role, they have less opportunity to experience prestige, activity, or self-expression (Leavitt 1951).

The present investigation studies formal and informal organizations of teacher education from the perspective of groups. In organizations, achieving goals is ensured by the fact that the complex system of tasks is divided into parts within the division of labor and is delegated to individual functional units. The partial tasks carried out in the units of the division of labor are then built together, achieving the complex aim. As a result of the division of labor among the units, a formal institution emerges in which the positions are hierarchically super- and subordinated, and vertically coordinated (Csepeli 2001).

However, behind every formal organization that arranges the planned activities hierarchically in the form of division of labor, rights, and responsibilities – rationally and clearly, if all is well –, there is always an informal organization that is the sum of interpersonal interactions among the members. Communication among the units is a prerequisite of successful operation both in formal and in informal organizations (Klein 2002).

On the study of the interpersonal relationships of teacher educators

In the study, as a first element of the questions directed at getting acquainted with the professional social networks, the respondents were asked to list all the persons with whom they were in working relationships in teacher education. Subsequently, the interviewer asked the following six questions with respect to each of the persons in the list:

– How regular is this working relationship?
  (Possible answers: 1 – once a year, 2 – a few times a year, 3 – monthly, 4 – weekly, 5 – daily, 0 – no working relationship)
– Generally, does this person contact you on issues of teacher education, or do you contact this person, or is it mutual?
  (Possible answers: 1 – the other person contacts the respondent, 2 – the respondent contacts the other person, 3 – mutual, 4 – they do not contact each other)
– Generally, do you give information to this person, or do you get information form this person?
– (Possible answers: 1 – you give, 2 – you receive, 3 – mutual)
  Please evaluate the working relationship in teacher education with this person along the following aspects. Please use a five point scale.
    - Unpleasant – Pleasant (1 – unpleasant, 5 pleasant)
    - Charged with disputes – No disputes (1 – charged with disputes, 5 – no disputes)
    - Not at all important for you – The most important (1 – not at all important for you, 5 – the most important).

In addition to the above, some additional questions were also asked about the system of relationships of the teacher educators, like keeping contact with the practicing schools, frequency and pleasantness of, and charge of dispute in that relationship were also asked to be rated. Some questions concerned the professional forums of teacher education, their usefulness, and if the respondents participated in them.

Of the 145 respondents, 132 provided data on their working relationships in teacher education. In addition to the respondents, there were 407 other persons named in the responses, thus, we collected information about the working relationships of a total of 541 teacher educators. There were slightly more women among the respondents (56%) and among the other persons (52%). The mean age of the respondents was 51 years.

The circle of respondents forms a limited structured sample of the population of teacher educators in Hungary, thus, the relationships reveled this way are determined by the respondents, and are far from being complete. The structured nature of the sample and the fact that the group of respondents was compiled by leaders responsible for teacher education ensured that the studied systems of relationships constituted an important and relevant part – even if not the totality – of the interpersonal network of the given teacher education institution.

In the interviews, the respondents named for each relationship who contacts whom. The relationships were illustrated with the directions appearing in the answers. Thus, if the respondent contacted the other person, the relationship pointed from the respondent toward the other person; if the other person contacted the respondent, the relationship pointed from the other person toward the respondent. If the respondent indicated that they mutually contacted each other, two relationships were recorded, one from the respondent to the given person, and one from the given person toward the respondent.

The respondents were also asked about the characteristics of the relationship, that is, the regularity, importance, pleasantness of the relationship,

if it was charged with disputes, and who gave information to whom. These characteristics of the relationship were recorded next to the provision of information, and the origin and target of the relationship. In the outcome, two types of relationships emerged, namely, of the relationship was characterized by the origin or the target of the relationship on the basis of the respondent's personal experiences and impression.

In order to handle this situation, the relationships were differentiated by the labels "real" or "perceived", whether the origin of the relationship was the respondent or the other person. This means that a relationship in which the respondent contacts his or her colleague is real, while the relationship in which the colleague is said to be contacting the respondent is perceived.

The 132 respondents had 1267 relationships with the 541 persons in the relationships; this was recorded as described above. The number of real relationships was 650, thus, 132 respondents contacted 650 colleagues. The mean regularity in the sample was 3.45, which is halfway between monthly and weekly contacts, that is, about once in every two weeks. The most frequent answer to the question of who gives information to whom was mutual flow of information; 81% of the relationships were said to be mutual by the respondents.

The pleasantness, charge of disputes, and importance were scored on a five point scale, where 5 meant positive values (pleasant, free of disputes, the most important) and 1 meant negative ones (unpleasant, charged with disputes, unimportant). The mean pleasantness of the working relationships was a high, 4.64. Slightly lower, but similarly high means were given to the disputes (4.50), which means that the relationships were not burdened with disputes too much. The mean importance of the teacher education relationships was 4.40, thus the respondents generally found their teacher education relationships important.

It can be presumed that the respondents were biased in the positive direction when an unknown interviewer asked them to rate the pleasantness, importance, and disputes of their working relationships; for this reason, it is not the specific numbers, but their magnitude relative to the sample mean were be taken into consideration.

It is an important characteristic of organizations how people in them relate to each other, if closely connected or loosely connected subgroups can be detected in them. The fast and effective inner communication within subgroups can be very useful for the organization, but may also lead to excluding others, so eliciting an opposite effect and ruining the effectiveness and fairness expected of the organization. An important loose structured grouping is K-core components, that is, a maximal component of persons within which everybody has at least K number of relationships, and everybody can reach everybody via some kind of a "path".

Part (a) of *Figure 12* illustrates a network in which the filled circles represent the individuals and the numbers represent their codes. In part (b) of the figure, we marked a 3-member core component. It can be seen in the figure that in the central component, everybody has at least three relationships, indeed, and everybody reaches everybody via some route.

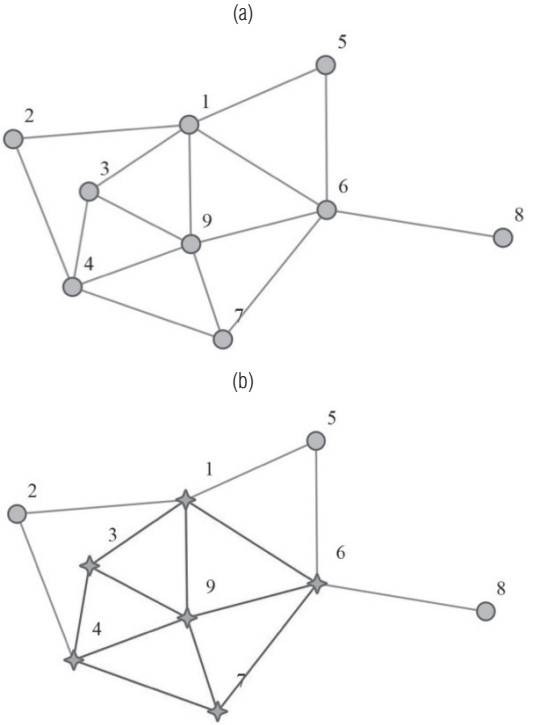


Figure 12: *K-core components*

The determination of the core or central component of a system of relationships is one of the elements of the method of social network analysis at the level of the institutional networks. The core of the system of relationships is a part of the network in which every person has at least K number of relationships and in which everybody can reach everybody via some kind of a route.

Thus, the central component is the central, most active, and, for the flow of information and coordination, the most decisive part of the system of relationships of teacher educators. It provides information about what kind of group in the network has the real direction of the processes: small or

large, who belongs there. Naturally, this group has a role at the level of the institutional hierarchy and is meaningful. In this section, we limit ourselves to demonstrate the concept and to review the composition of the respondents in the centers of relationship networks by field and by function. The data are summarized in *Table 21* and *Table 22*.

Table 21: *The presence of the respondents in the core of the relationship networks: distribution by field*

Field	Is the respondent in the core of the relationship networks?					
	Yes		No		total	
	Number	%	Number	%	Number	%
Coordination	23	92%	2	8%	25	100%
Sciences	16	64%	9	36%	25	100%
Humanities	23	62%	14	38%	37	100%
Education and psychology	25	89%	3	11%	28	100%
Schools	12	71%	5	29%	17	100%
Total	99	75%	33	25%	132	100%

It can be seen from the data that 75% of the respondents appointed by the institutions belong to the core of its system of relationships: This is not surprising, as it was rational of the institutions, when asked to fill in questionnaires on teacher education, to name colleagues who are versed in teacher education. Since these 132 persons were interviewed about their relationships, understandably, they had a central position in them.

This justifiably high proportion, however, is varied throughout the different fields. It is the highest in the field of coordination, since a person cannot coordinate, unless he or she is in the center of a network of relationship and is easily available. Teacher educators in the field of education and psychology are represented in the core group almost at the ratio as the coordinators; they are followed by the fields of the sciences and the humanities with 62-63%, and schools with 71%. The last figure shows that there are relationships with the head teachers of the schools even at the innermost level of the relationship networks, too.

Similarly to the fields, it is worth taking a quick look at the distribution of the respondents by function (*Table 22*). As can be seen from the distribution of teacher educators by function in the center of the relationship networks, the outstanding proportion of coordinators is followed by subject methodologists, the latter falling back behind the former by 13%, while the proportion of heads of modules and that of head teachers and mentors is still smaller by another 20%. Interestingly, the subject professors participate in the center of the relationships less than the head teachers in the schools do: Their proportion is the lowest, 67%.

Table 22: *The presence of the respondents in the core of the system of relationships: distribution by function*

Function	Is the respondent in the core of the relationship networks?					
	Yes		No		total	
	Number	%	Number	%	Number	%
Subject professor	26	67%	13	33%	39	100%
Methodologist	11	79%	3	21%	14	100%
Head of module	27	73%	10	27%	37	100%
Coordinator	23	92%	2	8%	25	100%
School teacher	12	71%	5	29%	17	100%
Total	99	75%	33	25%	132	100%

Another important aspect of the relationship networks came to the focus in the study, namely, how easy or difficult it is to reach one persons in the network. The probability of reaching someone is the probability of "arriving at" a given person in case of taking random routes in the network of relationships. Naturally, the sum of probabilities of arriving at the persons is 1. The Internet is an easily understood example: When we browse the Internet, where relationships match the links pointing in the direction of another website, the probability of reaching someone shows how probable it is that we arrive at a given website. This is very important in the world of the Internet, hence the term for this aspect measured is Page Rank.

In the case of institutions, Page Rank implies the importance of the persons in the natural sense. If someone can be reached easily, he/she has an "organization determining role", since a random "visitor" will reach him/her, will communicate with him/her, and will develop an attitude toward the organization on the basis of the relationship with him/her.

In *Figure 13,* a simple network is shown, the nodes (or actors) are A, B, C, D, E, and F. Visibly, it is a network with directed relationships with {A → B, A → C, B → E, C → F, B → F} relationships, where the arrows show the direction of the relationship, and the probabilities of access are as follows:

A → 0.120882
B → 0.172257
C → 0.172257
E → 0.194092
F → 0.340511

It can be seen from the values that actor A has the lowest Page Rank, since we can reach A only if we connect A straight at the start. As opposed to this, the Page Rank of F is highest, because it can be reached via several paths. Nodes B, C, and E ar e in between these probabilities. It can be seen that it is equally easy to reach B and C, so their probabilities of access are the same. E's value is higher than theirs, but lower than F's.

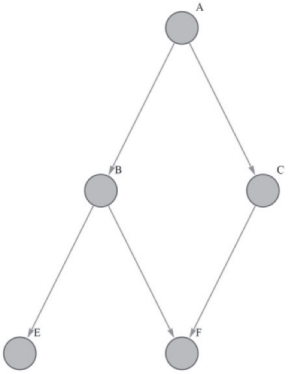


Figure 13: *Page Rank*

Let's see this in an example of an organization. Leader A gives information to B and C, who pass it on. B passes the information on to both E and F, while C passes it to F only. Thus, in an organization with five members, in any random moment of time, it is the most probable that a given piece of information is at F, and it is the most unlikely that it is at A.

The personal values of Page Rank depend on the size of the relationship network; therefore, they cannot be interpreted outside the network, only within. The values of Page Rank are given in percent. The mean Page Rank of persons in the studied institutional networks is 3.68.

The third organizational dimension studied in the present research was the value of closeness centrality. The distance between two individuals within an organism is the length of the relationship path from one to the other. Naturally, this distance is not the same as physical distance (e.g., telephone connection overrides geographical distance), but it is a relevant distance concept for the flow of information. If a person can reach everybody "on the spot" in the network, he or she is in a central position in the sense that he/she can react quickly in order to solve any arising problem.

Closeness centrality means that the person has minimum path distances from others, that is, the reciprocal of the average distance from the persons connected to the person: the greater its value, the more central the person.

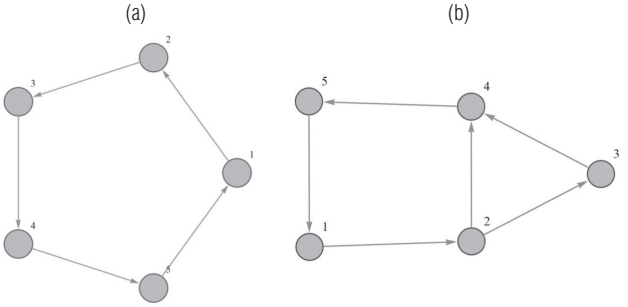


Figure 14: *Closeness centrality*

In *Figure 14,* there are two networks – (a) and (b) – with directional connections; the only difference between them is that in network (b) there is an additional tie pointing from actor 2 to actor 4. In network (a), the sum of distances from the others is equal for each actor: $1+2+3+4=10$. The distances in network (b) are as follows:

Actor	Distance	Centrality (reciprocal of distance)
1	8	0.125
2	7	0.143
3	10	0.100
4	10	0.100
5	9	0.111

It can be seen that adding the 2⟶4 tie changed the distances considerably; for actor 2, for example, the distance is 7, because:

Distance $(2 \rightarrow 3) = 1$
Distance $(2 \rightarrow 4) = 1$
Distance $(2 \rightarrow 5) = 2$
Distance $(2 \rightarrow 1) = 3$.

All this means that if an institution has long chains in its interpersonal relationships, the distances between the two individuals at the edges of the network will be high, because they can communicate with each other only through many intermediaries. Thus, if the average distance between individuals is grand, its reciprocal will be small. In an organizational network, however, where the individuals have many direct contacts, reaching each other through a small number of intermediaries, the reciprocal value, or closeness centrality will be high.

The mean closeness centrality of the whole sample of the respondents and the persons named by them in the studied teacher educators of Hungary was 0.27.

The Page Rank values within the network provide important information about the situations of the individuals, while the values of closeness centrality, similarly to those of pleasantness, importance, and charges of dispute, become meaningful in comparison across groups.

2.) NETWORKS OF TEACHER EDUCATORS IN HUNGARIAN INSTITUTES – A CASE STUDY

Based on the thematic qualitative interviews conducted with the leaders and the questionnaires filled out by the institutional respondents, the case studies of the most important 10 Hungarian teacher education institutions were prepared by the method of social network analysis. The case studies included the relationship diagrams of the teacher educators, their individual characteristics regarding their communication and attitudes, their perception of the main characteristics of the institutional relationships, and the information acquired on the dominant views in the institution.

The detailed presentation of the ten cases studies would be rather difficult, if not impossible to interpret in an international context; therefore, only one of them will be presented here, in order to show the methodological approach. Since Eötvös Loránd University (ELTE) is the flagship of Hungarian ITE, and this organization combines the features of teacher's colleges and a universities of sciences in many aspects, it will serve as a good example.

ELTE has long tradition in ITE; it offers the full range of teacher education, from professionals of early childhood and care, through preschool and elementary teachers and teachers of all branches of special education to ITE and the doctoral schools of education and psychology.

Strategic coordination and decisions take place at the Council of Initial and Continuing Teacher Education (abbreviation in Hungarian is TTT), whose president is responsible for master's level teacher education. The members of TTT are delegates of the Faculties involved in ITE and the representatives of the students. The so called Pedagogicum Center (a functional organizational unit made up of the Faculty of Education and Psychology, the Faculty of Pre- and Primary School Teacher Education and the Bárczi Gusztáv Faculty of Special Education) is responsible for running ITE; the operative tasks are conducted by the Department of Initial Teacher Education of the Pedagogicum Center.

Since the introduction of the Bologna system, ELTE has been training about 8-11% of all the students admitted to ITE in Hungary[19]. It is possible to get a teacher's qualification there in 36 subject disciplines, which is one of the highest number in the country. The model developed by ELTE laid the foundations of the Bologna reform realized in ITE, thus this university can be called the cradle of master's level teacher education.

The size of the institutional sample included in the study of interpersonal relationships was 17; the respondents named 80 persons and 185 relationships, thus, this relationship network was among the largest ones in the survey.

It can be seen in *Table 23* that the fields of the humanities and education and psychology were over represented, while in functions, subject methodologist were under represented and heads of modules were slightly over represented.

Table 23: *The composition of the sample at ELTE*

Field:	Coordination	Sciences	Humanities	Education and psychology	School teachers	Total
ELTE	3	2	5	5	2	17
Total	25	25	37	28	17	132
Function:	Coordination	Methodologist	Head of module	Subject professor	School teachers	Total
ELTE	3	1	7	4	2	17
Total	25	14	37	39	17	132

Closeness centrality value proved to be 0.33 at the University, which is more than the national mean (0.27); actually, it was the second largest in the country. This shows that teacher educators are close to each other in the network of interpersonal relationships; the calculated mean distance is low.

The mean accessibility of the teacher educator respondents was 2.86%; one person stood out even within ELTE, with a value of 10.31%. This person is coded in *Figure 15* as "ELTE koord 0104", and represents the field of education and psychology in coordinating teacher education; thus, in accordance with this person's role, Page Rank is exceptionally high. The Page Rank of five more persons was very high in the institution: two respondents in coordination, one in each of the rest of the fields: humanities, sciences, education and psychology, and schools.

[19] The percentage of students admitted to initial teacher education at ELTE in 2009, 2010, and 2011 were 9%, 11%, and 8% of all admissions to initial teacher education in Hungary. Source: Admissions database of Educational Authority.

The relationship diagram of ELTE is extensive, has many actors in it and is dense with interpersonal relationships. The network has several centers: instead of having individuals at the center at ELTE it is a rather extensive groups. This implies that there are multiple possibilities for communication in every direction, making exchange of information between people in the center and at the periphery more certain and efficient. This relationship network makes consultative, cooperation based coordination possible in master's level teacher education, or any other form of teacher education.

In the fields of the sciences and the humanities, however, there are relationship networks at the periphery that are not linked to the central network and exist detached from it. This is presumably the result of having asked a limited amount of teacher educators, so all the complexity of the network could not have been discovered. However this might also be a sign of a need develop more extensive relations with the educators of these disciplinary fields.

Although ELTE is a university of sciences, the comparison of its organizational diagram *(Figure 15)* with that of the College of Nyíregyháza *(Appendix 8)* shows many similarities. The diagram of both organizations are rich in relationships, have many participants, are round, and the number of relationships per person is high. The relationship diagram of the University of Szeged (SZTE) is also shown as a counterpoint *(Appendix 9).* In the center of the relationship figure of SZTE, there is a small, loosely related core, from which there are chains in four directions and extensions ending in cliques. In addition to this relationship network, there is a separate group of five persons, mostly from the field of arts, and a small separate network made up of ten psychologists and pedagogues at the Faculty of Humanities. All this shows that the coordination of teacher education at SZTE is concentrated in the hands of the small, loosely related group, and the system of interpersonal relationships necessary for the consultative, cooperative coordination is only available to a limited extent.

The individuals in the relationship network of ELTE had a mean of 5.7 relationships. Out of these the number of mutual relationships was 4.2. Both values are above the national average (national mean: 4.9, national mutual mean: 3.9); thus, it shows a wider than average system of direct contact relationships among the teacher educators, and cooperation instead of commands. The regularity of relationships at ELTE is about the same as the national mean (3.5), that is, about once in every two weeks. The importance of the teacher education relationships of the respondents was rated 4.1, slightly below the national mean of 4.4. The latter value can probably be explained by the fact that for the disciplinary teachers of the universities of sciences, the role of teacher educator is probably not a priority. Teacher education relationships at ELTE were rated to be slightly more charged with disputes (4.5) than the national average (4.1). Despite the disputes, the pleasantness of the relationships was rated similar to that of the national mean (4.6).

The size of the core of the system of relationships (at K=2) that has at least two contacts and that can mutually reach each was 33; this was the largest size in the national sample (*see Table 24*).

Table 24: *Fields in the core of the system of relationships at ELTE*

Core component of the network (K=2)	Coordination	Sciences	Humanities	Education and psychology	Schools	Total
ELTE	12	3	1	9	8	33
Total	73	30	35	50	28	216

In this core group representatives of the fields of coordination, education and psychology, and schools participate with highest number of persons. Since the field of education and psychology must have relationships with all of the disciplinary directions, the data suggest that both the field of coordination and that of education and psychology comply with their functions within the network. It is exemplary that there are 8 figures from schools in the core of relationships – it is an outstanding number at the national level.

The small number of people from the fields of the humanities and the sciences in the core of the system of relationships, and the detached groups of people from the humanities and sciences reinforce the finding that the links within t .

Figure 15: *Relationship network at Eötvös Loránd University*

Attitudes in the institution

Categorization by both kinds of attitudes shows that a larger than average proportion of supporters of the Bologna reform of teacher education work at ELTE *(Table 25).* It can also be seen that Group 2 of the teacher educators at ELTE, slightly rejecting the Bologna reform, is under represented as compared to the national proportion, while the ratio of strong opponents is greater than the national average. Thus, it can be seen from the data that supporters and strong opponents of the master's level teacher education program work together in the institution.

ELTE respondents in the field of the sciences proved to be more critical of the Bologna reform than the national average (mean at ELTE sciences fields: 4.00; national mean: 3.61), while the respondents in the humanities field with their neutral attitudes were less critical of the reform than the national average (mean at ELTE humanities fields: 2.60.; national mean: 3.42).

Table 25: *Attitudes of the respondents by cluster and groups at ELTE*

Institution	*Cluster 1*		*Cluster*		*Uncategorized*		*Group 1*		*Group 2*		*Group 3*		*Total*	
ELTE	8	40%	10	50%	2	10%	11	55%	2	10%	7	35%	20	100%
Total	39	27%	95	66%	11	8%	44	30%	55	38%	46	32%	145	100%

Knowing that the Bologna reform is criticized by the sciences and the humanities fields the most, this finding could explain why there is a separation in the system of relationships, why they fall back in the core of the system of relationships.

There were 12 persons in the core component of the network at ELTE. According to the responses they gave, the persons in the core component of the network definitely support the Bologna reform of teacher education. A the same time the mean of the respondents outside the core component do not support the views of Factor 1 either *(Table 26).* The real difference of opinion between those inside and outside the core lies in the ideal image of the organizational leadership of teacher education: those in the core group reject direction divided and broken into disciplinary departments, those outside the core strongly support it. There is a similar tension between the results showing the support or disapproval of common teacher education for teachers of different age group students, and in the views on the one semester in-school practice: Those in the core support the uniform training and the importance of in-school practice, those outside the core have the opposite opinion.

Table 26: *Means of factors within and outside the central core, in Hungary and at ELTE*

	National			ELTE		
Group size (Number)	99	33	132	12	5	17
Central component / Core of system of relationships (K=2)	Inside	Outside	Total	Inside	Outside	Total
Factor 1: Bologna Process opposition, idealization of the past	3.24	3.55	3.27	2.65	2.82	2.7
Factor 2: The discipline is the essence and organizational leader of initial teacher education	2.88	3.27	2.97	2.67	3.41	2.89
Factor 3: Coherence, motivation, and practice oriented preparation	4.21	4.25	4.22	4.11	4.18	4.13
Factor 4: Opposition to common preparation and practice	3.05	3.17	3.08	2.63	3.23	2.81
Factor 5: A good teacher is the professional mediator of up-to-date knowledge	2.97	2.99	2.97	2.58	3.12	2.74
Factor 6: Everything is wrong	2.96	3.24	3.03	3.15	3.34	3.21
Factor 7: Teacher-scientists and the artful practice of the teacher vocation	3.79	3.9	3.82	3.86	3.93	3.88

The data show that the views regarding the tasks of the teachers also differ strongly between those inside and outside the core. While the respondents outside the core see transfer of knowledge as the main task, respondents inside the core definitely reject this conceptualization. There is agreement in coherence, coordination, and practice oriented preparation, and the support of the idea of the scholar teacher and the artful practice of the teacher profession.

3.) INTERRELATIONS BETWEEN THE STRUCTURAL AND PSYCHOLOGICAL CHARACTERISTICS OF THE RELATIONSHIPS, AND THE PROJECTION OF THE SCHEMES OF VIEWS ON THE RELATIONSHIPS

Relationship networks can appropriately be studied at the institutional level. Beyond knowing the characteristics of each institution, however, it is also revealing to study the characteristics of disciplinary and functional groups within networks and the effects of their views on their relational characteristics.

The relational profi les of teacher educators by discipline, function, and importance

The means ratings (and their SDs) of the various characteristics of the working relationships of the teacher educators in the ten most important institutions of teacher education in Hungary *by field* are shown in *Table 27.* The overview of the profiles is made easier by *Figure 16.*

Table 27: *Relational characteristics in the various groups of teacher educators by field*

Field	Number of persons	Number of relationships		Regularity		Pleasantness		Importance		Disputes	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Coordination	25	6.68	2.80	3.56	0.67	4.26	0.99	4.07	1.93	3.90	1.25
Sciences	25	4.64	2.86	3.63	0.98	4.73	0.81	3.91	2.09	4.20	1.31
Humanities	37	4.16	2.97	3.43	0.75	4.73	0.88	4.26	1.74	4.48	1.02
Education and psychology	28	5.43	3.10	3.76	0.80	4.38	1.08	4.00	2.00	3.97	1.17
Schools	17	3.59	3.02	3.17	0.93	4.87	0.32	4.07	1.93	4.32	1.33
Total	132	4.92	3.08	3.53	0.83	4.58	0.90	4.08	1.92	4.19	1.20

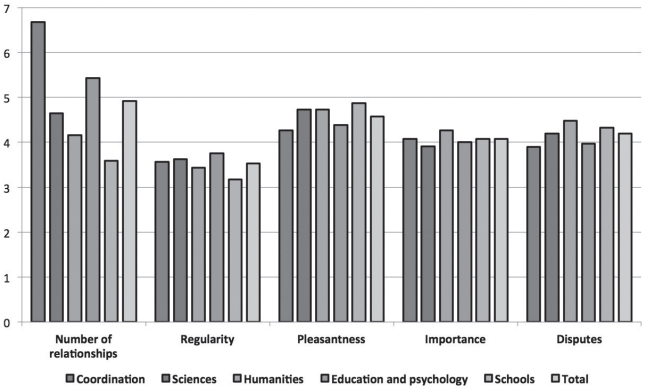


Figure 16: *Relational characteristics in the various groups of teacher educators by field*

The results about the number of relationships make common sense. People working in coordination have the greatest number of relationships, followed by the field of education and psychology. Respondents working in the fields of the sciences and the humanities have about the same number of relationships, while head teachers in the schools have the least number of relationships, about half of those working in coordination. On the basis of the number of relationships, coordination seems to exhaust (on the average) its general limit of 7 persons empirically determined as the maximum for effective work in groups, while head teachers and mentors seem to connect to the system of relationships of teacher education with relatively few ties. Apparently, the integration of the figures of the schools within teacher educators and their involvement could still be improved.

No significant differences could be seen in the judgment of the regularity of the real and perceived meetings and coordination within the network of working relations of teacher education among the different fields; this reflects a healthy operation of the system.

The pleasantness of these working relationships were rated the highest by the schools, and with the lowest variance as compared to the other groups. The next highest ratings of the relationships came from the fields of the sciences and the humanities, but variance was high in these groups. The pleasantness ratings by the field of education and psychology were perceptibly lower, and those in coordination was the lowest. The standard deviations of the views in the latter two groups were the highest. All this shows that the initiators and "leaders" of the Bologna reform of ITE, namely, the fields of education and psychology and coordination, have perhaps better

preserved the memories of the often unpleasant struggles of the past in their impressions of the relationships.

The importance of the working relationships were rated the highest by the teacher educators in the field of the humanities, followed by coordination and education and psychology, and the ratings in the fields of the schools and the sciences dropped a little behind. The differences in the importance of the relationships in teacher education exhibit the differences in the traditions of teacher education in the fields of the humanities and the sciences. Teacher education in the humanities was together with disciplinary training and they were inseparable until the reform of the Humanities Faculty at ELTE changed that. In the field of sciences, however, the separation of research and teaching orientations of both the curriculums and the students has a long tradition.

It must be noted that the variance of ratings regarding importance was outstandingly high as compared to the other characteristics (except for the number of relationships). The possible reason for this is that the generally parallel participation of the subject professors in disciplinary programs and teacher education does not accompany commitment to teacher education at equal intensity. In fact, there is probably a huge difference among the participants in the strength of their identities as teacher educators. Naturally, all this has an effect on the personal ratings of the importance of the relationships in teacher education.

Regarding the disputes in the working relationships, teachers working in the field of the humanities had the most favorable opinions, followed by the group of schools, then the sciences. The ratings of these three groups were above 4. The fields of coordination and education and psychology had rating means under 4. Similarly to pleasantness, this can be explained by the fact that as initiators of the reforms of teacher education, these two fields have a history of wishing to put through their aims and ideas; such disputes may have been more important and memorable for them than for other fields.

Similarly to the above review, let us examine the means ratings (and their SDs) of the characteristics of the working relationships of the teacher educators *by function*, detailed in *Table 28,* and illustrated in *Figure 17.*

Table 28: *Relational characteristics in the various groups of teacher educators by function*

Function	Number of persons	Number of relationships		Regularity		Pleasantness		Importance		Disputes	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Subject professor	39	4.74	3.38	3.74	0.79	4.44	1.08	3.84	1.23	4.07	1.30
Methodologist	14	5.43	2.59	3.07	0.82	4.92	0.18	4.01	1.26	4.27	1.27
Head of module	37	4.35	2.71	3.62	0.84	4.69	0.91	4.36	0.89	4.42	0.95
Coordinator	25	6.68	2.80	3.56	0.67	4.26	0.99	4.07	1.00	3.90	1.25
School teacher	17	3.59	3.02	3.17	0.93	4.87	0.32	4.07	1.10	4.32	1.33
Total	132	4.92	3.08	3.53	0.83	4.58	0.90	4.08	1.09	4.19	1.20

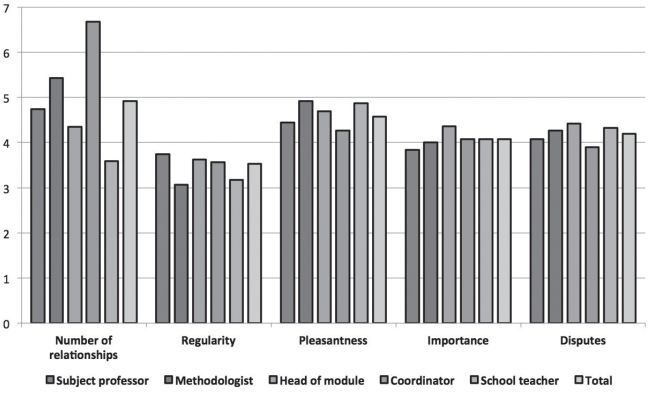


Figure 17: *Relational characteristics in the various groups of teacher educators by function*

In this kind of grouping also, the number of relationships was the highest in the group of coordinators. They were followed by the group of subject methodologists, which is logical and necessary for realizing their bridge

role. Then came the means of disciplinary professors, including the high average number of relationships in the field of education and psychology. Surprisingly, the average number of relationships of heads of modules was less than that of professors. This allows for the conclusion that the "module manager" kind of function of heads of modules often appears only at the administrative level of accreditation documents, but in reality, they do not oversee and innovate the contents or assure the quality of their module. If they would, they would definitely need more working relationships than "simple" professors. In the categorization by function, the average number of relationships of head teachers and mentors in schools is the smallest again.

The typical regularity of working relationships for subject methodologists and teachers is monthly, for subject professors, heads of modules, and coordinators, it means coordination once in every two weeks.

The data revealed that the subject methodologists and the teacher educators in the schools experience their working relationships as the most pleasant, heads of modules are in the middle range, while for subject professors and coordinators gave less pleasant ratings. Obviously, the mean pleasantness of the subject professors included the low average ratings of the large number of education and psychology professors.

The middle range of the ratings of the importance of the relationships was represented by the subject methodologists, teachers, and coordinators with their means of around 4. The group of subject professors rated the importance of relationships at a much lower level, while heads of modules, rated importance much higher, with a mean of 4.35, apparently, because of their very role.

The perception of the disputes does not seem to be dependent of function: Coordinators and subject professors – including those who work in the field of education and psychology – found their working relationships in teacher education the most charged with disputes, while the other groups found their relationship much less charged with disputes.

The characteristics of the relationships by *importance*, or, in other words, by *taking responsibility for teacher education* were also studied. These data are presented in *Table 29,* and illustrated in *Figure 18.* Based on their functions in teacher education, the respondents were categorized by their "importance" in ITE: 1 – the functions where one is responsible of his/her own performance (subject professors, methodologists, teachers), 2 – heads of modules, responsible for a module and the performance of a small group, and 3 – coordinators and leaders of the institution. (Since some respondents had more than one function in the institution, the highest rank importance was assigned to everyone. This is the reason of the difference between the sizes of the groups by function and importance.)

Knowing the results of analysis of the characteristics of relationships by groups of field and function, the means in *Table 29* are not much new, but the data do show the special character of the group of heads of modules.

It is obvious from the above data that the means of characteristics of heads of modules – who are at the "middle manager" level of taking responsibilities, between the subject professors and upper leadership – are not between the means of subject professors and the means of coordinators in any of the characteristics of the relationships. The opinion ratings of this group are always outside of the interval range determined by the means of the other two groups.

This phenomenon requires further study and explanation: Heads of modules keep contact with the least number of teacher educators, the most regularly, and in the most pleasant and in the most dispute-free relationships. These data imply that the group of heads of modules do not think over, re-evaluate, and renew the disciplinary contents, which, theoretically, would be part of their jobs, otherwise, this job would unavoidably elicit struggles, disputes, and unpleasantness in the relationships. Presumably, this role is only important for accreditation procedures and not in real life quality assurance and development.

Table 29: *Relationship characteristics by groups of importance (taking responsibility) of teacher educators*

Importance	Number of persons	Number of relationships		Regularity		Pleasantness		Importance		Disputes	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1 – Subject professor	68	4.72	3.20	3.49	0.88	4.61	0.86	4.29	0.68	4.50	0.77
2 – Head of module	41	4.12	2.45	3.59	0.83	4.73	0.87	4.61	0.45	4.67	0.50
3 – Coordination, leadership	23	6.91	3.03	3.52	0.67	4.25	1.03	4.32	0.80	4.21	1.03
Total	132	4.92	3.09	3.53	0.83	4.58	0.90	4.39	0.65	4.50	0.76

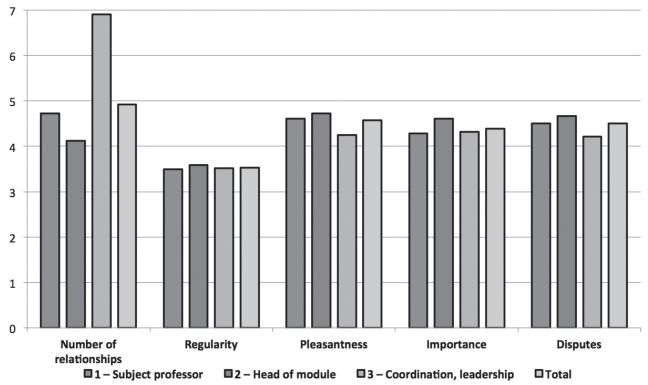


Figure 18: *Relationship characteristics by groups of importance (taking responsibility) of teacher educators*

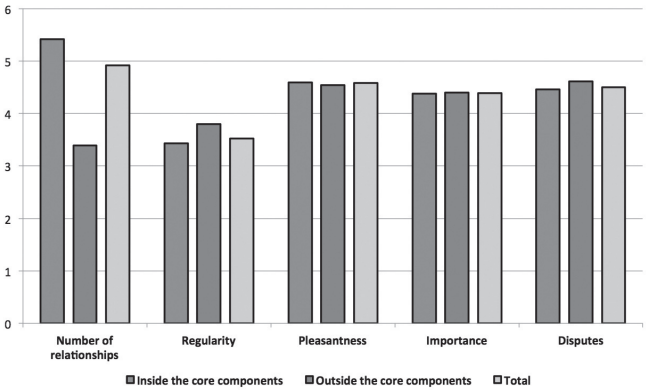


Figure 19: *Relationship characteristics by position (inside or outside) in the core of relationships of teacher educators*

The mean ratings and standard deviations of the *relationship characteristics* of the respondents *inside and outside the core of relationships* are shown in *Table 30,* and illustrated in *Figure 18.*

It is visible from the data in the table and the illustration in the figure that belonging to the core of the network results in notable changes only in the number of relationships as compared to the national mean. The means of the other characteristics are about the same as those in the national sample. Statistical analysis has shown that the significance level of the correlation between belonging to the core of network and between the number of relationships is .05, while it is not significant in any of the other characteristics.

Table 30: *Relationship characteristics by position (inside or outside) in the core of relationships of teacher educators*

Core components of networks	Number of persons	Number of relationships		Regularity		Pleasantness		Importance		Disputes	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Inside the core components	99	5.42	2.96	3.43	0.83	4.59	0.81	4.38	0.65	4.46	0.76
Outside the core components	33	3.39	2.99	3.80	0.78	4.54	1.13	4.40	0.65	4.61	0.76
Total	132	4.92	3.08	3.52	0.82	4.58	0.90	4.39	0.65	4.50	0.76

Interrelations among the relational characteristics

Interesting interrelationships were found among the relational characteristics. There is a correlation between the number and regularity of relationships. As the number of relationships increased, the regularity of keeping contact decreased.

There is a similar correlation between the regularity of relationships and the rating of their importance (Pearson's $r = .21$, $p<.02$). Meaning that the more important the respondents rated the relationship, the more regularly they met, or the other way around, the more often they had to meet the most important the relationship was rated.

The regularity of the relationship is negatively correlated, however, with its pleasantness (Pearson's $r = -.20$, $p<.02$): The more regularly they meet, the more unpleasant the respondents feel the relationship to be, or the more unpleasant they feel the relationship, the more regular it seems to them.

The pleasantness of the relationships was also correlated with the lack of dispute (Pearson's $r = .49$, $p<.01$), that is, teacher educators find relationships pleasant in which they have the same opinions, and vice versa: agreement makes the relationships pleasant.

The importance of the relationships are also linearly correlated with the lack of disputes (Pearson's $r = .27$, $p<.02$). This means that the more important a relationship is to the respondent, the more he/she makes efforts

to push back disputes; and vice versa, the less the disputes in a relationship, the more important it is for the respondent.

As we saw it in Chapter II (Clusters of teacher education by function), the respondents in the relationship networks were categorized into three groups: (1) supporters of the Bologna reform if ITE, (2) slight critics of the reform, (3) sharp critics of the reform. The respondents were also clearly determined by their institutions. A two-way analysis of variance was performed on the main characteristics of the relationships, the opinions and the institutions of the respondents being the two independent variables.[20]

As it turned out, there was a main effect of opinions ($p<.05$) and of institutions ($p<.03$) on the changes in the Page Rank; however, there was no interaction between the two main effects, that is, they influence the Page Rank independently of each other.

The same analysis was performed on the closeness centrality values, too: We found that the dependent variable significantly changes as a function of institutions ($p<.04$), whereas the views and the two effects do not affect closeness centrality significantly even together.

Two way analysis of variance was performed on the characteristics of the relationships, institution and position in the core of relationships being the two independent variables. The results revealed that the two independent variables were in significant interaction in affecting the mean importance of the relationships ($p<.05$).

There was a significant main effect of the position regarding being in the core component on influencing the number of relationships ($p<.01$), the number of mutual relationships ($p<.02$), and the regularity of contacts in the relationships ($p<.02$). The last variable was also significantly affected by the institution as a main effect ($p<.01$), but there was not significant interaction. The institution also had main effect on the feeling of pleasantness of the relationships.

Two studied characteristics had effects on the system of views. Being in the core group of the network significantly affected the judgment of Factor 2 (that emphasizes the priority of the disciplines in the contents and organizational direction of teacher education) ($p<.05$). Belonging to an institution significantly affected the evaluation of Factor 6 (saying that everything is wrong in master's level teacher education) ($p<.01$).

Relationships between views and network characteristics

As we have seen above, the respondents in the relationship networks were put into three groups according to their views: (1) supporters of the Bologna reform of ITE, (2) slight critics of the reform, (3) sharp critics of the reform. The respondents were also categorized based on their importance in ITE (in other words based on the degree of their responsibility) into three groups: (a) persons responsible for their own selves, (b) persons responsible for a module, (c) persons responsible for institutional level ITE.

Two way analyses of variance were performed on the most important characteristics of the relationships, the importance and the views of the respondents being the two independent variables.[21]

Analysis revealed that the importance of the respondent have a significant effect on the person's Page Rank ($p<.03$), but the views do not, nor are there an interaction between the two variables.

The importance of the respondents had a significant main effect ($p<.01$) on the number of their relationships, but their scheme of views do not.

The pleasantness of the relationships was in significant interaction with the importance and the views of the respondents ($p<.02$). This interaction is shown in *Figure 20*.

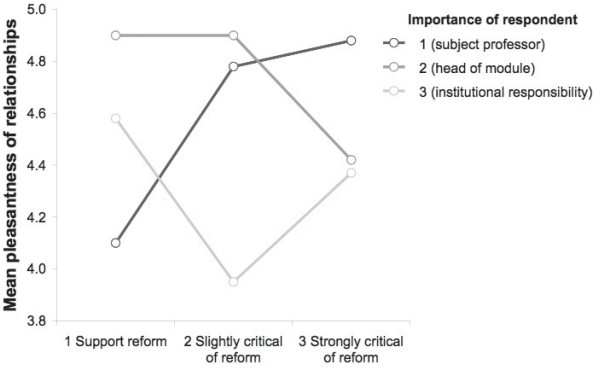


Figure 20: *The interactional effects of the respondents' importance and their views on the importance of their relationships*

[20] Levene's test was used to assess the equality of the variances before performing the analysis of variance.

[21] Levene's test was used to assess the equality of the variances before performing the analysis of variance.

As the figure shows, the subject professors (blue line) experience low pleasantness in their relationships only if they agree with the Bologna system in teacher education; if they disagree – slightly or strongly – their relationships are pleasant. Heads of modules (green line), however, experience pleasant relationships if they support the present system of ITE or if it is neutral to them, and experience their responsibility as unpleasant if they oppose to the master's level teacher education reform. For the institutional coordinators and leaders (yellow line), the relationships are the most unpleasant if they have to participate in the disputes of institutional coordination when their standpoints are neither too supportive, not too critical of the reform. To be sure, it is clear from the results that the role of being an institutional coordinator is not accompanied by the most pleasant relationships, since the views of teacher educators cooperating are varying.

Conclusions

Relationship networks can appropriately be studied at the institutional level. Beyond knowing the characteristics of each institution, however, it is also revealing to study the characteristics of disciplinary and functional groups within networks and the effects of their views on their relational characteristics.

Based on the characteristics, different profiles emerged at the level of group means.

Similar statements can be said of the relationships of the respondents working in the fields of coordination and education and psychology in teacher education. These two groups have the greatest number of relationships, thus, the mean data confirm that the informal system of relationships of the representatives of these fields is in accordance with their formal roles. The great number of relationships is accompanied by relatively low levels of pleasantness and is laden with heavier disputes, probably because of the great number and complexity of coordination, and the enormous differences in the systems of views. Relationships in teacher education are moderately important for these groups.

Teacher educators in the fields of the sciences and the humanities have about the same, moderate amount of relationships. The pleasantness of their relationships is high, they perceive their relationships as relatively free of disputes; on the other hand, the humanities rate the importance of the relationships of teacher education with the highest scale values, the sciences rate it with the lowest.

Respondents working in the field of schools have the least number of relationships in general, and find them the most pleasant and free of disputes. Nevertheless, they rated their teacher education relationships as the second lowest in importance.

As to the categorization by functions, the group of subject methodologists has a definitely great number of relationships, which indicates that similarly to the coordinators, they have an informal system of relationships that conforms to their formal statuses. This group rates their teacher education relationships as the most pleasant.

Interestingly, the heads of modules have a small number of relationships on the average, less than that of the subject professors. This group found their relationships as very pleasant and free from disputes. This allows for the conclusion that the "module manager" kind of function of heads of modules often appears only at the administrative level of accreditation documents, but in reality, they do not oversee and innovate the contents or assure the quality of their module. If they would, they would definitely need more working relationships than "simple" professors and would very likely experience more dispute.

The mean number of relationships of the subject professors is moderate, but they rate their relationships of teacher education as less pleasant.

Apparently, the national means of the characteristics of the relationships suggest a general tendency, namely, that the different groups of teacher educators have informal relationship profiles that are basically appropriate for and match their formal roles. The heads of modules, however, are an exception to this. On the basis of their informal system of relationships, this group does not seem to fill their formal roles in their informal relationships. It can also be seen that there is more to be done in integrating the head teachers of the schools into the network of relationships of teacher educators at the national level.

The studies have shown that the importance of the person, that is, the level of responsibility taken in teacher education has a significant effect on some aspects of his or her interpersonal relationships. Thus, importance affects Page Rank and the number of relationship of the person. In other words the greater formal responsibility one undertakes in teacher education, the more relationships one has and the greater the probability that one will be reached in case of random search. This is basically also a sign of healthy organizational operation.

It is a particularly interesting that the pleasantness ratings of the relationships are significantly influenced by the importance and by the scheme of views of the person, in interaction with each other. That means that the views in themselves have no effect on the characteristics of the networks, cooperation must work in the interest of ITE, despite the greatest differences of opinions.

IV.
Closing Summary

In the comprehensive strategy of the European Union for 2020, there are seven goals, two of which are related to education (*European Commission*, 2010). This is a clear indication that education is of the highest European priority. As part of the priorities of education, both higher education and teacher policy have become arenas of turbulent processes and changes in approaches in the past decade.

The European approach to higher education is fundamentally determined by the social and economic demand for lifelong learning. Smart growth demands knowledge society, therefore the rise of mass education in higher education and a uniform, transparent and compatible structure of education at European level. The latter took place within the frames of the Bologna Process, which has radically transformed the traditional educational structures of the European countries. We could witness the transition to the three-cycle training structure, the spread of the learning outcome approach, and the appreciation of non-formal and informal learning (*Bologna Secretariat*, 2009).

In parallel with this, the outcome based competence oriented approach has become dominant in ITE, too, in Europe, in which the role of ITE is to prepare the continuum of teacher education, to lay its foundations, and to ensure the acquisition of the fundamental competences. Initial teacher education prepares the next two phases of the continuum of teacher education (induction period and continuous professional development), and lays the foundations of reflective practice for development during the whole continuum (*Commission of the European Communities*, 2007; 2008; *Council of the European Union*, 2009).

Beyond competence-orientation and the ideal of integrated phases of teachers' development continuum, the pedagogical system of views has definitely turned from factual knowledge to learning, from teacher to pupil, from teaching to learning. The embracing diversity in the broadest sense into the educational system, differentiation in the classrooms (*European Agency for Development in Special Needs Education*, 2012), the professionalization of teaching (*Council of the European Union*, 2009), and the support and professional development of teacher educators are also in the center of European professional dialogues (*Commission of the European Communities*, 2007; Donaldson 2010; *Teaching Council of Ireland*, 2011).

In the main stream of changes in the past ten years, Bologna reform has radically redrawn European higher education, including ITE. Therefore, it comes naturally from the situation that there is a need for a comparative research at a European level on national ITE practices after the reform. The first part of this work shows the results of a European comparative study carried out in 2010, investigating the basic characteristics of reforms, and structures in ITE in 29 systems of 27 countries.

The subject of the comparative study was ITE of class teachers and subject teachers of the first three ISCED levels,[22] that is, from grade 1 to 12. In the study based on a questionnaire, the specialists and the persons in charge of ITE in the ministries were asked about the following three topics: (1) the main characteristics of teacher education, (2) the state and the direction of the reforms, (3) the structure of the ITE programs (paths).

In the study, the experts of ministries of the next 27 countries of the European Higher Education Area (EHEA) provided data about their countries: Albania (AL), Armenia (AM), Austria (AT), Belgium (BE), Bosnia and Herzegovina (BIH), Croatia (HR), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), Germany (DE), Hungary (HU), Iceland (IS), Latvia (LT), Lichtenstein (LI), Lithuania (LV), Luxemburg (LU), Moldavia (MD), Montenegro (CG), Norway (NO), Romania (RO), Spain (ES), Switzerland (CH), Sweden (SE), The Netherlands (NL), Ukraine (UA), and United Kingdom, England (GB, E).

The study provided compelling data on the fact that the Bologna Process is no longer a matter of choice; it is a European (in fact, a Eurasian) reality. The transformation sweeping through Europe shows dominantly

[22] ISCED: International Standard of Classification of Education, developed by UNESCO. ISCED 1 is primary education, ISCED 2 is lower secondary education, and ISCED 3 is upper secondary education.

a bachelor's degree structure of ITE for primary school teachers, and a dominantly a bachelor's plus master's structure of ITE for lower and upper secondary teachers.

The ITE reforms linked to the Bologna Process have taken place in waves, but the great wave of structural transformation is generally over in Europe, rather fine tuning is taking place currently. In most of the countries, strengthening the preparation in the fields of education and psychology, subject methodology, and practical preparation are top priorities among the aims of the reforms.

In connection with the Bologna reform of ITE, it became clear that the structural transformation was not for its own sake, but proved to be an opportunity to renew the profession. At the European level, the primary motive behind the Bologna reforms was the need for professional renewal; the second motive was making teaching as a career more attractive, the third one was improving the preparation of the students in subject methodology. The countries involved in the study mentioned deepening subject knowledge only as the tenth in the list of motives.

The analysis of ITE systems and paths has revealed that the duration of ITE is increasing in Europe, and in many countries the qualification levels have also increased. It is typical that for teaching at a higher level of the school system, a longer preparation and a higher level qualification is required. In contrast with the aims, the analysis shows that the extra time and credits in the education of teachers for higher ISCED levels in schools tend to be spent on subject preparation, often even at the expense of the educational, psychological, and methodological preparation. Thus, the lengthening of teacher education results in trends of increasing levels of subject knowledge and decreasing levels of practice and preparation for the role of the teacher.

On the whole, we can say of the paths of ITE in Europe that at all ISCED (primary, lower secondary, upper secondary) levels, on the average about 110 credits are allocated to professional preparation for becoming a teacher – in addition to the credits of the subject orientation –, including a usually one semester long (30 credits) in-school practice. This means that usually two semesters remain for the preparation for the teaching profession, in which the acquisition of the complex teacher competences is a real challenge. This is especially true of the development of skills and attitudes, which is known to be time-consuming. Consequently, preparation of teachers can only be successful where the pedagogical approach, values, and the opinions regarding the ideal of a good teacher are shared between the group of teacher educators, and they cooperate as a team.

Only in 16% of the 25 European countries surveyed are the ITE programs for ISCED 1-2 strictly separated from those for ISCED 3.

Regarding Hungary, the present study has shown that the Bologna reform of ITE has progressed in compliance with the aims, structure, and proportions of the European trends. The comparative analyses at the level of paths have revealed that ITE offers a better than average training and in-school practice. Master's level teacher education in Hungary falls behind the European average in only one aspect, namely, the number of credits spent on teacher professional preparation.

The above data do not seem to support the criticisms appearing in Hungarian debates, namely, that the volume of disciplinary credits is insufficient, or that educational and psychological preparation is disproportionate, too dominant. The European trends presented do not seem to justify the demand put forth by some professionals that we should return to the undivided education from the present divided training, or that we should separate the training of teachers for ISCED 1-2 and ISCED-3 levels.

Nevertheless, the already finished, and apparently "Euro conform" Bologna reform of teacher education in Hungary was strongly debated by teacher educators. Differences in approach could clearly be sensed in these debates, but they have never been explored in a detailed study covering the whole country. Similarly, no data have been available regarding the interpersonal network behind formal organizational structures actually realizing ITE programs. Sensing the attitude gaps between groups of teacher educators the questions naturally arise. Do they work together on realizing ITE? Is there real cooperation? Do differences in attitude and views influence the characteristics of interpersonal relations between teacher educators? The aim of the second research in 2011 was to find answers to these questions.

In contrast with the orientation toward a European comparison, the second research revealed the characteristics of the central role players in teacher education in Hungary, namely, teacher educators and their main institutions. Since interpersonal work relationships and attitudes are known to change only slowly, and are particularly difficult to be changed by external influences, the aim of this research can be rephrased as the study of the social psychological features that are independent of the structure and content of teacher education.

The core of the study was a structured questionnaire, containing open-ended, closed, multiple choice and scaling questions. After the preliminary approval by the rector of the given higher education institutions, interviewers surveyed the respondents in the sample. In addition to the questionnaire study, thematic qualitative interviews were also conducted with at least one leader of each institution in order to get acquainted with the context of the organization and regulation of teacher education in the institution.

In accordance with the aims, one of the areas in the course of the research was mapping the schemes of views of teacher educators. The basis of attitude

testing was a scaling measure containing a set of structured statements, supplemented by open ended and closed questions in an alternating manner. A set of questions constituted the other pillar of the questionnaire, designed to get to know the interpersonal work relationships of teacher educators within the organization.

The composition of the sample of about 150 teacher educators was determined along three dimensions: the institutions, the disciplinary field, and the function in ITE. (The categories of the fields were as follows: science, humanities, education and psychology, coordination, and schools; the categories by function were: subject professors, methodologists, and heads of modules, coordinators, and school teachers. (The categories of coordination and schools, and teachers were the same in the two divisions.) The specific respondents were recommended by one of the leaders of the institution responsible for ITE, considering the proportions of the given fields and functions. That is, there was quota used within a non-probability procedure of sampling.

Principal component analysis was performed for the attitude measure, thus main components (or simply: factors) of views were created, whose characteristics were studied according to institute, and according to teacher educators' field, and function. The data on interpersonal relationships were visualized and analyzed by social network analysis, while the interrelationships of the opinions and characteristics of the social networks were studied by analysis of variance.

Let's begin the comprehensive review of the views of teacher educators by showing their views on schools and the image of the ideal teacher. The opinions of teacher educators regarding the school system, teacher image, and education reforms, and their interrelationships are fundamental, because teacher education is supposed to prepare future teachers for the challenges in the school system, and because the ideas of teacher educators influence future teachers directly and indirectly.

According to the results of the study, teacher educators see the lack of appreciation and the lack of motivation of teachers, the difficulties of motivating pupils, and the need for a compensation of social inequalities within the educational system as the greatest present day challenges of schools. It is important to note that less than a half of the respondents have information about the present challenges of schools through their own professional working relationships. The majority gain information from the media, professional forums, and teacher acquaintances, thus, the views teacher educators have of the challenges of schools is often indirect and can easily be influenced.

It cannot be expected of teacher education programs to offer solutions to all questions related to challenges of schools. Questions such as the appreciation of teachers or teacher careers will not likely be solved through ITE. Thus, we concentrated on issues raised that are relevant for ITE. The most important such challenges found in the responses were achieving respect for knowledge in the children, their motivation for achievement, and decreasing drop-out rate and inequality.

According to teacher educators, the most important characteristics of a good teacher are well preparedness in the subject taught, and personality characteristics like empathy, openness, acceptance, and authenticity. Pedagogical preparedness is much less important in the ideal teacher image of the teacher educators, and even there, there are two distinct lines of approach regarding professional preparedness. The first one considers pedagogical preparedness as the acquisition and passing on of knowledge, the second one regards it as a complex and differentiated development of students based on the teacher's self-reflection and self-development. It is important to note that only an insignificant number of the responses included in their answer of pedagogical preparedness the capacity for differentiation in the teacher's work, or a reflective and self-developing pedagogical practice or searching for innovative solutions to the new expectations of society.

We can say about the motives of the Bologna reforms in teacher education in Hungary that they are similar to and fit the European tendencies, and are tinted by Hungarian characteristics and attitudes. Hungarian teacher educators definitely placed professional aims and raising quality at the top of the list of factors determining the reform, that is, increasing coherence, and improving the amount and orientation of practice. This is followed by strengthening pedagogical and psychological orientation, and by creating motivation for the student-teachers.

The orientations of the three views are not in harmony with each other. The individualized, differentiated development of children, and a system of pedagogical tools that can constantly renew itself are essential for the children's motivation, also in the development of their respect for knowledge, or in avoiding their falling behind. However, these methods are virtually absent from the image of the ideal teacher. Thus, there is no coherence between the challenges of the schools and the ideal image of a good teacher, while the reflective, differentiating, and competence-based development of pedagogical and psychological preparation is one of the main directions of the Bologna reform. This means that while teacher education reform is in harmony with the requirements posed by the challenges of the schools, it conflicts with the views of teacher educators about the ideal teacher. All this can be illustrated in the simple sketch of *Figure 21.*

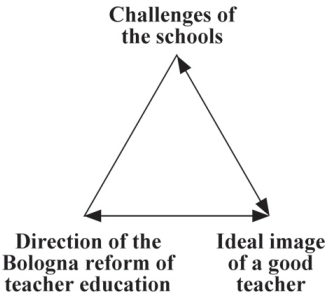


Figure 21: *The interrelationship among the views of teacher educators regarding the challenges of the schools, the ideal image of a good teacher, and the direction of the Bologna reform of teacher education*

In addition to the above contradictory system of relationships, the Bologna reform, the evaluation of the teacher educators regarding their own teacher training activity, and the vision of the future also belong to the overall picture about the views of teacher educators.

The responses to the open ended question of the research showed that about half of the respondents agreed, and half disagreed with the Bologna reform of teacher education; the average support of the reform was slightly positive, scoring 3.35 on a five point scale. This – the opinions of the teacher educators in general – does not call for the withdrawal of the Bologna reform, nor does it show the necessity of its complete revision.

According to the answers, teacher educators are basically content with the present institutional operation of teacher education; they do not think it would be in a critical state, or that it definitely needs to be transformed. They assume some backwardness only in comparison with some indistinct image about the situation in other countries. The overall satisfaction with ITE falls back to a moderate level when referring to ITE content, i.e. the opinions of the teacher educators imply that there is still more to be done in the area of content revision and modernization.

The respondents generally judged the professional contents they used themselves as more up-to-date and modern than those farther from their own discipline. They thought they were using a wide range of methods in their own teaching practice, but were developing students' pedagogical skills only moderately. Similarly, the teacher educators were familiar with the modern pedagogical approach as a requirement for their jobs, they believed they lived up to it in their own practice, but were not convinced about its prevalence in the group of teacher educators as a whole. The great majority of the respondents thought of themselves as teacher educators, and thought their teacher educator activity was definitely important among their other tasks.

The lack of a clear vision of future was markedly present in the circle of the respondents; moreover, pessimistic expectations regarding the quality of future students were also clearly demonstrable. Nevertheless, teacher educators also reported that their own activity related to teacher education was positive.

An attitude scale was used to measure the system of views of the teacher educators, containing five (one summary and four specifying) statements in each of 26 areas related to the Bologna system and the master-level ITE program. The respondents had to indicate the level of their agreement with the 130 statements clustered by topic on a five point scale.

The statements used in the attitude questionnaire were derived from the arguments put forward at national forums, lectures, and discussions on master's level teacher education in 2010 and 2011. When composing the items, we took care to include ideas both supporting and criticizing Bologna type teacher education in every field, and also to represent the various points of view proportionately and in the same orientation as they were present in the arguments.

Principal component analysis was used to show the intercorrelation among the respondents regarding the level of agreement with the statements in the attitude measure. It was found that the attitude system of the teacher educators is fully developed: seven components, that is, 7 co-varying groups of views could be identified.

The strongest, first bundle of views is the Factor 1. Concisely, this factor depicts a scheme of views that is against the structure of the Bologna reform and idealizes the past. The items with the heavies load in this scheme of views formulate the advantages, clarity, and transparency of the undivided structure of the previous, traditional system of ITE. Essentially, this scheme of views disregards the changes in higher educational, educational, and the social environments, does not understand the role and justification of the Bologna Process and the necessity of the reforms either in ITE, or in higher education in general.

As the first factor of principal component analysis, this system of views represents the relationships with the greatest explanatory factor in the co-occurrence of views, in the variance of the views; thus, the views appearing in this factor belong together the most and their evaluations vary together the most strongly. The sample mean is slightly supportive of this scheme of views, but the group of teacher educators is highly divided in this issue.

The call-word for the scheme of views represented by Factor 2 is discipline. An important attitude of the discipline oriented approach is that the organizational host of ITE should be the disciplinary departments, that is, it is really a key issue to regain the leading role and direction. Another important trend in this factor criticizes the pedagogical and psychological

studies; furthermore, two statements among the items of this factor even doubt the scientific parity of disciplinary subjects and the pedagogical and psychological fields.

This hardcore approach that cried for the disciplinary control of ITE was slightly rejected by the teachers educators in the sample, at the border of indifference.

The Factor 3 comprises the views that are related to coherent, motivating, and practice-oriented preparation. This scheme of views is definitely supported by the teacher educators, as seen in the highest factor mean and lowest standard deviation.

In Factor 4, there are several ideas that are not closely related in their contents. One of the ideas is the dislike of the semester long in-school practice, namely, that the duration of teacher education with it is too long, and the time of graduation is not in harmony with the opening of new jobs in schools. Another set of ideas is the rejection of uniform preparation for teachers of different age group students, or different subject disciplines. The fourth factor got a close to neutral, slightly positive mean rating in the whole sample.

According to the scheme of views present in Factor 5 the main criterion for a good teacher is profound subject knowledge, coupled with a broad repertoire of methodology as to how to transfer knowledge. Behind this factor we can find the conservative pedagogical view according to which the fundamental role of a teacher is to transfer knowledge, and that of a pupil is to take it in. The sample mean slightly rejected the fifth factor.

Factor 6 is an assault fire at, and the total rejection of master's level teacher education. The sixth factor, summarized as "everything is wrong", was rated by the sample as neutral on the average.

The system of views of Factor 7 emerges as the demand for "producing" teacher-scientists, great teacher personalities, and teachers raising their profession to the artistic level get an accented role in it. Similarly to the third factor, the sample mean was slightly supportive of the seventh factor.

The contents of the seven factors can be divided to two parts: five of them (1st, 2nd, 3rd, 4th, and 6th) address the systemic level of ITE, and two of them (5th and 7th), regard the characteristics of a good teacher. Regarding the factors dealing with the structure of ITE, an overall impasse is reached in the country. The support of the fourth factor that clearly evaluates the reform positively, and the milder support of or neutrality in the other factors that oppose the reform does not show that the reform is judged against equivocally.

The foundation of the national agreement among the teacher educators is given by the scheme of views of the third and seventh factors, out of which agreement with the third factor is clearly strong. Regarding the other factors, there are large differences of opinions.

The greatest dividing disagreement among teacher educators, involves the second factor, which regards the disciplines as the essence of teacher education and as its' ideal organizational host. This finding implies that there is a battle over and a difference of opinion about who should direct and control ITE, this strategic branch of higher education: This is at the bottom of present day disputes.

The support of the factors was also studied by the field and the function of teacher educators. It can be seen in the results that it is the identity by field f the teacher educators that was decisive in the opinions: ANOVA revealed that the respondents' discipline had a statistically significant effect on the mean scores in factors 1, 2, and 5 ($p1<0.01$; $p2<0.01$; $p5<0.01$, respectively).

Analysis by field revealed that factors 1, 2, 4, 5, and 6 were collectively or – so to speak – systematically rejected by the representatives of the field of education and psychology and by those of the coordinators, although to various degrees, while the representatives of the sciences, humanities and the schools (teachers) gave supportive opinions.

It is worth mentioning, and it probably deserves further investigation that in the case of factor 4, that includes the rejection of in-school practice, it was the mean scores of the teachers in schools that was the highest. In other words the school based mentors and school heads were against practice the most. This paradoxical result suggests that more intensive discourse between higher education institutions and schools, more provision of information, and probably better financing of school tasks would be desirable.

The conservative pedagogical view of the role of teachers (Factor 5) is represented by the teacher educators of the science field together with the teachers of the schools, the rest of the fields reject this view. It is an important difference that while the disciplines resent the coordination of the pedagogical-psychological field together, the restrictive conceptualization of the teacher's role characterizes the sciences and the teacher educators at schools only.

Thus, we can say on the basis of the field of the teacher educators that the scheme of views of the pedagogical and psychological field and that of the coordinators markedly differ from that of the fields of sciences, humanities, and teachers in schools.

Cluster analysis on the responses supports these results: Cluster analysis identified two groups who markedly differ in their opinions, and a smaller, scattered group outside the mainstream opinions.

It could be seen in the analysis that persons in the first cluster formulated a rejecting opinion in the "anti-Bologna" factors (Factors 1, 2, 4, 5, and 6), and supported the systems of view that emphasize coherence, motivation- and practice orientation, and that depict the complexity of

the teacher-scientist and teaching as an art-like profession (Factors 3 and 7). Thus, respondents in the first cluster are the supporters of the Bologna system, and also reject the idea of the teaching profession being restricted to passing on knowledge. This shows that the supporters of the Bologna reform of Hungarian ITE tend to have more complex and progressive views regarding the roles of the teachers. The greatest proportion of the respondents in this cluster came from the fields of education and psychology, and coordination.

The persons in the second cluster systematically supported the factors that criticize teacher education in the Bologna system (Factors 1, 2, 4, 5, and 6), thus, we can say that this is a group opposing the reform. Only the members of this second cluster supported the restrictive view of the role of teachers, appearing in component 5, limited to passing on knowledge. This cluster included two thirds of the teacher educators, and the respondents mainly belonged to the fields of the humanities and the sciences.

Respondents in the second cluster regularly supported the bundle of views that criticize the Bologna type teacher education (Factors 1, 2, 4, 5, and 6), so we can say that the group members in the second cluster oppose the reform. Of the two clusters and the uncategorized group, only the members of the second cluster supported the narrow concept of a teacher (Factor 5). This cluster included two thirds of the teacher educators, and the respondents mainly belonged to the fields of humanities and science.

We received similar results in a control study in which the respondents could be categorized into three groups on the basis of their responses to the items of the first factor. The results of this study also showed that the supporters of the Bologna reform, that is, the first group included 30% of the sample, while the second and third groups constituted 70% of the respondents.

The data by field reinforced that more than half of the respondents from the fields of education and psychology are in favor of the Bologna reform, most of those from coordination are slightly rejective, but one third of them are supportive, while the majority from the fields of sciences, humanities, and schools are strongly rejective. However, 30% of teacher educators in the field of humanities were supportive, so it can be concluded that humanities is the most divided field regarding the reform of teacher education.

The overview of the opinions of the teacher educators in the samplethus confirm that there is no agreement among teacher educators regarding the most important questions of teacher education in Hungary; in fact, there are fundamental differences of opinions. The views are determined mostly by disciplinary and institutional belonging, by the views that developed during the time spent in the various fields. Since opinions are characteristics that are subject to very slow changes and that are very difficult to influence from outside, it cannot be expected that the differences will be bridged or eliminated in the short run.

It is also evident from the overall and detailed study of the opinions that the common ground among the teacher educators in Hungary is coherence, good coordination and practice oriented preparation, and the ideal of the teacher-scientist raising his or her profession to the artistic level. The most divisive differences of opinion could be seen regarding the organizational control over teacher education and the structure and proportion of contents within the education, affecting the interests and prestige of the teacher educators.

One might say that the differences of opinions regarding the structure of education and the reform are natural. The various fields and institutions were affected by the transformation of ITE differently; obviously, the development of the personal, group, and institutional interests and prestige had an effect on the developing directions of views. On the other hand, both supporting and opposing views can be discovered and identified in all cases of profound reforms; the consolidation of the conflicts and the convergence of opinions can generally be expected with time, with new tasks, with changes, and with the verification of the success or failure of the reform.

The picture received of the views of the teacher educators is problematic with respect to the two markedly different ideal images of a teacher. It is indispensable for the success and efficiency of any form of ITE that teacher educators shape by both their conscious and spontaneous manifestations the image of a good teacher in a coherent, complementary way. It is indispensable since the slightly more than one semester provided by the 40 credits for professional preparation (education and psychology) is by itself not sufficient to shape these views. The time spent on education is wasted with respect to the development of attitudes, if the teacher educators do not agree in fundamental values and aims.

It is particularly painful that the respondents in the fields of subject methodology and schools, who have the most “teacher like” profession, turned out to have a basically conservative image of an ideal teacher almost uniformly. The question arises if student teachers meet so heterogeneous teacher-images in the course of their studies, and see such a narrow and conservative conceptualization of the tasks of a teacher in the course of their school practice, will it be possible to widen it in the continuum of teacher education. Looking at the question from the other side: In case of markedly different teacher educators, whose effect will have the greatest influence on the student teacher’s attitude?

The system of work relationships were uncovered by the method of social network analysis. Our primary hypothesis was that the effective and successful realization of the most complex educational form of Hungarian

higher education, that is, master's level teacher education is inconceivable without the coordinated cooperation among the different specialties. Therefore, our aim was to reveal the network of relationships of the persons working in and operating ITE in ten institutions of teacher education, and to evaluate them from the aspect of organizational psychology.

The following characteristics were used in the questionnaire regarding the interpersonal relationships: number of relationships, regularity of relationships, mutuality of information-provision, pleasantness of the relationships, importance of the relationships, and the lack of disputes in the relationship. Three further indicators, relevant for communication, were also introduced in the course of analysis to characterize the network of relationships:

– *K-core components of a network*: provides information on how many persons form the core, or central component in the network that determines the operation of the group, that is, how small or large the group is that actually controls the processes;
– *Page Rank*: shows the probability of reaching a person when addressing someone at random in the network.
– *Closeness centrality:* gives the reciprocal average distance among the persons in the network. In other words it shows, how difficult or easy the cooperation of teacher educators are in the established network.

Of the 145 respondents participating in the study, 132 provided data on their working relationships in teacher education, naming a total of 541 persons and their 1267 relationships in the institutional networks.

A case study was prepared of the interpersonal relationships on the ten studied institutions, including the short description of the institution, the characteristics of the sample in the research, the main structural characteristics and figures of the interpersonal relationship network, the relationships of views in the central component of the institute and in the network of relationships.

The case studies of the institutions revealed that the studied institutions are highly diversified, and they showed individual characteristics in their interpersonal relationships ensuring the complex task of ITE. The institutions are heterogeneous in the form, structure and characteristics of their relationship networks, in the personal judgment of the characteristics of their relationships, and in the scheme of views appearing at the different nodes of the relationship network.

The opinions at the institutional and the institutional group level regarding the Bologna reform of teacher education varied within a wide range. The proportion of the supporters and resolute opponents of the Bologna Process varied from institution to institution; these views were present to various extents both inside the core component of the relationship network and in the periphery.

It is worth looking at the average scores of the individuals in the core of the institutions of teacher education with respect to the first factor, that is, the support of the Bologna Process. The Bologna Process was supported by the cores of the social networks of four institutions, and it was opposed by those of six institutions.

The relationship characteristics of the teacher education fields and functions were studied at the national level, together with the composition of the core component and the effect of opinions on the relationship characteristics. The following characteristics appeared at the level of group averages.

The relationships of the respondents working in the fields of coordination and education and psychology in teacher education have the greatest number of relationships, thus, the mean data confirm that the informal system of relationships of the representatives of these fields is in accordance with their formal roles. The great number of relationships is accompanied by relatively low levels of pleasantness of the relationship and is laden with heavier disputes – probably because of the great number and complexity of coordination, and the enormous differences in the systems of views. Relationships in teacher education are moderately important for these groups.

Teacher educators in the fields of the sciences and the humanities have about the same amount, a moderate number of relationships. The pleasantness of their relationships is high, they perceive their relationships as relatively free of disputes; on the other hand, the humanities rate the importance of the relationships of teacher education with the highest scale values, the sciences rate it with the lowest values.

Respondents working in the field of schools have the least number of relationships in general, and find them the most pleasant and free of disputes. Nevertheless, they rated their teacher education relationships as the second lowest in importance.

As to the categorization by functions, the group of subject methodologists has a definitely great number of relationships, which indicates that similarly to the coordinators, they have an informal system of relationships that conforms to their formal statuses. This group rates their teacher education relationships as the most pleasant, and their importance as moderately important.

Interestingly, the heads of modules have a small number of relationships on the average, less than that of the subject professors. This group found their relationships very pleasant and free from disputes. This implies that the heads of modules only formally perform their tasks of monitoring and

coordinating the contents of the modules. The signs of intensive, multilateral coordination that would be necessary for their activity are absent from the number of their relationships, from their evaluations of the charge of disputes, and from their ratings of the occasional unpleasantness of their relationships. Yet thinking over, re-evaluating, and renewing the disciplinary contents – that are theoretically parts of their jobs – should unavoidably go together with struggles, disputes, and unpleasantness in their relationships.

The mean number of relationships of the subject professors is moderate, but they rate their relationships of teacher education as less pleasant.

Beyond the groups of teacher educators by field and function, the size and composition of the core components of the social networks of the institutions deserve special attention. The number of persons in the institutional core was relatively high as compared to the number of respondents. Within the core, the proportion of persons in the fields of coordination and education and psychology was the highest, followed by that of the teacher educators in the disciplinary fields, then by those in the schools. The proportion of subject methodologists was high in the core of the relationship networks, while the proportion of subject professors was smaller than that of the teachers in the schools.

Apparently, the national means of the characteristics of the relationships suggest a general tendency, namely, that the different groups of teacher educators have informal relationship profiles that are basically appropriate for and match their formal roles. The heads of modules, however, are an exception to this. On the basis of their informal system of relationships, this group does not seem to fill their formal roles in their informal relationships. It can also be seen that there is more to be done in integrating the teachers of the schools into the network of relationships of teacher educators.

The studies have shown that the importance of the person, that is, the level of responsibility taken in teacher education has a significant effect on some aspects of his or her interpersonal relationships. Thus, importance affects the Page Rank and the number of relationships of the person; so, the greater formal responsibility one undertakes in teacher education, the more relationships one has and the greater the probability that one will be reached in case of random search. This is basically also a sign of healthy organizational operation.

It is a particularly interesting that the pleasantness ratings of the relationships are significantly influenced by the importance and by the system of views of the person, in interaction with each other. That is, the views in themselves have no effect on the interpersonal relationships, cooperation must work in the interest of ITE, despite greatest differences of opinions. The views and the level of responsibility for teacher education together, however, determine the pleasantness of the relationships.

All this reinforces what has been said before, namely, that in the institutions, the groups by discipline and function take part in the actual interpersonal realization of teacher education in accordance with their formal roles.

Knowing the history of the master's level teacher education program, it is clear that the reform was generated and led by the pedagogical and psychological field – the field whose scheme of views, as we have seen, is radically different in most respects from that of other higher education fields. The reform interfered with interests and views of prestige, and also violated and upset conservative views, but at the same time it is fit to the requirements of the schools, and was in agreement with the orientation, structure, and values of the trends in Europe.

The institutional case studies imply that despite the differences in the structure of relationships and in the proportion the different fields and functions participate, the fundamental frames of professional cooperation necessary for operating the master's level teacher education programs are ensured. This is supported by the fact that the "operators" of the ITE programs gave a 4 on a five point scale to teacher education: Master's level teacher education operates well in Hungary.

Apparently, the problem is not so much with the reform itself, but with the surrounding attitudes that are losing contact with Europe, with the struggles fighting to maintain previous conditions and positions at any price, even at the cost of losing sight of the strategic interests and needs of teacher education and of schools.

V. Appendix

Appendix 1: The system of views of teacher educators – Statements in the fi rst factor

(The originally negative factor items are indicated by grey; their factor loadings were calculated after reverse-scoring.)

Factor 1: Bologna Process opposition, idealization of the past: Mean: 3.27	Loading	Factor mean
14.7. As opposed to the two-cycle initial teacher education, it is an advantage of the undivided teacher education that it is known from the very beginning who prepares to become a teacher.	0.789	3.60
44.13.1 Traditional initial teacher education was clear, it contained branched pathways, and the system of training was transparent.	0.751	3.88
44.11. With the Bologna type two cycles, initial teacher education was forced into a structure that is foreign to Hungarian traditions.	0.693	3.82
44.11.3 The Bologna system made it possible to build basic disciplinary studies and focused pedagogical preparation on one another in initial teacher education.	0.686	2.86
44.1.4 Although the volume of credits in the second (minor) subject is not too big, but the well directed and suitably constructed curriculum can provide sufficient knowledge and approach necessary for beginning the teacher career.	0.633	3.03
44.10.1 In the fields of the humanities, disciplinary and teacher-professional preparations have traditionally been conducted together, and this is what is taking place at the Bologna type bachelor's level, which is a cost-effective solution, and it also leaves a free choice to the students with respect to continuing on this path.	0.619	2.61
44.13.4 Although the Bologna system of initial teacher education is complicated, but we are already over the most difficult part of the in-teach phase: The institutions have already solved the basic issues of transformation, and the students have accepted and can orient themselves in the new system.	0.610	2.78
44.11.2 Nothing justifies forcing initial teacher education into the European multi cycle structure, since it works for the Hungarian market.	0.592	3.23
44.11.4 The introduction of the Bologna system provided an opportunity to expand the almost one and a half decade long process of professional renewal.	0.587	3.36
44.13.2 The Bologna type education is unclear not only for the students, but for the teachers as well; the sources of confusion are the relationship between the bachelor's and master's levels, the multitude of subject-qualifications of master's level teacher education, the great number of responsible persons of sub-tasks, while there is no real host of initial teacher education.	0.586	3.48
14.7.2 Undivided teacher education can serve the aims of teacher preparation form the beginning, it does not disrupt professional socialization, and nothing hinders it.	0.584	4.04
14.4.1 Mass education must be eliminated, and only those should continue with their studies who meet the high standard requirements.	0.559	3.37
44.11.1 Previously, Hungarian initial teacher education was useful and effective; it was really a pity to disturb it.	0.553	3.22
44. 1 In the two-cycle structure, there is no way of acquiring the conceptual basis of the second subject.	0.519	2.99
44.2.4 The professional and methodological knowledge related to the second subject in the continuum of teacher education can be deepened in continuing education, too. Therefore, it is not necessary to devote the same attention to both subjects in the course of master's level teacher education.	0.498	3.70
44.2.2 The seemingly two majors in initial teacher education mislead the students and the schools that employ them, because the two qualifications cannot be equal in the practice of teaching.	0.493	3.40

14.6.2 In higher education institutions, the available places should be opened so that the students coming from the secondary schools could apply for the really needed careers, like teaching.	0.466	3.56
14.7.4 It is a disadvantage of the undivided teacher education that is does not offer a way out to unsuited students, so they too obtain a teacher's diploma or leave higher education without getting any diploma after many years of studying.	0.437	2.50
44.1.1 The first cycle of the Bologna type education serves the purpose of deepening scientific knowledge and attitude, and this is successful in the first subject (major), it will be transferred to the second discipline, too.	0.412	2.89
44.1.3 The volume of credits devoted to the second subject (minor) reaches that of the previous college-level training, therefore, it is possible and it is a must to bring the students to a level of approach where most of the teachers had stood – in both of their subjects.	0.410	2.82
14.1. The knowledge students bring from secondary school is not enough for beginning their studies in higher education.	0.391	3.17
44.8.1 Many have all kinds of ideas about the development of children, but the scholars of the different disciplines know the best what should be taught to them and how.	0.390	2.67
14.4.3 Future researchers and future teachers have to be separated already at the bachelor's level on the basis of their performances.	0.387	3.15
14.5. Interest in the teaching career dramatically dropped after the introduction of the Bologna type two-cycle education.	0.383	3.42
14.8. It is not known what a bachelor's degree is good for in the world of schools, it cannot be used for anything here.	0.373	4.35

Appendix 2: The system of views of teacher educators – Statements in the second factor

(The originally negative factor items are indicated by grey; their factor loadings were calculated after reverse-scoring.)

Factor 2: The discipline is the essence and organizational host of initial teacher education Mean: 2.98	Loading	Factor mean
44.3. The intensive growth of the proportion of studies in education and psychology has taken place at the expense of disciplinary preparation and knowledge.	0.767	2.96
44.3.4 In schools, it is not the lack of subject knowledge of the teachers that prevents learning, but the lack of motivation, interest, and intellectual neglect of the pupils – to which the correct answer is equipping teachers with better knowledge in education and psychology.	0.671	2.21
44.8. Initial teacher education must be put into the hands of the disciplines.	0.611	3.13
44.3.1 Teachers in today's schools must struggle with problems of education that cannot be solved by having subject knowledge only; one must be prepared in education and psychology better than ever before.	0.605	1.76
44.12.4 Uniform outcome based knowledge conforming to the demands of schools is the best ensured if initial teacher education is a separate subject (major) including all of the qualifications and forms of education.	0.576	3.18
44.9.3 Obviously, initial teacher education offering different kinds of qualifications must be coordinated, but it only increases organizational uncertainty if the traditionally attached disciplinary preparation and teacher preparation are separated organizationally.	0.549	2.41
14.7.1 The disciplinary and pedagogical type of studies are disproportionately distributed in the Bologna type of education, it is not possible to deepen subject knowledge sufficiently in master's level teacher education, and the congested pedagogical-psychological and subject methodological studies cannot be built on each other in time.	0.528	2.24
44.8.4 Initial teacher education will be successful if the participants in the disciplinary fields recognize the scholarly equality of education and psychology as subject methodologies and accept the leading role of education and psychology in initial teacher education.	0.521	2.48
44.3.2 Solid knowledge of the discipline and the acquisition of its perspective are essential; pedagogical and psychological studies will never replace it.	0.501	1.86
44.4.4 Pedagogical studies are theoretical because there is too much history of education.	0.468	3.73
44.4.2 In preparing for a teacher's career, one cannot talk too much about the school, the scope, functions and methods teachers have; it is an essential prerequisite for the conscious and self-reflective work of a teacher.	0.464	2.41
14.11. Scholarly teachers must be trained; their efficiency may raise the quality and efficiency of schools.	0.463	3.10
14.11.3 Teachers must be scientifically prepared and knowledgeable in how to plan, organize, and evaluate the learning process.	0.457	2.19
44.4. Theoretical pedagogical knowledge disproportionately prevails over practical knowledge in the pedagogical and psychological studies.	0.456	2.67
44.8.2 Undoubtedly, pedagogy based of psychological knowledge is a profession in itself, and the field of education and initial teacher education are in the best hands if they are directed, represented, and developed by the scholars of this profession.	0.446	2.44
44.12.1. Teaching as a single major is a megalomaniac idea, because keeping the 1000 combinations of the various subjects in one hand is impossible both theoretically and technically.	0.425	2.87
44.15.4 The fifth semester does not pose a real problem either to the students or to schools, because the student of teacher education can spend the semester after the practice meaningfully and usefully.	0.403	3.17
44.8.3 It is not accidental that the scientific prestige and authority of the sciences and the humanities in the institutions of higher education are higher than those of pedagogy are.	0.384	2.60
44.9.2 Initial teacher education is such an important task for the sciences and the humanities both in amount and in quality that the organizational hosts, the affected faculties, cannot give up the responsibility they have for initial teacher education.	0.383	1.71
44.7.4 In order to create coherence in initial teacher education, basically, it is the pedagogical and psychological module that has to accommodate to subject knowledge and the contents of disciplinary pedagogy.	0.318	3.37
44.10.2 In the field of the sciences, training of researchers has long been detached from teacher education; if this had not been preserved in the Bologna system at the bachelor's level, the professional progression of the talented researchers and experts would have been unjustly decelerated.	0.308	2.83
44.9.4 Coordination must be limited to the issues of the organization of education; contents must be left to the people in the disciplinary field.	0.300	3.51

Appendix 3: The system of views of teacher educators – Statements in the third factor

(The originally negative factor items are indicated by grey; their factor loadings were calculated after reverse-scoring.)

Factor 3: Coherence, motivation, and practice oriented preparation Mean: 4.21	Loading	Factor mean
44.5.1 Subject methodology translates knowledge learnt in the discipline and in the pedagogical and psychological studies into the language of practice.	0.705	4.01
44.5.2 Neither disciplinary preparation, nor teaching general education and psychology will achieve their aims if they are not connected by subject methodology and if they are not exposed to the test of in-school practice.	0.626	4.25
44.5. Subject methodology and in-school practice should be placed in the center of initial teacher education.	0.574	3.64
44.9.1 Various specialists and organizations participate in initial teacher education; it is impossible to prepare for this profession efficiently without coordinating the contents of their work and harmonizing the operation of their activity.	0.545	4.68
14.3.2 There are students who choose the teacher major because they are interested in and wish to promote the development of the children's personalities.	0.472	3.60
44.14.4 The complex task of the organization, execution, and evaluation of in-school practice makes the teacher training institutions sensitive to the present situation and challenges of schools, and this makes the contents of the theoretical and practical parts in the training more coherent.	0.466	3.88
14.2.4 The decisive factors in the efficiency of school-preparation are the motivation of the pupils and preserving this motivation.	0.444	4.40
44.14.3 The state undertakes extra costs, and the students work more and longer in the master's level teacher education with the one semester extension of field practice, but it is worth it just as much as the preparation for other professions, like the undivided training of doctors and lawyers with specialization extension.	0.438	4.08
44.4.3 Practice in the field of the schools has increased in initial teacher education; pedagogical and psychological studies must prepare for this and support its working-through; this is what ensures theory and practice to build on one another.	0.429	4.01
14.7.3 The possibility of revising the decision the students made after their secondary school studies must be given to the students: If they do not wish to become teachers after all, they should be able to switch to the disciplinary field, and vice versa, the students in disciplinary training must be allowed to switch to teacher education.	0.422	4.33
14.9.3 Nowadays, it is essential to gain some experience abroad in the teaching of the discipline and in the operation of their educational system for the high quality and development of the teaching activity in Hungary.	0.420	4.22
44.7.3 Preparation for the teaching profession requires the coordinated teaching of the main fields both in contents and in organization of the work.	0.408	4.43
44.7. The three main parts of initial teacher education must be built inherently on each another both in terms of logic and in time.	0.391	4.49
14.11.4 One is not a scholar teacher when one receives his or her teacher's diploma; one becomes a scholar teacher in the continuum of teacher education by continuously broadening his or her knowledge with modern scientific findings, by creatively mediating his or her scientific knowledge to the pupils, and by tuning the pupils to science.	0.379	4.48
14.6.4 It is necessary to promote the interest of the youth in the teaching career by improving the prestige and financial appreciation of teachers and by methods of marketing and PR.	0.338	4.60

Appendix 4: The system of views of teacher educators – Statements in the fourth factor

(The originally negative factor items are indicated by grey; their factor loadings were calculated after reverse-scoring.)

Factor 4: Opposition to uniformity and practice Mean: 3.08	Loading	Factor mean
44.15.1 It does not send a good message and it does not have a good effect if training ends in the middle of an academic year, even if the students can mange the 12 semesters available to them quite freely and get behind with the completion of their study obligations.	0.634	3.57
44.14.1 If somebody wishes to become a teacher and could become one in four years in two majors, he or she may not be happy to achieve the same by having to spend five and a half or six years of two cycles in higher education.	0.601	3.33
44.14.2 No matter how valuable in-school practice is, it lengthens the period of studies very much, and it imposes complicated organizational, professional leadership, and evaluation tasks for which the institutions were not prepared.	0.576	3.33
44.15. The students of master's level teacher education graduate in February, thus it will be impossible for them to get a job in the schools.	0.576	3.72
44.14. Students may be discouraged from the teaching major by the lengthening of the training by an undivided teaching practice.	0.538	2.58
44.15.2 The introduction of a practical semester into initial teacher education is a professional opportunity and progression for which it was worth making master's level teacher education a 5 semester curriculum.	0.527	2.55
44.6.4 Teacher education that was forced to comprise two age groups will become partly deficient and partly superfluous.	0.517	2.59
44.12.1. Teaching as a single major is a megalomaniac idea, because keeping the 1000 combinations of the various subjects in one hand is impossible both theoretically and technically.	0.416	3.13
14.9.1 Because of the strong language constraint of the teacher's work, every nation educates its own teachers; the knowledge of teachers is difficult to convert across countries.	0.413	4.68
44.6. It is almost impossible to meet the demands of preparing teachers of the 10-14 and the 14-18 year age groups together within the uniform teacher education program of the Bologna system.	0.412	2.90
44.6.3 The required professional knowledge and the useful methodological skills are so different in teaching 10-14 and 14-18 year old pupils that the teachers of the two age groups cannot be prepared simultaneously and in the same time frame.	0.390	2.64
14.2.2 The decreasing number of science teachers in the next generation of teachers show that the disciplinary and methodological knowledge of the teachers working in the schools has not been sufficient to make the pupils like and get interested in this broad field.	0.387	3.65
14.9. We do not train teachers for the European market.	0.385	3.87
44.12. The creation of the single master's level teacher education is a unification that does not display the variety of teacher education on the one hand, and forces it within narrow boundaries, on the other hand.	0.381	3.30
44.15.4 The fifth semester does not pose a real problem either to the students or to schools, because the student of teacher education can spend the semester after the practice meaningfully and usefully.	0.379	3.17
44.11.2 Nothing justifies forcing initial teacher education into the European multi cycle structure, since it works for the Hungarian market.	0.379	3.23
44.11.1 Previously, Hungarian initial teacher education was useful and effective; it was really a pity to disturb it.	0.366	3.22
44.10.4 For students who excel in the field of sciences, a teaching career is not a competitive perspective; the teaching career is more suited for the one who are less talented in the discipline.	0.361	2.24
44.12.2 There are enormous differences among the different fields and professions; they determine and give face to the teaching profession.	0.347	3.32
44.5.3 It is already a step forward that the closing exam of initial teacher education is no longer the defense of a thesis, but a portfolio that describes and self-reflectively analyzes the experiences gained during the teaching practice in the school.	0.338	2.18

44.4.2 In preparing for a teacher's career, one cannot talk too much about the school, the scope, functions and methods teachers have; it is an essential prerequisite for the conscious and self-reflective work of a teacher.	0.336	2.41
44.9.3 Obviously, initial teacher education offering different kinds of qualifications must be coordinated, but it only increases organizational uncertainty if the traditionally attached disciplinary preparation and teacher preparation are separated organizationally.	0.321	3.59
44.6.1 Frequently, it is absurd to talk about lower secondary school teachers or upper secondary school teachers, because a teacher may accompany his or her students for eight or six years until graduation, and he or she must be prepared for this.	0.320	2.19
44.11.1 Previously, Hungarian initial teacher education was useful and effective; it was really a pity to disturb it.	0.319	3.22
44.7.4 In order to create coherence in initial teacher education, basically, it is the pedagogical and psychological module that has to accommodate to subject knowledge and the contents of disciplinary pedagogy.	0.315	3.37
14.2. The secret of secondary school preparation is that the schools employ teachers who love their profession and who can make the pupils like it too, and whose disciplinary and methodological knowledge is unquestionable.	0.308	1.40

Appendix 5: The system of views of teacher educators – Statements in the fi fth factor

(The originally negative factor items are indicated by grey; their factor loadings were calculated after reverse-scoring.)

Factor 5: A good teacher is the professional mediator of up-to-date knowledge Mean: 2.97	Loading	Factor mean
14.10.1 Teacher efficiency is a special gift that cannot be learn it; it can be practiced and refined, but somebody either has it or don't.	0.626	2.55
14.10.4 It can be predicted from the good grades in the major subjects in upper secondary school if someone is suited for teaching.	0.604	1.79
14.3.1 The professional transmission of modern knowledge is the main task of a teacher; good examples of this will attract students to this profession.	0.570	3.78
14.7.1 The disciplinary and pedagogical type of studies are disproportionately distributed in the Bologna type of education, it is not possible to deepen subject knowledge sufficiently in master's level teacher education, and the congested pedagogical-psychological and subject methodological studies cannot be built on each other in time.	0.544	3.76
14.2.3 The preparation of an effective and good teacher lies in teaching his or her subject well and to pass on his or her subject knowledge and devotion.	0.540	3.74
14.6.1 All unnecessary obstacles and screening before entering master's level teacher education must be removed, entering and completing the teaching major should be facilitated even by financial methods.	0.540	2.57
14.10. It is genetically determined who will become a good teacher.	0.458	1.69
14.6. Under the given circumstances, the most important thing is that there should be students in initial teacher education, students who prepare for this profession.	0.362	3.46
14.2. The secret of secondary school preparation is that the schools employ teachers who love their profession and who can make the pupils like it too, and whose disciplinary and methodological knowledge is unquestionable.	0.361	4.60
14.9.4 Actually, teachers do not have to speak foreign languages, because they barely use their foreign language skills in their everyday tasks, if at all.	0.324	1.90
14.3. The decisive factor in choosing the teaching profession is that the students could hear interesting lessons in the classes from their teachers, and not that they saw the solution of various pedagogical problems in the school.	0.301	3.53
44.9. The work of the teaching units and that of the experts of initial teacher education should be coordinated taking into consideration the existing traditions and the institutional structure.	0.301	3.42

Appendix 6: The system of views of teacher educators – Statements in the sixth factor

(The originally negative factor items are indicated by grey; their factor loadings were calculated after reverse-scoring.)

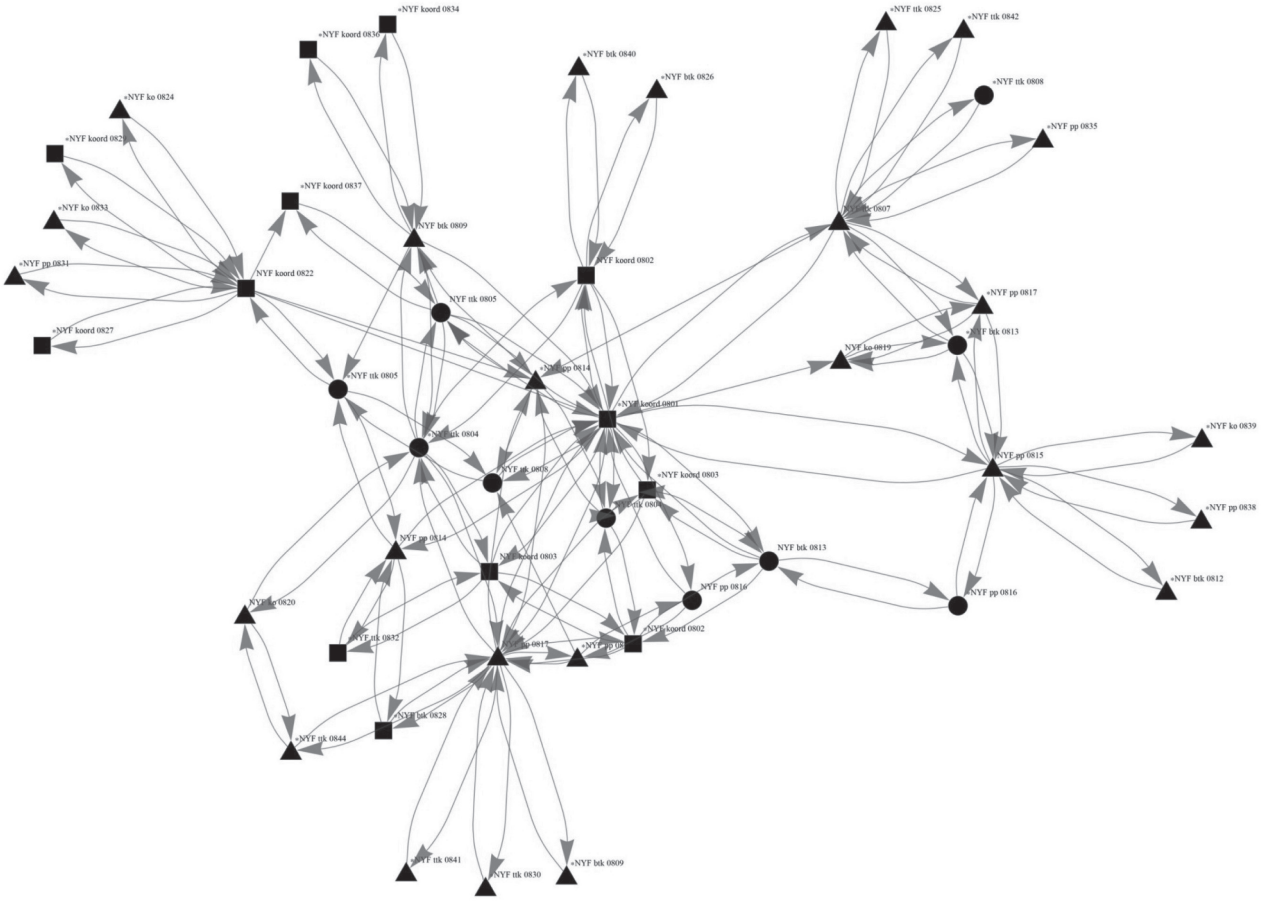
Factor 6: Everything is wrong Mean: 3.03	Loading	Factor mean
44.2.1 In the Bologna system, students can get two teacher's diploma so that the foundations of and knowledge in the student's second (minor) subject are actually insufficient for high quality teaching in the school.	0.558	3.25
44.13. The ignorance of the people affected by initial teacher education is a serious problem, which is made more severe by the fact that the Bologna system is undoubtedly complicated.	0.525	3.47
44.4.1 The theoretical part of the pedagogical and psychological studies is often very abstract, just plenty of talk about school work; instead of this, good solutions should be given to support practical teaching activity.	0.497	3.47
44.12.2 There are enormous differences among the different fields and professions; they determine and give face to the teaching profession.	0.456	3.32
44.5.4 Subject methodology does not fulfill its role, because is has not renewed itself; for example, it has not considered the possibilities offered by the Internet and information communication technology.	0.426	2.33
44.10.4 For students who excel in the field of sciences, a teaching career is not a competitive perspective; the teaching career is more suited for those who are less talented in the discipline.	0.418	2.24
14.9.2 It is a great promise of the Bologna type of education that it will make use of the possibility of the "teacher training in a foreign language", and it will prepare for teaching humanities and sciences in foreign languages in bilingual schools in Hungary and in educational systems abroad.	0.397	2.73
14.8.3 It is against the principles of the Bologna system if the bachelor's degrees are not equal, and if there are some teacher specializations with which one cannot get admitted to research and expert specialization of master's level education of the discipline.	0.384	3.71
14.4.4 It is important that the broadest possible groups of society enter higher education and receive a diploma; educated people form the foundations of economic growth and social stability.	0.354	2.39
44.13.3 The introduction of the Bologna type of education brought a lot of changes, but the too detailed regulations obscured its internationally well known and functional logic; the reluctance and sluggishness of the institutions also slowed down the transition to the more open and more flexible order of subsequent cycles.	0.313	3.66

Appendix 7: The system of views of teacher educators – Statements in the seventh factor

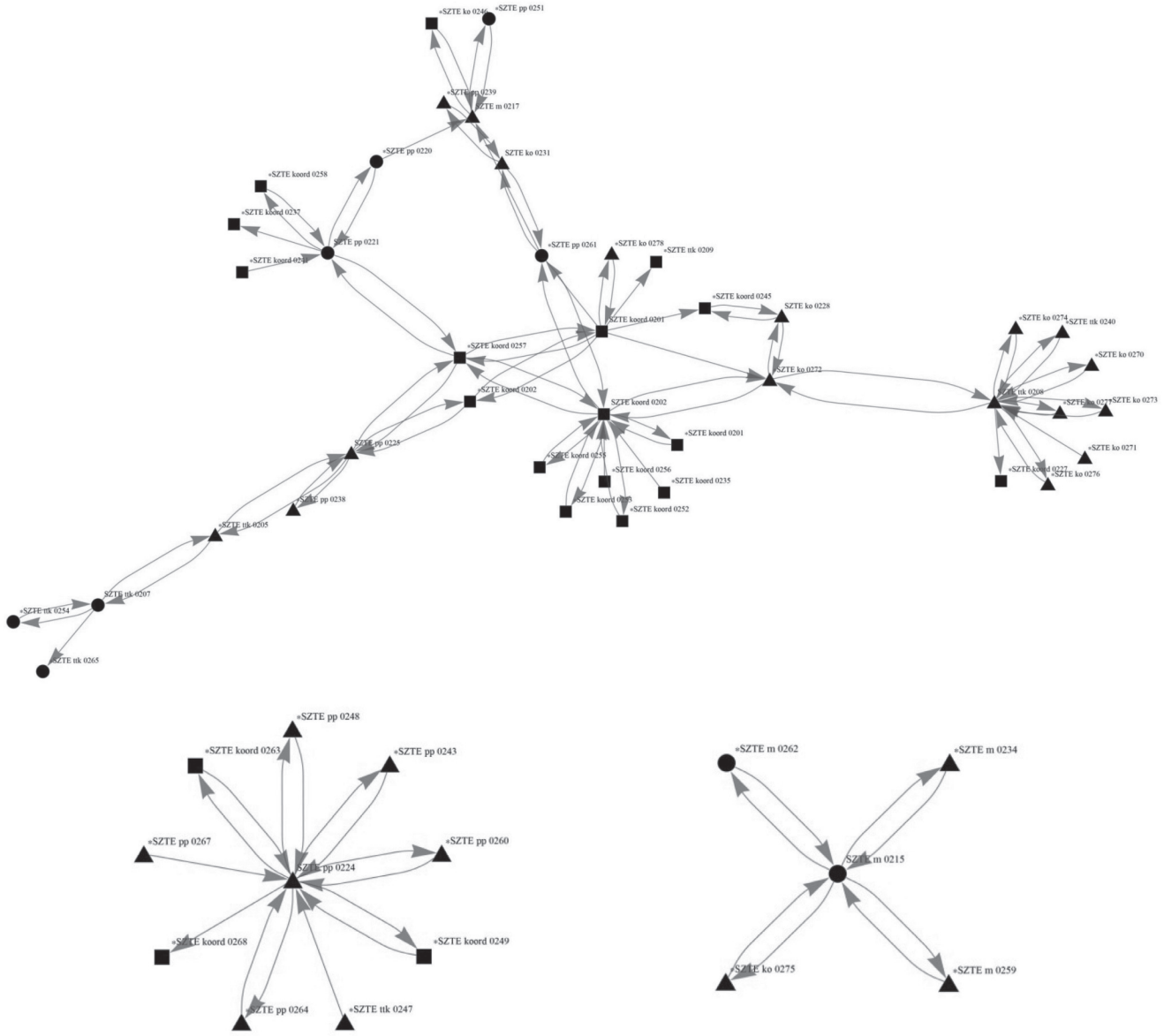
(The originally negative factor items are indicated by grey; their factor loadings were calculated after reverse-scoring.)

Factor 7: Scholar teacher and the artful practice of the teacher vocation Mean: 3.81	Loading	Factor mean
44.10. The traditions of the division between disciplinary and teacher education are different in the field of the sciences and those of the humanities.	0.558	3.51
14.11.2 Scholar teachers are those who know their discipline well and are capable of its in-depth cultivation: Their independent, creating thinking is the most attractive example for their talented pupils.	0.543	3.85
14.11.1 The subject knowledge of the teachers determine the quality of schools, this is what should be reinforced and raised so that the pupils will know more, and so that most of the pupils will do well in higher education, too.	0.509	3.40
44.6.2 In the times of the best traditions of the Hungarian gymnasiums (upper secondary schools), scholar teachers taught their pupils from age 10 to 18.	0.419	3.93
14.10.2 Commitment to and interest in the young generation, empathy and willingness to help them are essential personality prerequisites for practicing the teaching profession artfully.	0.413	4.50
14.5.4 The Bologna type of education terminated the previous practice of educating many times more teachers than those who were really interested in teaching.	0.402	3.46
14.8.2 It is not the job of bachelor's level education in the fields of science and the humanities to prepare for school functions.	0.399	3.89
14.3.3 Personal school examples, good or bad examples seen from teachers, and the subsequent view of a "laymen's pedagogy" may be conclusive in choosing the teaching profession as a career (especially immediately after graduation from secondary schools).	0.373	4.35
44.12.3 The variegation and diverse combination of initial teacher education is enabled by the very possibility of placing various majors into a system of comprehensive rules, all leading to teacher preparation in so many ways.	0.341	3.41
44.2. The asymmetry of disciplinary education within the dual-subject educational system causes problems.	0.339	3.92
14.6.3 Let's trust the decision of the students, matured in the course of the studies, to choose teaching as a major, because this will commit them to the profession and retain them there.	0.304	3.86

Appendix 8: Relations diagram of the College of Nyíregyháza



Appendix 9: Relations diagram of the University of Szeged



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What has happened in the last decade in Hungary and in Europe in the field of teacher education? What are the major trends of reforms? How do Hungarian teacher educators see these changes? What are the main characteristics of their attitudes? And last but not least, how do the differing views of Hungarian teacher educators affect their work relationships?

This study aims at answering these questions in three steps. First it presents the results of a comparative analysis of European teacher education reforms realised in 2010. This section also compares the Hungarian teacher education reform of 2009 with the European major reform trends. Then in the second section it provides a detailed picture on teacher educators' attitudes in Hungary. Their differing views are presented on the concept of good teaching and on various aspects of initial teacher education. As a final step, this study gives insights to Hungarian teacher educators' social networks. It describes the characteristics of the interpersonal work relations of teacher educators, determining the frames of operation in initial teacher education.

This study may be instructive for experts dealing with teacher education in any country. It raises awareness on the importance of attitudes of teacher educators, it demonstrates how different the objective and subjective evaluation of reforms can be, and how close cooperation can be maintained among teacher educators with different views.

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