

Teachers Studying, Teachers Researching: A Possible Role of Doctoral Training in the Professional Development of Educators

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Abstract

Knowledge today means not just a compilation of static facts but rather a continual creation and acquisition of renewing contents. The concept of the learning process and of the teacher's role has changed. The role of a researcher has been added to the often mentioned position of a facilitator: the teacher solves problems, examines and finds a solution for unique situations which are often uncertain and many times also involve conflicts of values. This present study is an overview of what this transformed concept of knowledge means with regard to teachers' training and further training, at the same time it is also an examination of the practice of doctoral trainings and of whether or not these meet the conditions of efficient further training.

Keywords: Teacher training; Further training; Research; Scientific Literacy; Reflectivity.

Introduction

The doctoral training of teachers may be positioned at the intersection of the relevant issues of our days. One of these is that the Bologna process defines PhD training (unified since 2011, according to European decision makers) as the third training cycle, following bachelor's and master's training. This raises the question whether or not the expansion of the third training cycle can be expected: professional literature is relatively unified in stating that expansion is a clear tendency, only various authors may rank the reasons in various ways (Kehm, 2009; Bogle, 2010).

The other discussion related to teachers' training and further training has to do with ways that the new interpretation of learning and knowledge should influence the role and preparation of the teacher. In our present, knowledge-based society, learning is not a linear process, but rather there is a construction of shared knowledge in which activeness and shared action are also important factors besides the presence of knowledge. In this model, teachers are not clearly superposed agents, at the same time neither can they become passive consumers of scientific knowledge. It is necessary, with respect to both professional and methodological practice, that the work of educators be established by the most valuable knowledge acquirable (Osterman & Kottkamps, 1994; Niemi, 2008). This means that practicing teachers have to interpret and transform ever newer disciplinary and pedagogical research results; therefore they need a certain scientific literacy. Some experts emphasize that this would have a positive effect on the prestige of this profession as a whole, while others point out that when teachers partake in doctoral training and do innovative work as researchers or curriculum writers, it will improve the quality of education (Niemi, 2008; Kárpáti, 2008).

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The so called innovation potential of teachers has become the focus of the researches in recent years, because of the quality of teaching and the success and efficiency of school shows very close relationship. In Hungary the new “teacher career model” also has effect on this issue, because it contains the “teacher-researcher professional category”, and it can enhance doctoral-degree-seeking ambitions (Chrappán & Pusztai, 2014; Mourshed, Chijoke & Barber, 2010).

We are going to take a look at the way the above interpretation of the concept of knowledge draws a parallel between the teacher’s and the researcher’s roles, the way (self) reflectivity becomes a foundational part of continual professional renewal, and then we will present a brief overview of the practice of doctoral trainings and see to what extent these meet the criteria of efficient further training.

Training, further training: a problem-centered view

The concept of knowledge has changed: today it no longer means static and transferable facts, but rather renewing concepts that are often created together. Since sharing and participation have become key terms within the definition of learning (Niemi, 2008), we cannot consider the teaching process and academic knowledge separately; and this new concept of knowledge has to be involved in the interpretation of the teacher’s role as well. In connection with this, a discussion in professional literature was started almost a decade ago, insisting on placing emphasis on a problem-oriented or research-oriented view in teacher training (Szabó, 2001). In fact, even the dialogue concerning the reflective pedagogical paradigm may be considered a related issue, because it states that teaching is a complex, therefore unstable, process, creating unique situations, and making problems interpretable only within the given context. Later, based on these criteria exactly, parallels were drawn between the work of an expert-researcher and that of the teacher: in a sense, both are problem-solving roles, with the participants examining unique situations which are often uncertain and also involve conflicts of values; at the same time, the application of scientific models and the ability to handle problems in their complexity are necessary for the solution (Szabó, 2001; Niemi, 2008).

Knowledge itself is a complex concept, including research, the store of learning piled up in professional literature and learning experience as well. Therefore, when we talk about research-based practice of processes, performers are also learners, creating knowledge in their own field of expertise or their work through research or learning. Living the role of a learner seems important from another aspect as well: researches examining the professional development of educators call attention to the fact that teachers who consciously embraced their own role as learners were better able to understand the students’ thinking and the development of their concepts related to a given subject, and so to improve their own teaching practice (Borko, 2004; Niemi, 2008).

Several studies point to the eminent role of reflectivity or self-reflection. According to the reflective paradigm, transferred knowledge is problem-related, the learning process is dialectical and experimenting, while created knowledge is holistic and personal (Osterman & Kottkamps, 1994). The change appearing in behavior and teaching practice is not exclusively rational, it also has emotional, social and cultural components and it comes into being due to the awareness of one’s own activity. Professional knowledge is a symbolic construction; the teacher’s own pedagogical principles will be established with respect to his or her own practice and its context. Here we have to note that in the course of teacher training, there is often a lack of meta-level (actual, practically detectable) change: teachers try to change the cognitions of students through direct behavioral prescriptions, and reframing does not happen, that is, preconceptions behind the inner images do not change (Osterman & Kottkamps, 1994; Szabó, 2001).

Meta-analyses done in the past few years also seem to support these statements. Gerard et al. (2011), for instance, after analyzing the studies of the past 25 years involving over 2,350 teachers and 138,000 students, have come to the conclusion that the teacher’s reflectivity and his or her convictions regarding learning, teaching and the subject, will determine whether or not he or she is able to apply new knowledge in the everyday practice of teaching. The results show that the professional development programs for teachers which were comprehensive and constructivism-oriented, lasting for more than a year, significantly improved the

accomplishments of the students. In the case of programs lasting for less than a year, there were technical and methodological hindrances that prevented the teachers from successfully implementing new knowledge and methods in their classes (Gerard et al., 2011).

Hargreaves & Fullan (2012) established a new concept to express the professional knowledge of teachers. This new concept fits the theories based on a new interpretation of knowledge, inasmuch as it strives to define the above mentioned problem-solving function as a part of the teaching profession. Thus, the professional capital of the teacher consists of three components. Human capital, expressed in the individual qualifications and education of the teacher, social capital², necessary to deal with interpersonal relationships and measurable by the number of interactions, and decisional capital, consisting of the teacher's competence, intuitions, discernment and spontaneous problem-solving ability. As for the latter, the authors emphasize the fact that it takes years of professional practice to develop, and apart from good individual discernment, it also requires the support of colleagues and a professional environment enhancing development. A deliberate educator is characterized by constant professional interest, the planning and development of teaching, all within the framework of teamwork. Thus, innovative teachers will report their professional efforts and results at national and international conferences, generating recognition rather than professional jealousy in a supportive school atmosphere (Hargreaves & Fullan, 2012).

Effectiveness: analyzing one's own pedagogical practice

Action research is one of the methods suited to enhance teaching, and its aims may involve the improvement of the quality of the teacher's instructions and explanations. Bob Dick has analyzed the professional literature of several countries in relation to action research for nearly a decade by two-year periods, considering education as a prominent area. The various researches taken into consideration have two elements in common: cooperation between university researchers and practicing teachers is quite frequent, and the demand of (self) reflectivity appears in virtually every case (Dick, 2006; 2010).

Class research is specifically suitable to develop pedagogical methodology and pedagogical problem-solving ability. The theory and method started in Asia, and even though its realization is similar to action research, there is still a difference regarding its philosophy: it is essential that this is the work of a group of teachers, involving an outside expert – usually a university lecturer or researcher – but planned by the educators themselves. Class research consists of methodically constructed cycles in which participants plan a research class aimed at analyzing and developing a given methodological element. After the research class, they analyze the experience and include it in their own teaching practice. This method breaks down complex teaching situations, thus supporting learning from teaching. It is practice-oriented, collaborative and reflective, making it a very favorable method. Thorough exploration of professional literature in the preparatory stage of the research class, observation of the class, making the experience public are activities that relate this method to qualitative researches (Gordon, 2009).

In some European countries, the teaching of research methods has already appeared in teacher training, however, in the light of what has been stated above, its true value lies in whether or not it is also related to pedagogical modules and not only to certain professional subjects (Bjekic, Zlatic & Capric, 2008). In Austria, the research knowledge of teacher candidates is being developed in connection with their professional-methodological training, and it is also closely related to teaching practice at Finnish universities. During its one-semester long teaching practice, teacher training in Finland aims at making students capable of critically reflecting on their own practice and on their social competencies while they analyze their teaching and learning situations (Niemi, 2008).

A teaching career requires the constant renewal of professional knowledge: the further training of teachers is present in most countries in one way or another, but according to the 2007 report of

² Hargreaves uses the term "social capital" not in its better-known sense but specifically meaning the social competence of the teacher, the way he or she is able to get along in interpersonal situations.

the European Commission, a coherent strategy of further training is nonexistent in several European countries, and there is no sufficient relation between research, education development and professional development (Commission of The European Communities, 2007).

Professional literature related to the further training of teachers underlines a few factors that determine success. The role of reflectivity is prominent here as well: special attention has to be paid, for instance, to teachers' ideas regarding their own functioning as teachers, brought from the time of their own school days, and regarding their teaching policy; that is, their idea of the purpose of education, what they know about their own subject and how they wish to pass it on to students.

Successful further training programs also pay attention to the fact that an educator should be able to relate written syllabus to the one actually realized, and to transform acquired knowledge into his or her own teaching practice. Research-oriented or constructivism-oriented further trainings that focus on problem-solving have proven to be very efficient in this respect.

It is also important that teachers learn about their students' ideas and ways of thinking. They need to understand how the students' conceptual thinking develops, and they have to inquire about the problem-solving methods used by the students. In that respect, it seemed profitable if the teachers were involved in research where they made sociological interviews with students, and they were able to recognize typical mistaken ideas of students and also the way these ideas influenced the learning process (Borko, 2004; Gerard et al., 2011; Opfer & Pedder, 2011; Schneider & Plasman, 2011).

Doctoral trainings are long-term, but the question is if they are connecting the theory and the practice. Other trainings can be practice-oriented, but – as will be seen – most of them are short-term.

Further training for teachers and doctoral trainings in Hungary

According to the relevant public education act (Act CXC/2011), educators have to take part in further training at least once every seven years. In our outlook above at professional literature, we could see that for a further training to be truly successful, it has to last for at least one year: this means that if the training involves 10-12 hours a month, it should consist of 120 hours minimum. In the Accreditation System of Educators' Further Training (see www.pedakkred.oh.gov.hu) there are 53 120-hour-long or longer further trainings at the moment – in January 2014 –, presented in the chart below.

Table 1: *In-service trainings in the Accreditation System of Educators' Further Training*

Nature of further training	Examples	Number of training events
Pedagogical methods	Drama education, preparing educators for non-specialized training in grades 5-6, group leading, differentiated schooling	12
Public education development	Educational project cycle management	2
Expert preparation	Training institutional development experts, mentors	4
Recreational culture	Folk games club group leaders training course	11
Special needs education, developmental education	Therapeutic horseback riding, Individual therapy of organically handicapped children	6
Alternative education	Waldorf educational further training	6
Children's welfare, equality	Family, children's and youth welfare	2
Information technology	Using a laptop in classes, curriculum development for E-learning	3
Other	Graphology, Theology, specialized language	7

Naturally, the actual content of further trainings may differ, yet we can state that most of these do not necessarily support the transformation of newly acquired knowledge because they are not long enough to follow this procedure. Although if it communicates important new methodological facts that may even raise the level of reflectivity.

The composition of trainings preparing people for the educators' exam shows ratios similar to that of further trainings. During most of the 2-4 semesters of the training, participants are being prepared for some specialized task-solving. Such trainings include public education manager, special needs physical education or quality and process management training. In some cases, however – based on the name of the training –, we may conclude that the program makes knowledge transformation and reflectivity possible, notably, the training programs for curriculum and teaching aid innovator or talent developing educator preparing for scientific work.

The doctoral training of teachers is a separate category within further trainings. Not only because it can enhance the prestige of the profession more than the previous ones, but also because by its nature it is especially suitable for the presentation of key elements listed earlier, thus significantly improving the quality of education. Today, in Hungary, the acquisition of a PhD degree is primarily made possible in disciplinary doctoral trainings. Although the life career of teachers includes the classification of “scholar-teacher” which requires a doctoral qualification, this does not necessarily enlarges the range of doctoral schools. However, professional literature examining the professional development of educators considers trainings and further trainings efficient if they connect new knowledge and methodological elements to research knowledge and curriculum transformation.

With regard to doctoral programs, there are major differences in organizational forms and relations in all of Europe: the training exists in the form of doctoral programs tied to university departments and faculties, but in some places there are doctoral schools unattached to bachelor's and master's training, and in certain countries these various forms coexist. Hungarian universities have not yet become conscious of the fact that doctoral training is another cycle of higher education, therefore their recognition of doctoral schools as their own is often only formal. The fact that this situation is perceived as temporal is also shown by insufficient research resources, the lack of proper infrastructure for doctoral schools, and the fact that supervisory work qualifies as a type of “voluntary free time activity” (Pusztai, 2009, p. 344).

The situation of teachers' doctoral training is further modified by the feminization of teaching careers, especially demonstrating feminine attributes with regard to training and further training. According to the data of “Graduate Follow-Up Research, 2010”, for instance – as compared to the whole of the sample – there is only a minority among educators who are planning to enroll in doctoral training, and of these, participation is mainly preferred by men or those who graduated from an academic area traditionally considered masculine (Kovács, 2012a). Acquiring a higher academic qualification is typically a masculine career strategy: female students are more likely to have plans for further education, beyond a degree, in order to possess greater cultural capital, but that means acquiring another, same-level degree, and not participation in a doctoral training (Fényes, 2009).

Doctoral training models in Euro-Atlantic countries may serve as role models: in that respect, we can see a remarkable difference between the practices of Anglo-Saxon and Continental states. In the Anglo-Saxon world, “professional” doctoral qualifications are acceptable, whereas in continental Europe, these are still considered secondary. At the same time, the content of a teacher's doctoral (EdD) is more similar to that of successful trainings focusing on professional-methodological learning. Next, we will consider the possibilities in the area of doctoral training today in Europe, Great-Britain and the United States.

Doctoral trainings in Anglo-Saxon countries³ EdD and PhD compared (United States, Great-Britain, Australia and New-Zealand)

As we have already mentioned, in these countries, there are two types of doctoral training in the area of education: EdD is practice-oriented, not primarily preparing students for academic work, and PhD is research-oriented, deals with more comprehensive topics and in general is more similar to the type of PhD that is accepted in Europe. A study analyzed almost 2,000 theses in order to justify or refute this assertion. Authors concluded that PhD dissertations use more types of statistical analyses and their results have more universal validity, whereas questionnaire-type interviews and case studies are more frequent in EdD dissertations. However, with respect to whether or not the dissertation is describing a basic research or an applied one, and to the novelty and significance of the results, no difference could be demonstrated (Nelson & Coorough, 1994).

A common attribute of these trainings – except for teacher trainings specifically related to a certain academic field – is that they are full-time courses; students have three years to learn the material and another two years to prepare the dissertation⁴. “Curriculum development and education” is also available in the various institutions as an EdD or a PhD program, thus providing an opportunity for us to compare “professional” and “research” doctoral trainings. The description of the EdD program emphasizes the fact that it enhances the professional development of teachers and that its purpose is to train school leaders who are competent regarding the environment of educational institutions and are also able to have a well-founded view of social issues. As opposed to this, a PhD program wishes to train curriculum developers primarily – besides educational leaders – and experts who are capable of comprehensively assessing school curricula.

Accordingly, one significant difference is that in the curriculum of EdD, the issue of multiculturalism and the study of the micro and macro world of school classes receive great emphasis, whereas PhD training focuses on the critical analysis of educational practice and curriculum, the comprehension of various research methods and the professional and critical evaluation of research reports conducted in the area of curriculum and education.

We can see little variation regarding the main subjects, although the shift of emphasis described above can be perceived. Although curriculum history, philosophy of education and curriculum planning and assessment are included in both types of training, PhD training involves more subjects of research-methodology, such as statistical methods or introduction into qualitative and quantitative research methods, whereas in EdD these are replaced by subjects such as adult development or early childhood education.

We also find EdD and PhD trainings related to specific disciplines. These are primarily connected to sciences; they are numerous in the United States as well as in Australia, New-Zealand and Great-Britain. Organizationally, they belong to the Faculty of Education and they cooperate with the faculty of the field of science involved. There are part-time and full-time trainings.

The purpose of these programs is the development of science education. This is also the focus of the researches going on parallel with the training, entitled for instance, “The application of innovative technologies in science education” or “The model of scientific education and learning”. In the case of PhD trainings, the emphasis is on researches, students can work in their chosen field alongside their professors. By contrast, EdD programs focus on the development of teaching competencies and professional knowledge, for instance, they deal with the transforming of scientific knowledge into public education and they also include education development supported by video recordings.

With the exception of the United States, Anglo-Saxon countries also operate PhD trainings aiming at the general professional development of teachers. These have the specific goal to allow students to develop their own professional competencies and knowledge during the training, for

³ The doctoral trainings of Euro-Atlantic countries were presented in great detail in my study entitled “The third cycle of teacher training – questions and opportunities” (Kovács, 2012b), the results of which are summarized in this paper.

⁴ The starting point was <http://www.hotcoursesabroad.com/study/training-degrees/international/phd/teacher-training-courses/slevel/15/cgory/o3-3/sin/ct/programs.html> site which leads to homepage of Anglo-Saxon Universities.

example, in the area of program and curriculum development, fitting new knowledge into the curriculum and evaluation. Teacher-researchers prepare their dissertations based on some practical research conducted in the area of teaching. These researches often contain harsh self-reflection and self-criticism as well as feedback from students, friends and colleagues.

Doctoral trainings in Continental Europe⁵

The “professional” doctoral degree so prevalent in the Anglo-Saxon world is still unknown in Europe. In some of these countries, there are not even PhD trainings specifically for teachers; rather, it is possible to get a doctoral qualification dealing with educational science and pedagogy similar to what we have in Hungary. In countries where there is a PhD training for teachers, it is a full-time training usually lasting for three years, and enrollment requirements include a teaching degree and in most cases, two years of teaching practice.

The teacher trainings of the third cycle basically have two types of focus, with varying shifts of emphasis with the categories. One type of training is oriented towards didactics and methodology. In the course of the training, the organizing institution cooperates with other faculties as it is presenting the significance and possibilities of didactics and curriculum planning with regard to the teaching of certain subjects or to adult training as well. The main goal of these trainings is to present, define and make known the nature and process of teaching, learning and motivating from a scientific point of view.

The “subject didactics” PhD training of Umea University, Sweden, is a good example. Their goal is to help future doctors to examine and comprehend the process of teaching and learning from a scientific point of view. The doctoral school cooperates with the Faculties of Biology, English, French, Physics, History, Chemistry, Mathematics, Pedagogy, Swedish and German, as it is extremely important for them that the teaching process is a part of teaching any academic field. The researches being conducted parallel with the PhD training are the following: “Teaching in a multiethnic environment”, “Internet Culture”, “The education of values in new teacher training”.

The other type of training in continental Europe primarily develops teacher’s competencies, skills and attitudes and it offers a scientific foundation for these. These types of training take into consideration a multicultural–multiethnic environment, gender aspects and the defining nature of internet culture. They deal with the construction of a teacher’s image, discussions about teachers and education, and the way these influence the efficiency of teachers and professionalism. They also involve such special areas as artistic education, inclusive education, recreation and teacher-parent relationships.

The “Education” PhD training of Lund University, Sweden, is such an example. According to the description, it is their main goal to introduce theoretical foundations and scientific approaches that help assess issues such as the sustainment of motivation, the development of competencies and lifelong learning or individual and group attributes and possibilities of learning.

Conclusions

If PhD training will indeed become the third cycle of higher education and the expansion predicted by many will be realized, then, in order to avoid further decrease of the teaching profession, it will become necessary to expand the range of educational doctoral trainings in Hungary. The situation is further complicated by the fact that since teacher training became undivided⁶ in September 2013, a bachelor’s degree may be enough for teaching; that is, in a significant number of cases, the level of qualification will not be sufficient for the teachers to

⁵ Institutions were reviewed by countries, the analysis included in the following universities: the University of Oslo, University of Bergen, Lund University, Umea University, Universiteit Leiden Universiteit Utrecht, The Hague University, University of Twente.

⁶ Education of primary school teachers takes four years, education of secondary school teachers takes five years. It also means they have college degree in the first case and university degree in the second.

enroll in PhD training. At the same time, the planned fourth stage of the teacher's life career, that of research-teacher, may be motivating, however, the way this will function is yet unknown.

The EdD qualification that is well-respected in Anglo-Saxon countries, is considered secondary in continental Europe, still, we could see that the attributes of successful further trainings are better suited to the contents of "professional" doctoral programs. Efficient professional development always takes into consideration the context, as well as previous ideas and beliefs regarding teaching and the fact that theoretical issues and their practical realization should be dealt with as a whole. It is also important for teachers involved in the training to embrace their own role as students. The significance of reflectivity is prominent: action research and class research are two methods especially suited for self-reflection, therefore it is well worth building these into training and further training programs.

For now, few European countries set an example for research-oriented teacher training, even though results show that it is profitable to establish a research view during teaching practice already. A critical analysis of one's own activity enhances the expansion of methodological expertise, as well as the development of the teacher's technical skills and the realization that teaching is a complex process in which problems can only be interpreted with regard to the given context. We cannot ignore the fact that the agents of the feminized teaching career, when choosing a further training, apply a "feminine" career strategy and pile up similar-level qualifications. However, if they were introduced to research methods and innovative curriculum development while getting their first degree, it may help them overcome their aversion to participation in doctoral programs later on.

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