
THE ROLE AND POSITION OF PEDAGOGICAL KNOWLEDGE IN THE THEORY AND PRACTICE OF INITIAL TEACHER TRAINING

(A Constructive Model of the Integration of Theory and Practice in Pedagogical
Training in Reference to Teacher Training)

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Abstract: Teacher training or broadly speaking pedagogical education is the most problematic and at the same time most debated area of the educational system in every society. Which are the specific areas of erudition, how much should the content be that would prove to be sufficient for teacher training, how should the vocational, psychological and pedagogical training be carried out, what should be the ratio between theory and practice and how long should the optimal training period be? These are the central issues that professionals in teacher training are engaged in worldwide. These issues gain importance now that the rapid augmentation of scientific information, the pace of technological development, the incursion of media, the means of communication and the limitless and un-embraceable amount of information are becoming central issues of contemporary society.

Keywords: teacher training; pedagogical knowledge; constructivism; theory and practice in teacher training

1. Introduction

This thesis examines the pedagogical dimensions of initial teacher training, it sets out to analyse the possible effects of the relationship between theory and practice on the development of professorial attitudes and opinions. The aim of this study is to identify the position and role of pedagogical knowledge in initial teacher training. The thorough analysis of initial teacher training and its main difficulty, namely the relationship between theory and practice brought me to the definition of pedagogical knowledge.

Initial Teacher Training

Teacher training or broadly speaking pedagogical education is the most problematic and in the same time most debated area of the educational system in every society. Which are the specific areas of erudition, how much should the content be that would prove to be sufficient for teacher training, how should the vocational, psychological and pedagogical training be carried out, which should be the ratio between theory and practice and how much should the optimal training period be? These are the central issues that professionals in teacher training are engaged in worldwide. These issues gain importance now that the rapid augmentation of scientific information, the pace of technological development, the incursion of media, the means of communication and the limitless and unembraceable amount of information are becoming central issues of contemporary society. Our information based society expects the development of different types of competence. Undoubtedly it takes a good quality institutional education and competent teachers to ensure such training. Due to the

rapid scientific development we know more about professional development and as such about the process of becoming a teacher, and one can draw the conclusion that this process has become more and more complex, which paradoxically does not facilitate the organization of teacher training but on the contrary makes it more difficult.

The Relationship between Theory and Practice in Teacher Training

After reviewing the literature of initial teacher training one can draw the conclusion that there is need for a general requirement that would clarify the basic set of tasks and objectives for teacher training, the expected types of competence, the contents that would correspond to these, the optimal ratio between theory and practice, the training time, the assessment system etc. Training in a classical sense, where during theoretical and practical training the items of information do not come together, but are stored on top of the other, does not allow the development of professorial competences. There is need for the establishment of such an educational system, which is based on the priority of developing the personality and set of competences of the teacher candidate. The results of our questionnaire survey suggest that neither those who exercised the teaching profession for 1-2 years nor university professors are satisfied with the present training system. They all think that the issue of teacher training has become particularly important and it is necessary to rethink and reorganise our national educational system in this respect. Nowadays education faces a series of challenges that primarily result from the changes on a social, cultural, economic and scientific level, from economic and political globalization, and from the formation of new values. Consequently, teacher training should draw on a professional reality that would enable prospective teachers to meet these challenges.

„The improvement of teachers’ professional knowledge and motivation must be a priority in every country.” (Delors 1998, 122.)

Pedagogical knowledge

Subjects that mediate pedagogical knowledge have a central role in the teacher training systems of most countries. It is considered to be the second most important area of training after the vocational one. Its primary aim is to develop a modern and scientific pedagogical approach, but on the other hand, it also sets out to acquaint the theoretical and historical basis of education. Such training allows us to understand the determining characteristics of education at any age and in any historical period. The most frequently arisen question during the acquisition of pedagogical knowledge is the problem that students face when learning the theory of pedagogy. Scilicet, during the conveyance of pedagogical information one can observe that this knowledge is not “usable” neither during training nor later on during practice. Theory is present only as “passive” knowledge, the conveyed information does not prove to be useful (see the results presented in chapter 9). It is necessary to clarify here that this kind of theoretical information is not meant to be applied in practice but its aim is to shape the teachers’ outlook and attitudes in connection with the educational problems that they may encounter during teaching, namely its role is to develop a general pedagogical erudition. Its usefulness should be approached from this perspective. Among the attempts to reform teacher training most specialists examine the possibilities of the integration of pedagogical, psychological, theoretical and practical knowledge. Therefore, the problem is that so far pedagogics has been dealt with only in theory, but once we apply it in practice it can be a foundation to methodological and teaching practice. According to the constructivists we should secure such an educational environment, where there is possibility for conceptual change. Nevertheless, such an approach does not exclude the importance of theoretical knowledge, since there are no abilities without knowledge, thus pedagogical knowledge has its *raison d’être*. Surveys from Hungary also prove the negative attitudes towards pedagogical knowledge in teacher training. Pedagogical knowledge occupies a central position in the present descriptions of competence. The fundamental aim of such knowledge is to help students reconceptualize their own ideas with reference to the nature of attainments. This is a very important basis of the continuing professional education (Maxwell 2004). The problem with the conveyance of pedagogical knowledge within the classical frames of training is that students do not see its applicability in practice, its usefulness in getting to know students better or in day to day school life.

2. Conclusions Drawn from the Analysis of the Specialized Literature Applicable in the Questionnaire Survey and Empirical Research

The General Questions and Problems of Teacher Training in the Light of the Expectations of the 21st Century

The necessary transformation and reformation of teacher training cannot be carried out without the accretion of prestige related to teacher training. This accretion of prestige should equally affect vocational and teacher training, and in both fields only quality growth can constitute its basis. „The role of education today and ever is to meet the demands of a given society. In our world the prosperity of learning and existence is greatly influenced by the individual’s capacity to filter the great amount of information, select the relevant items of information for his decisions and be able to embed the new information in the appropriate context during the process of assigning meaning.” (Bárdossy, Dudás, Pethőné és Piskinné 2002. 97.) [translation by me – N B-Sz].

The overall and in the same time most problematic fields of initial teacher training, significant also in international terms, are the following: *expansion, content regulation, applicability of theoretical knowledge, the lack of integration of theory and practice, harmonizing the different fields of training, the problem of selection, the problems concerning the introduction of inclusive education, the putting into practice of competence based training and the introduction of its evaluation system.*

International Tendencies in Teacher Training

When trying to define the vocation of teaching one gets a very uncertain picture, since there are no ready-made recipes. The process of becoming a teacher is an individual one; personality traits and their mobilization play a decisive role in this kind of formation. It is a process that starts at birth, one becomes aware of it during initial training and it develops and evolves with actual practice, since the development of professorial competences takes a lot of time. The key of efficiency is very complex and manifold, for a long time it has been the endeavour of researchers to disclose it. In the present research project the following main scope(s) of investigation can be separated: the forms of integrating theory and practice, the description of professorial competences, the means of their development and evaluation, the disclosure and impressionability of preliminary knowledge, namely the *views and attitudes.*

The Role and Position of Pedagogical Knowledge in Initial Teacher Training

Information, being of any nature, is not superfluous from the perspective of the organization of training. According to the constructivist concept operations arise from knowledge through its expansion and through the relation between items of information that make up a well-defined system. The process of learning, the key of successful development, the starting point of the process is the knowledge the individual has about the world, the preliminary ideas and set of personal beliefs already organized in a system that influences the individual’s world view (Nahalka 2003). Still, it is important to state the fact - underlined by many scientific findings - that when talking about pedagogical training the classical form of training do not have a positive impact on the students that study to become teachers.

The Applicability of Constructive Pedagogy in Teacher Training

The scientific achievements of the constructivists show lines of conduct for further development in reference to the methodology of teacher training. The effect that beliefs and attitudes have on the formation of theoretical and practical knowledge significantly shapes the course of research of teacher training (Fig. 1.). The essence of this new method is that its starting point is the student, the teacher candidate him/herself, his/her knowledge, and it builds on this preliminary knowledge taking into consideration, on the one hand, its development and formation in the actual training contexts and, on the other hand, the formation and developing of the most essential competences.

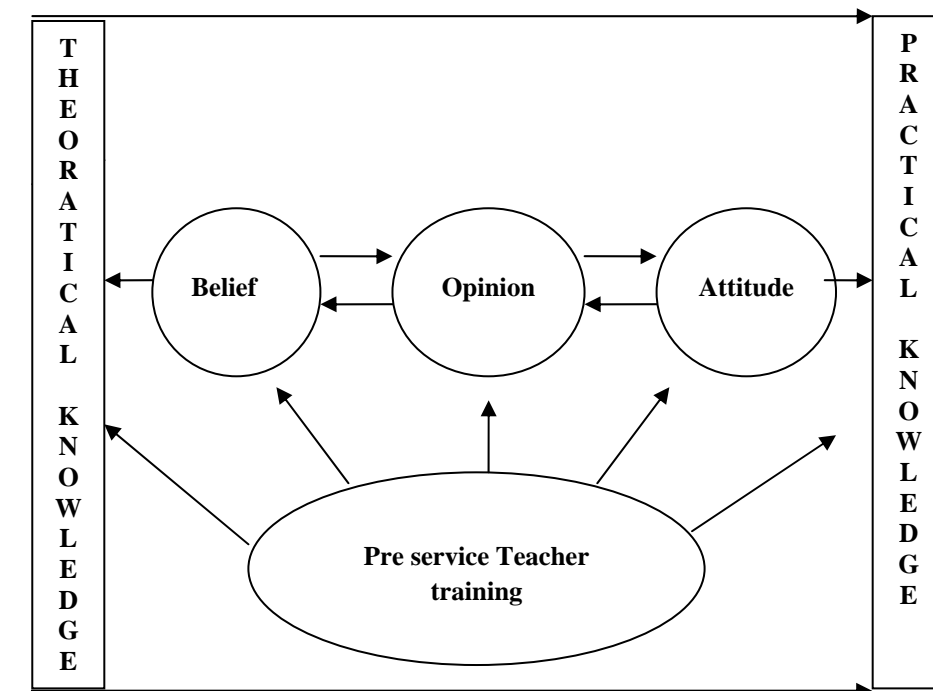


Fig.1. Factors influencing teacher knowledge

3. The Analysis of Teacher Training in the Questionnaire Survey

The exploration of the situation of Hungarian teacher training in Romania is a descriptive research, contains the unfolding of its past and the analysis of its present. Beside the analysis of documents, we adopted also a questionnaire survey with which we aimed at practicing teachers (78), graduate students (127) and members of the academic teaching staff (16). The aim of the survey was to explore the general opinion teachers, academics and students have about the present functioning of teacher training and to find out which are the competences the participants consider to be important in teacher training. We can undoubtedly state that teacher training in Romania is in a transitional period since the new training frames and output requirements brought about by the Bologna process have not been clarified yet (2005-2006 academic year). These changes did not live up to the claimed expectations: the basic training concept is the same, there is still no place for self-development studies in the training process and practice does not play an important role. Generally speaking, the questioned students, practicing teachers and academics are not satisfied with the present teacher training system, and due to this consider their own training to be deficient. They criticize the theory-oriented nature of teacher training, and consider that reason of their failures lies in the lack of professorial competences. Academics lack the output requirements, the uniform expectations regarding competence that could constitute the guidelines of training. Conclusions drawn from the results of the questionnaire survey:

- The selection at the beginning of the teaching career is not justified since the attitudes towards the profession of teaching may change during training.
- All three target groups emphasize the lack of practice in teacher training. It can even be considered a fact since most of the researches connected to teacher training have demonstrated the great importance of practice in teacher training. „...it is a significant fact that they placed practical training – and mainly its usefulness – to be more important than vocational training.” (Kocsis 2003. 118.).
- They underestimate the importance of theoretical training as well, the theoretical pedagogical course gets the lowest score. It has been proven internationally as well, that the academic theoretical training has a very low efficiency in teacher training.
- Practical training has to be adopted in line with theoretical training, which is simultaneously.

- There has to be greater emphasis on the development of such competences as empathy and the ability to communicate since the necessity for such competences in the process of teaching is confirmed also by practicing, experienced teachers.
- Pedagogical preparedness is in significant connection with the individual attitude towards teaching, thus greatly contributes to the successfulness of teaching.
- Graduate students, practicing teachers and academics all pinpointed the same problems in the questionnaire survey, thus there is no difference between the opinion of expert and novice teachers in the case of our design.

Justification and Description of the Empirical Research

Our basic aim was to analyze the impact of Basic School Practice, introduced simultaneously with the theoretical training, on the preliminary beliefs and concepts of the students. The intention is to influence the opinions and attitudes of students. Furthermore:

- To identify the shortcomings of pedagogical training based on the results of the questionnaire survey that can be compensated and the possibility of elaborating a basic pedagogical training program
- To disclose the constructive training possibilities of combining theory and practice in pedagogical training.
- To prove experimentally the positive effects of Basic School Practice on the professional training of teacher candidates, on the increase of their positive attitudes and on the framing of their vocation and *opinion*.
- To draw up suggestions based on the results and conclusions in reference to the curricular adaptation of pedagogical competences that contribute to the increase of professional competence.

Hypotheses

The starting point of the hypotheses of the present research is the assumption that the theoretical pedagogical knowledge cannot be utilized independently, theoretical information takes effect only when combined with practice, only as such can it shape the attitude and opinion of pedagogues. In pursuance of this:

1. The positive teacher image of first year students is consistent with the results of the questionnaire survey carried out in the second stage of the research project, namely with the positive teacher image of graduate students, practicing teachers and academics
2. Participants in the *Basic School Practice* programme (experimental group):
 - a. Consider themselves to be better prepared, they consider their knowledge to be more useful,
 - b. Have a more positive attitude towards teaching,
 - c. Have a higher efficiency (they have better examination results) than participants of the control group.
3. Among the results of the experimental group's pre-test fear of children and of the unknown is more frequent than in the case of the post-test.
4. In the case of the control group the difference between the results of the pre-test and post-test regarding fears is not significant.
5. Among the fears regarding the practice of teaching in the case of the control group distress, fear of children and fear of the unknown are more frequent than in the results of the experimental group's post-test.
6. The preliminary beliefs and preconceptions of the participants in the *Basic School Practice* programme (experimental group) show alterations along the key concepts, as a result of the programme.
7. The conceptual maps of the participants in the *Basic School Practice* programme (experimental group) are more structured, more perspicuous at the end of the programme than at its beginning.
8. There is no significant difference between the pre-maps and the post-maps of the students who did not take part in the *Basic School Practice* programme (control group).

Experimental design

The experimental part of the project follows the scenario of the classical, empirical programme evaluation¹ experiments. In our case we talk about an experiment with two groups both of them being of the same level (experimental group and control group). We conducted the experiment with a group of second year students who study to become teachers. (The treatment of the characteristics of the design can be found below). The independent variable is the *basic school practice* programme, dependent variables are the attitudes towards the profession of teaching and the students' opinions regarding the rudiments of pedagogy, which we measure with the help of conceptual maps. The result of the experiment is to show the degree of alteration regarding conceptions and attitudes towards pedagogical knowledge brought about by the *basic school practice* programme.

Table 1. General experimental design

Stages	PRE-TEST	INTERVEN-TION	POST-TEST	RESULT
EXPERIMEN-TAL	Sample choice Defining the profession of teaching and attitudes towards the practice of teaching. Self-estimation questionnaire, Similar in the case of both groups.	Introducing independent variables.	Measurement of the dependent variables.	The constructive model of theoretical pedagogical knowledge in teacher training
CONTROL		No intervention	The same at both groups.	

Table 2. The experimental design corresponding to the stages of the research

Period	PRETEST	INTERVENTION	POST-TEST
2004-2006	October 2004 <i>Experimental group</i> <i>Control group</i> Attitude analysis Conceptual map	1st, 2nd semester, 2005/2006 academic year 28 weeks 2005 October- 2006 June Basic School Practice <i>Experimental group</i>	June 2006 <i>Experimental group</i> <i>Control group</i> Attitude analysis Conceptual map

The Characteristics of the Design

The sample contains 60 second year students from BBU² Cluj-Napoca, who study to become teachers (30 humanities students – Hungarian literature and language major, foreign language or ethnography minor - and 30 students who study science – mathematics, computer science, and physics). The experimental group consists of 15 humanities students and 15 students of science, and the structure of the control group is the same. The *Basic School Practice* was carried out in the following schools from Cluj-Napoca: Apáczai Csere János High school, Báthory István High school, Sigismund Toduță Music School, Brassai Sámuel High school.

Research Methods

- Questionnaire survey – students' questioning – for the selection of the experimental and control group.

¹ see Bábosik István, Bp., 2004

² Babes-Bolyai University, Cluj-Napoca

- Empirical experiment – in order to analyse the effectiveness of the *basic school practice programme*. Time period: two academic semesters.
- Self-estimation questionnaire
 - Attitude analysis (*Likert's*³ - scale) – pre-test and post-test
 - Self-estimation, for the sake of pre- and post-measuring – the self-estimation of the experimental and of the trial group in connection with their pedagogical effectiveness.
- Conceptual maps – to analyse the alterations of pedagogical opinions in the case of the experimental and that of the control group. In the processing we used *Dersheimer's* method (Szivák 2002), applied in 1993.
- Comparison of examination results.
- Statistical methods – analysis of the research results with the aid of Excel and SPSS programmes.

4. Basic School Practice (BSP)

The aim of basic school training is to help students recognize their attained theoretical knowledge in school context and vice versa, to help them integrate phenomena observed in the school into their theoretical constructions. Furthermore, the aim of the practice is to influence the attitudes and opinions of students about the profession of teaching in a positive way. Through interactive and reflective situations students become responsive and sensitive towards problems that can arise in class, and this grounds their future teaching practice. The basic objective of basic school practice is to make students aware of the preparation needed in order to become an efficient teacher, to make them conscious of the fact that primarily they are student teachers and not only students.

BSP is intended for those students who in line with vocational training also want to obtain a diploma in teaching during their studies. BSP is compulsory, meaning that it cannot be omitted if one decides to become a teacher. The student teacher takes up basic school practice together with theoretical pedagogical and psychological studies. Basic school practice is the condition for the actual teaching practice.

5. Results

In selecting the participants in the empirical research it was important to have such people in the experimental and control group, who are already committed to the teaching profession (stratified targeted method, Szokolszky 2004). Thus it was desired to exclude the assumption, that the experimental group would include only people who are committed to the teaching profession, while the control group would include those, who are not committed. The comparison of the data was considered authentic only in the above case. The positive teacher image of the first year students is very similar to that of practicing teachers, of graduating students and academics.

Table 3. Comparative analysis on the positive teaching competences

<i>Questionnaire survey – Stage 2</i>			<i>Empirical research – Stage 3</i>
Graduate students	Teachers	Academics	Second-year university students (experimental & control group)
empathy	communication skills	communication skills	joyful teaching
communication skills	empathy	reflectivity	professionalism
professionalism	presentation skills	empathy	presentation skills
presentation skills	creativity	self-knowledge creativity	

³ Szokolszky Ágnes, 2004, 371

In the case of the experimental group a significant change can be identified regarding confidence, as the results measured on the Likert-scale of attitude show that there is significant difference between the results obtained in the pretest and the post-test. These results lead to the conclusion that the *Basic School Practice* programme has a positive effect on the change of attitudes towards the teaching profession and teaching (Table 4 and 5).

Table 4. The results of the attitude analysis pretest

Values	N	Mean	SD	t	p
Groups					
Experimental	30	3.07	0.62	1.720	0.096 p>0.05
Control	30	2.73	0.61		

Table 5. Attitude analysis on the experimental group, T-the results of the test

Values	N	Mean	SD	R	p
Groups					
Experimental	30	3.07	0.74	0.353	0.056
Control		3.97	0.66		

The way the opinions of the students change as a result of the *Basic School Practice* programme is an issue that needs further analysis, and this has to be conducted along three basic pedagogical concepts. Both the experimental and the control group created conceptual maps along these three basic concepts. The three key concepts are the following: *school*, ⁴*teacher*, ⁵*child*. The topic of our analysis: the structure of the concepts, the differentiated nature and logic of the structure; the usage of the professional language; the number and content of the identified concepts; the number of layers in the graph. In the processing of the data from the conceptual maps Dershimer's method (1993, quoted by Szivák 2002) is used as a starting point. There were 2,797 concepts processed. While in the case of the pretest results there were no significant differences in the positions of the content groups in the different key concepts, there were clear differences in the case of the post-test. Changes of a certain extent were noticed both in the experimental and in the control group.

Table 6. The aggregate data of the pretest based on the position of the key concepts on the concept maps

SCHOLL	CENTRAL		NOT CENTRAL		
Experimental group		1. 2.			3.
Control group	1.				2., 3.
TEACHER	CENTRAL		NOT CENTRAL		
Experimental group		1.		2., 3.	
Control group		1., 2., 3.			
CHILD	CENTRAL		NOT CENTRAL		
Experimental group		1. 2.		3.	
Control group			1.	2.	3.

In the experimental group regarding the key concept of *school* the second content group (the function of the school) is substantially different, as from the third group of the central category it was moved to the first one. This change may indicate that the issues of the *functions of the school* was considered more significant by the members of the experimental group, which validates our assumption according

4Concept map 1

5Concept map 2

to which - as a result of the *Basic School Practice Programme* - the functions of the school were made more aware in the members of the experimental group. There was a similar change in the case of the first content group (the institutional character of the school) with an opposite effect, as it moved from the second group of the central category to the third one, which could indicate, that the institutional character of the school did not become significant. In the case of the third content group (the phenomena belonging to the school) only a small shift can be observed, which seems to be natural as due to the *Basic School Practice* the different school phenomena, the effects of the hidden curriculum are made aware in the ones taking part in the experiment.

Table 7. The aggregate data of the post-test based on the position of the key concepts on the concept maps

SCHOOL	CENTRAL			NOT CENTRAL		
Experimental group	2.		1.		3.	
Control group			2.			1., 3.
TEACHER	CENTRAL			NOT CENTRAL		
Experimental group	1.	2.				3.
Control group		1.	3.			2.
CHILD	CENTRAL			NOT CENTRAL		
Experimental group	2.	1., 3.				
Control group		1.				2., 3.

In the case of the *teacher* key concept there was a slight movement in the first content group (the personality and competences of the teacher), while there was a significant change in the second content group, as it shifted from the non-central category into the central category, moving up three levels. This significant change can be explained by the fact that the people taking part in the experiment spent 40 hours in the school, in the everyday life and activities, they performed different tasks and thus they were more made aware of the contents of the teachers’ activity. In the third content group (the methods and organization forms applied by the teachers’ activity) there is a slight step back, which could be explained by the fact that during the *Basic School Practice* the observation of methods and organization forms was not an explicit aim of the research, as it is thought that these factors are more important during the education of the different subject pedagogies.

In the case of the *child* key concept there was no noticeable change in the first content group (the areas of child cognition), which contradicts our assumptions, as the observation of the child and the analysis of its behaviour was an important task in the *Basic School Practice*. The second content group (the child and its environment) presents a substantial progress as it moved from the third group of the central category to the first one, which still validates that the *Basic School Practice* changed the image of the child in the minds of the people taking part in the experiment. This also can be supported by the fact that only regarding the key concept of the child did the emphatic concepts shift in the post-test. The third content group (the teacher-student relationship) also presented a basic change, as it shifted from a non-central category to a central category.

Table 8. The results of the conceptual maps in the case of the experimental group

	SCHOOL	CENTRAL			NOT CENTRAL		
Pre-test			1.	2.			3.
Post-test		2.		1.		3.	
	TEACHER	CENTRAL			NOT CENTRAL		
Pre-test			1.			2.,3.	
Post-test		1.	2.			3.	
	CHILD	CENTRAL			NOT CENTRAL		
Pre-test			1.	2.		3.	
Post-test		2.	1., 3.				

In the control group regarding the key concept of the school there were significant changes in the first and second content groups. The first content group (the institutional character of the school) presented a rather drastical step back as it moved from the first group of the central category into the third group of the non-central category. In the case of the second content group (the function of the school) there is a forward movement from the non-central category to the central category. Similarly to the experimental group the institutional character of the school becomes less emphatic, while the function of the school becomes more important. This result was expected from the experimental group and not from the control group. In the third content group (the phenomena and elements connected to the school, effects of the hidden curriculum) there was no change whatsoever. The members of the control group did not take part in the school life, therefore this factor was not important for them in the post-test either.

In the case of the *teacher* key concept only the second content group (the content of the teachers' activity, tasks, phenomena connected to work) presents some significant change, as it moved from the central category to the non-central one, which is a backward shift. The members of the control group could not observe the teachers during work, they did not become aware of their tasks, the phenomena the teachers' activity implies. In the case of the first and third content groups there were no significant changes at all. There was no significant change in the case of the control group in the post-tests regarding the key concept of the child out of the three key concepts, and this can be explained by the fact that the preconceptions and beliefs of the members of the control group regarding the image of the child were not altered.

Table 9. The results of the conceptual maps in the case of the control group

	SCHOLL	CENTRAL			NOT CENTRAL	
Pre-test			1.			
Post-test				2.		1., 3.
	TEACHER	CENTRAL			NOT CENTRAL	
Pre-test			1., 2., 3.			
Post-test			1.	3.		2.
	CHILD	CENTRAL			NOT CENTRAL	
Pre-test				1.		2.
Post-test			1.			2., 3.

Table 10 presents the concepts detailed, that is taken to pieces, divided in sub-concepts during the creation of the conceptual maps by the ones taking part in the experiment. The tables include the concepts based on their frequency, as only those were taken into consideration, which appeared at least twice in the detailed conceptual maps. In the experimental group in the case of two key concepts (*teacher*, *child*) there was no concept in the final maps, which would appear in a detailed way at least twice. *Based on the theory of constructivism this means that the impact of the Basic School Practice divided the existing constructions, there was a conceptual shift as the post-test maps of the ones taking part in the experiment were more differentiated than the ones included in the pretest.* In the case of the school key concept there was no such change, as recurring concepts also appeared which indicate the strength of the constructions. Such degree of differentiation was observed in the case of the control group only during the pretest. In this case the different views of the concept of the *teacher* were present. In the case of the *school* and the *child* one can see that the concepts appearing in the pretest appear in the post-test as well.

Table 11 includes the most frequent concepts grouped according to the key concepts. The concepts were organized according to their frequency. The highlighted concepts are the ones which are included either on the pre-maps or on the final maps. The non-highlighted concepts are present in both cases, which could indicate that these are the concepts, which were not modified as a result of the Basic School Practice in the case of the experimental group and as the result of the traditional educational form in the case of the control group.

Table 10. Summary of the detailed concepts based on key concepts

Groups	EXPERIMENTAL GROUP			CONTROL GROUP		
Key concepts	<i>school</i>	<i>teacher</i>	<i>child</i>	<i>school</i>	<i>teacher</i>	<i>child</i>
PRE-TEST	teacher friend learning activity pupil	education pupil cognition teaching	convers ation family	Learning teacher child teaching education pupil		learning parent school game
POST-TEST	teacher pupil parent Learning friend			teacher course learning education pupil	child school pupil education pedagogical skills/knowl edge personality traits parent	game family parent school friend methods education teacher Learning

In the case of the experimental group it can be observed that the final maps include concepts in the case of the *school* and *teacher* key concepts (student, friends) which validate the viewpoint of the student on the one hand and that of the teacher on the other (teaching, control, evaluation, understanding). Regarding its frequency the concept of *home* was depreciated on the final maps in the case of the key concept of *school*, and was replaced by the concepts of *student*, *teaching* and *friends*. This could indicate that for the members of the experimental group within the key concept of *school* friendship was appreciated. The final maps include the concept of the *student* which is a step forward as opposed to the pre-maps, which do not appear among the most frequent ones in this category. The concept of the *teacher* appears both in the pre-maps and in the final maps, nevertheless it is the second in the case of the latter one. All these indicate that the school-image of the members of the experimental group is teacher-centred. In the case of the key concept of the *teacher* the final map includes the concepts of *understanding*, *control* and *evaluation* which refer to the tasks of the teacher. The frequency of these concepts could be explained by the impact of the Basic School Practice, where the ones taking part in the experiment were affected by the activity of the teacher. The concepts of *empathy* and *student* were depreciated, albeit *empathy* and *understanding* are somewhat overlapping notions. The depreciation of the concept of the student could be explained with the final maps of the key concept of the *teacher*, as the members of the experimental group emphasized the tasks of the teacher on these, they considered them more important as this was stated in the analysis of the emphatic and non-emphatic distribution of the content groups. In the case of the key concept of the *child* notions, such as *behaviour*, *environment*, *observation* and *family* were depreciated, while *research*, *control* and *teaching* were appreciated. Seemingly the viewpoint of the teacher prevails in the final maps as opposed to the pre-maps, which indicates the fact that the people included in the experiment approached the concept of the *child* from the viewpoint of the teacher in the final maps, which means that they shifted viewpoint. The governing concept on the pre-maps is *education*, while in the final maps is *teaching* which can also be explained by the above.

Changes can be identified in the case of the control group as well. In the case of the *school* key concept a basic concept, *playing* was strongly depreciated, and it was replaced by the notions of *teaching* and *institution*. This is a qualitative change as *playing* is part of everyday life, it is frequent on the pre-maps, while, as a result of traditional education, it is replaced on the final maps by concepts that lead to special terminology. This also can be observed in the case of the key concepts of the *teacher* and the *child*. The everyday concepts on the pre-maps (*playing*, *child*, *love*, *parent*) is replaced

by the terminology used by the pedagogical scholarly literature (*communication, environment, education*). Of course this can also be explained by the theory-oriented nature of traditional education.

It can be stated that in the case of the experimental groups there is only one most frequent concept in the case of the experimental group, while in the case of the control group there are two key concepts, and this also affirms that the Basic School Practice had a greater shifting effect on the opinions of the students, than the traditional theoretical traditional disciplinary theories. It is important to state that the constant concepts are similar in the case of the two groups, only their order is changed, which can be explained by the fact that the similar cultural environment has an impact on the development of opinions.

Table 11. Summary of the most frequent concepts based on key concepts

Groups	EXPERIMENTAL GROUP			CONTROL GROUP		
Key concepts	<i>school</i>	<i>teacher</i>	<i>child</i>	<i>school</i>	<i>teacher</i>	<i>child</i>
PRE-TEST	Teacher education learning <i>Home</i>	education teaching <i>empathy</i> <i>pupil</i>	conversation attention <i>behavior</i> <i>environment</i> <i>observation</i> friends <i>family</i>	teacher learning education pupil <i>game</i>	education <i>educator</i> teaching school <i>teacher</i> <i>child</i>	game school <i>love</i> <i>parent</i> <i>learning</i> development family
Most frequent concept	education			teacher		
POST-TEST	education teacher learning <i>pupil</i> <i>teaching</i> <i>friends</i>	education training teaching <i>understanding</i> <i>guidance</i> <i>evaluation</i>	friends <i>research</i> attention conversation <i>evaluation</i> <i>teaching</i>	training learning <i>teaching</i> teacher pupil <i>institution</i>	education <i>empathy</i> <i>training</i> school teaching <i>helpfulness</i> <i>communication</i> <i>patience</i>	game family school <i>friends</i> <i>environment</i> <i>teacher</i> <i>training</i> development
Most frequent concept	teaching			education		

Our hypotheses regarding the experimental group were fully confirmed, while the ones regarding the control group were confirmed only partially. From the quantitative point of view the number of concepts used in the final maps (428 concepts) decreased as opposed to the pre-maps (578), nevertheless there was a qualitative change regarding the emphatic and non-emphatic placement of the concepts used. In the case of the control group there is a quantitative increase in the final maps (1068 concepts) as opposed to the pre-maps (723 concepts) nevertheless there are no significant qualitative changes in the mapping of the concepts, unless the appearance of terms can be considered such. In the case of the experimental group the placement of concepts on the final maps has become much more task-oriented, relationships appear on the final map which refer to the relationship between the teachers and the students, as well as to the process of teaching and learning. It can be stated that there is a conceptual shift in the case of the opinions of the experimental group. As opposed to this there was a powerful quantitative shift in the final maps in the control group, especially regarding the terminology⁶.

⁶ see Birta-Székely, 2012

6. Conclusions

The following conclusions can be drawn from the analysis of the specialized literature and from the completed scientific investigations:

Stage 1.

From the analysis of the problematic areas in teacher training and from the exercise of the different European countries it can be ascertained that the following areas need most attention in the process of reforming teacher training:

- *expansion*
- *content regulation*
- *the applicability of theoretical knowledge*
- *integration of theory and practice*
- *harmonizing fields of training*
- *the question of selection*
- *matters regarding the introduction of inclusive education*
- *the putting into practice of competence-based training, the introduction of its evaluation system.*

Stage 2.

The following conclusions can be drawn from the analysis of Hungarian teacher training in Romania:

- The general observations drawn up in the first stage are valid also for the Hungarian teacher training in Romania;
- Due to the Bologna process Hungarian teacher training in Romania is in transition. The structural and functional principles of basic teacher training remain unchanged, namely we can still speak about the lack of connection between theory and practice and the structure of theoretical training has not changed either;
- The output requirements have not been clarified and neither have the conditions of postgraduate master's training;
- The drafting and description of teaching competences as general output conditions has only been partially carried out, mainly in the field of primary school teacher training;
- All three target groups emphasize the lack of practice in Hungarian teacher training from Romania;
- By questioning graduate student teachers, practicing teachers and academics the results show that there is a significant connection between the individual attitudes towards teaching and pedagogical preparedness, thus the latter greatly contributes to the effectiveness of teaching.

Stage 3.

- The following conclusions can be drawn from the empirical research: Theoretical pedagogical knowledge plays an important role in the realization of the profession of teaching, in the formation of attitudes and opinions if the theoretical training is connected and completed with practical activities;
- The conclusion that can be drawn from BSP is that the opinions of the experimental group have become more problem centred along key concepts (school, student, teacher). They also have better examination results in contrast with the results of the control group, fact which leads us to the conclusion that they were able to employ their knowledge better;
- The attitudes of the control group have changed as well in connection with key concepts, but the conceptual maps show that not necessarily their way of thinking changed but rather their vocabulary enriched, they were able to use the specific terminology. From the perspective of the constructive approach there has not been any conceptual change, whereas in the case of the experimental group we can talk about such changes. The results of the conceptual maps show that the control group is less sensitive towards the importance of the student-teacher relationship;

- Consequently, BSP is a practical teacher training activity that runs simultaneously with theoretical training and completes it. Its aim is to offer students the opportunity to experience in practice the attained theoretical knowledge and thus to shape students' attitude towards a teaching career, and in the same time it also helps obtain conceptual changes during training. This way students' knowledge is not extraneous but shapes their attitudes and opinions.

Stage 4

Falling back on the results of the previous three stages and proceeding from there, suggestions are drawn up regarding the structural and functional particularities of teacher training. Suggestions are made about the developing of professorial competences too, corresponding them to the training units that are responsible for their formation.

Suggestions Regarding the Genre and Structure of Curricula Applied in Teacher Training in Reference to Theoretical and Practical Pedagogical Training

Since according to the constructivist principle the formation of attitudes and opinions of student teachers is a very important factor, we suggest the introduction of methods that enable the disclosure of opinions before and after the training stages, which can help students become aware of the importance of the formation of attitudes and opinions in the profession of teaching, and these methods would also enable the development of reflective competences. Pedagogical and psychological training essential in teacher training grounds both the theoretical and the practical training and prepares student teachers for the special methodology and for the actual teaching process. Pedagogical training plays an essential role in teacher training and it must ensure simultaneous theoretical and practical training. The ratio of theoretical and practical training is at least 40%-60%. Regarding school practice we assign accentuated importance to the application of formative evaluation.

Furthermore, we consider it important to match these competences with the different domains of training, because the exercise of teacher training shows that the general description of these competences does not produce results. If we do not clarify the educational units that are "responsible" for their formation it may happen that everyone proceeds as he or she wishes, training falls apart because there is no uniform coherence. It would be a great help also for academics who work in teacher training to clarify the competences assigned to the individual training domains. Competence descriptions do not correspond to the traditional units of training thus in order to make these competences useable we either change the names of these units (according to competence domains) or we correspond these traditional units to competences. In the present case the latter happened since the changing of training units is quite difficult due to political and administrative etc. factors.

Based on the analysis of the specialized literature and the results of the empirical measurements the following new scientific results can be formulated:

1. Theoretical pedagogical knowledge plays a central role in teacher training especially if it is simultaneously completed with practical activities (see Basic School Practice). It helps students become aware of the preparation for teaching, meaning that it shapes attitudes and opinions.
2. BSP has a positive influence on student teachers' pedagogical knowledge and on the shaping of pedagogical competences and helps also in the conceptual change considered to be very important by the constructivist learning theory.
3. According to the principle of BSP during practice it is possible to customize the contents according to the particularities of each group or student.
4. BSP influences examination results as well and this refers to the applicability of the attained pedagogical knowledge.

These could be the directions in which the research could be further developed:

- It would be useful to elaborate a methodological exercise book based on constructivist learning (see on the analogy of Trencsényi László, *Nevelés- és iskolaelméleti gyakorlatok*, Okker, 2002) that could be used during theoretical and practical pedagogical training;
- Furthermore, it would be useful to examine whether or not due to the effect of basic school practice a superior pedagogical way of thinking develops;

- It would be instructive to carry out the research presented in this thesis with an experimental group that has no sense of vocation and thus to monitor the effect of basic school practice on such a group;
- It would be useful as well to observe which group performs better in the actual teaching process. It would be interesting to determine the attitude of student teachers towards the different factors through the questioning of students and then compare these results with the student teachers' own opinions;
- The elaboration of such means and aspects of evaluation that, on the one hand, can measure the changes in student teachers' opinions and, on the other hand, can determine how the same opinions develop during teaching practice and whether or not students build on the knowledge attained during basic school practice during their future teaching practice;
- We suggest as a further research possibility the investigation of attitude formation in similar context by making teaching competences conscious in a way that would allow student teachers to work with these competences, pay attention and reflect on them and monitor their development.

Bibliography

Bárdossy Ildikó, Dudás Margit, Pethőné Nagy Csilla, Priskinné Rizner Erika (2002), Az interaktív és reflektív tanulás lehetőségei a tanárképzésben, In. Katona András, Ládi László, Széplaki György, Szombatiné Kovács Margit. (szerk.), *A tanári mesterség gyakorlata, Tanárképzés és tudomány*, Nemzeti tankönyvkiadó-ELTE Tanárképző Főiskolai Kar, Budapest, 93-112.

Birta-Székely Noémi (2012), *A tanárképzés fejlődési irányai a 21. század kezdetén*, Kolozsvári Egyetemi Kiadó, Kolozsvár

Delors J., (1998), *Oktatás - rejtett kincs* - A Jaques Delors vezette Nemzetközi Bizottság jelentése az UNESCO-nak az oktatás XXI. századra vonatkozó kérdéseiről, Osiris, Budapest

Kocsis Mihály (2003), *A tanárképzés megítélése*, Iskolakultúra-könyvek, Pécs

Maxwell, B.. (2004), *Becoming a Teacher in the Learning and Skills Sector: Using a Knowledge resources perspective to inform the development of initial teacher training*, *Paper presented at the Scottish Educational Research Association Conference*, Perth, 25-27. November.

Nahalka István (2003), A nevelési nézetek kutatása. In. *Iskolakultúra*, Pécs, 5.sz. 69-76.

Szivák Judit (2002), *A pedagógusok gondolkodásának kutatási módszerei*, Műszaki könyvkiadó, Budapest

Szokolszky Ágnes (2004), *Kutatómunka a pszichológiában*, Osiris kiadó, Budapest

Trencsényi László (2002), *Nevelés-, és iskolaelméleti gyakorlatok*, Okker kiadó, Budapest

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