



THE DEVELOPMENT OF PRIMARY TEACHERS COMPETENCIES AS A BASIS TO INTRODUCE THE STUDY PROGRAMMES OF UNDERGRADUATE TEACHER EDUCATION

ÖĞRETMEN YETİŞTİRME PROGRAMLARINA TEMEL TEŞKİL EDEN İLKÖĞRETİM ÖĞRETMEN YETERLİKLERİNİN GELİŞTİRİLMESİ

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ABSTRACT: In this article the authors establish the key competencies that should be acquired by future teachers in the course of their undergraduate studies. They also develop a model of the factors for which they presume most significantly contribute to the development of the selected competencies. For the selection of competencies and predictors of their development they adapted the model of the REFLEX Project (2009 –) in-line with relevant theories, projects and authors concerning the competencies of primary school teachers. In the empirical part, the authors, among others, prove as follows: (1) the grades of the future primary school teachers during study have only a very limited impact on the acquired competencies studied in the paper; (2) occupational values highly impact the development of all studied competencies; (3) greater inclusiveness of an individual in social networks has a positive impact and statistically significantly contributes to reaching all studied competencies. The authors agree that the future development of the curriculum for primary school teachers should seriously consider these findings.

Keywords: teacher competencies, teacher training programs, REFLEX

ÖZET: Bu makalede yazarlar, geleceğin öğretmenlerinin lisans eğitimleri sırasında edinmeleri gereken temel yeterlikleri belirlemişlerdir. Aynı zamanda, belirlenen becerilerin kazanılmasına en fazla katkı sağladığını varsaydıkları faktörlere ilişkin bir model geliştirmişlerdir. Yazarlar, yeterliklerin seçimine ve bu yeterliklerin geliştirilmesine ilişkin yordayıcı unsurlarının belirlenmesine yönelik olarak, ilköğretim öğretmenlerinin yeterliklerine ilişkin kuramlar olarak REFLEX Projesi (2009 –) modelini benimsemişlerdir. Yazarlar çalışmaları sırasında bazı noktalar belirlemişlerdir: (1) geleceğin ilköğretim öğretmenlerinin öğrenimleri esnasında sahip oldukları yeterlikler, bu çalışmada açıklanan edinilmiş beceriler üzerinde yalnızca sınırlı bir etkiye sahiptir; (2) ilköğretim öğretmenlerinin çalışma hayatı esnasında kazandıkları değerler incelenen tüm beceri unsurlarını oldukça fazla etkilemektedir; (3) bireyin sosyal ağlara katılımındaki artış, olumlu bir etki yaratmakta ve incelenen tüm yeterliklerin kazanılmasına istatistiksel olarak katkı sağlamaktadır. Yazarlar, ilköğretim öğretmenleri için bir müfredatın hazırlanmasında bu bulguların göz önünde bulundurulması gerektiği konusunda hemfikirlerdir.

Anahtar Kelimeler: öğretmenin yeterlikleri, öğretmen eğitimi, REFLEX Projesi

1. INTRODUCTION

Fast-changing societal and technological developments trigger changes in every area of human activity. Changes are an imperative of time. Living and acting in society is becoming more and more complex. The urgency of comprehension and introduction of changes in the area of education in the last two decades had practical as well as theoretical implications. Again and again we are facing the reforms of educational systems related to coping with challenges such as the increased number of the so called »non-traditional« pupils and students, the need for a transfer from individual to group teaching, a shift from knowledge sharing to knowledge creation, the evaluation of educational systems and performance of individual teachers and changing and greater adaptability of school management, respectively (OECD, 1999; OECD, 2001).

Moreover, we also increasingly use the term »changing of education« to denote the readiness of the youth for responsible and tolerant living in the pluralistic changing and learning society apart from raising the achieved level of education. »Learn to live together« (Delors, 1996) means acquiring and integrating knowledge at the same time – learning how to learn; gaining and developing abilities to deal with and solve problems; developing the social and emotional area to understand others,

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accepting co-dependence and respect; developing such a personality to be able to act independently, reasonably and in a responsible manner. This set of goals can only be achieved by the changed role of the teacher. A quality upbringing, education and training are, according to the opinions of the authors of the Green paper on *Teacher Education in Europe* (Buchberger *et al.* 2001, 13-14), an indispensable factor at building up »*Europe of knowledge*«, at designing »*the learning society*«, triggering an economic boom and ensuring social cohesion.

In order to achieve the mentioned goals the strategies and visions of individual countries should be considered. The future teachers should develop such competencies that would enable them to be able to meet various demands and tasks of teaching in a modern school, for which reason they should be taught the corresponding approaches, forms and methods of work and learning situations supporting such development. The main purpose of this article is to establish the model of relevant factors contributing to the development of professional competencies of primary teachers. Thus, contemporary theoretical viewpoints on the role of learning and a teacher in the modern knowledge society are presented first. In the second part, within this context and based on the analysis of the relevant sources and framework developed by the Reflex (2009–)⁴ research consortium, the most important competences in the teaching profession and the personal and institutional factors are operationalized, which presumably have the greatest impact on the achieved level of teacher competencies in the course of their undergraduate studies. In the third phase attention is paid to the connection between the professional competences of primary school teachers and the factors impacting them. On the basis of the analysis and hypotheses evaluation, guidelines for the drawing up and implementation of the programme of primary teacher education are formed.

2. THEORETICAL STARTING POINTS

From a historical viewpoint the education of European primary teachers most often drew on the teachers' training colleges' tradition, in which the students were mainly subjected to practical training, methodical subjects and teaching practice (Buchberger *et al.* 2001). Thus, the component part of this tradition was the teacher's personality and pedagogical skills practice, whereas modern trends in teacher education are based on a professional approach to teaching, which, apart from research based knowledge on teaching, studies and learning, and evaluating the direct pedagogical practice, fosters autonomous and competent professional teachers' performance – as critical intellectuals who know how to take into account the interests and learning needs of their students at all levels of education.

In order to master the competencies enabling future teachers to meet the demands and tasks of teaching in a modern school, they should be taught such approaches, forms and methods of work and learning situations, to be able to effectively develop the corresponding competencies. Different approaches to and styles of teaching at every education level significantly contribute to the development of their professional competencies. In the Tuning document (2004) the organizational forms (lectures, exercises, practice, guided or self- study, project work) and various kinds of taught and study activities, such as participation in lectures, performing certain activities, writing texts, project work presentations, group leading, etc. are mentioned. The former range of teaching styles is expanded by Razdevšek Pučko (2006) with seminars, research seminars, individual tasks, guided individual studies, participatory learning and teaching, active (reflective) teaching, portfolio conferences, field work, workshops, demonstration lessons, teacher observations, e-learning, etc. In the modernized programmes it is thus sensible to implement the very styles and methods of teaching and learning which enable reaching study achievements in line with the programme (*ibid*) to the maximum possible extent and for reasons of achieving the competency necessary to realize the teacher's roles and tasks in the context of the learning society and indirectly – of the learning school. Why?

Teachers play an important role at teaching the youth. They are the key element of the education system of every country. They should, therefore, strive for quality education, providing the pupils/students with personal fulfilment, better social skills and more versatile opportunities for

education and employment. Their profession, which is inspired by the values of inclusiveness into the knowledge society and the need to nurture the potential of all learners, has a considerable impact on society and is crucial at advancing the human potential and at shaping following generations. These claims were further elaborated in the document on Common European Principles (EC, 2005) stating that the teaching profession requires a higher education institution diploma, teachers should have knowledge on their subject matter and suitable knowledge on pedagogy; further, teacher education programmes should be provided at all three levels (undergraduate, master and doctoral study); above all, the teachers' readiness for research, proving their own practice and developing new knowledge should be fostered. The document also draws attention to the urgency of perceiving the teaching profession as the continuum, which means that consistent and sufficiently funded learning strategies are needed – from the initial teacher education to lifelong learning strategies, comprising formal as well as informal learning forms – for teachers' professional development.

Various authors (e.g. Hirvi, 1996, Tom, 1997, Day, 1999, Loughran, 2006), acting on the assumptions of changes in society (consequently also in the education system), often deliberate on »the new roles« of the contemporary teacher. Changes in society influence the changed role of teachers, which shifts the focus of the so called traditional role and trigger teachers to adopt some new roles and to change or abolish some former ones. According to Hirvi (1996) the teacher is no longer the only source of information, he has to adapt his work to new circumstances and demands of the society and to the development of technology; he should be the mentor, the fosterer of pupils' development, the organizer and the introducer of the new ICT into lessons, learning and teaching; he should take care of his personal and professional development, he should participate in the developing and learning organisation. Qualifications attained by teachers in the undergraduate study programme only are no longer adequate to meet increased demands.

Among the fundamental competencies/skills that are much more needed now than they were in the past there are some new ones, e.g. digital literacy and others, such as mastering foreign languages, social skills, etc. The individuals are namely expected to be prepared to learn and make meaningful a wide range of information, to behave in a more autonomous, tolerant and participatory way than in the past and at the same time to be able and ready to acquire new skills and to adapt to new challenges and situations. Medveš (2006) considers competencies to be the global goal of education, which, on the one hand, are a synthesis of knowledge in the sense of mastering contents, cognitions and information by applying higher cognitive processes, i.e. knowledge as per content, and, on the other hand they are a synthesis of skills, competencies and methods of a particular field of expertise or expert field, i.e. procedural knowledge, and last but not least, competencies are a synthesis of the development of interests, motivation, the personal response of the individual, their integrity and social inclusiveness.

When contemplating competencies, we cannot overlook Perrenoud's definition (Key competences, 2002), who defines competence as the ability to act efficiently in various situations, which is otherwise based on acquired knowledge, yet it is not limited by it. In the continuation competences acquisition is perceived by the author as training individuals for mobilization, application and integration of the acquired knowledge in complex, various and unpredictable situations. According to Razdevšek Pučko (2006) this perception is wide enough to describe the demands that teachers are supposed to satisfy in the contemporary school, which produces complex, various and unpredictable situations, necessitating the need for permanent professional development, as knowledge acquired only in the education process is no longer sufficient.

In the analysis produced by Eurydice (2003; 2008), apart from the so called »classical – specific competences« that are related to the sole work with pupils and to learning and teaching, namely, those competences related to the changed and new role of the teacher in the present and future society (*»new competences now expected of teachers«*) are also mentioned. These are as follows: teaching by applying contemporary ICT, integration of special needs children, work with groups of different children, also with multi-culturally mixed groups, school management, various administrative tasks and conflict management. Razdevšek Pučko (2006) observes that this list mainly includes subject matter independent competences. On the basis of these competences within the process of the study programme's modernization at the University of Ljubljana's Faculty of Education, research was carried out among Slovenian head teachers, teachers and other education professionals,

following which the study programmes modernization group defined and created the following clusters of teacher competences:

(1) comprehensive knowledge on didactics and methodology, enabling the teacher to plan and organize optimum and encouraging learning environment with a view to foster and facilitate the learning process with pupils; (2) the competence for team work (teaching) and collaboration with other teachers and education professionals; (3) the changed role of a teacher in the classroom (a teacher as a mentor, organizing the independent or participatory work of pupils), demanding more knowledge on communication and organisation; (4) knowledge on psychology, enabling teachers to get to know pupils, their characteristic traits and peculiarities needed for effective motivation, adaptation and fostering learning processes; (5) training pupils for lifelong learning in the knowledge society («to teach them how to learn»); (6) developing own professionalism: responsible direction of own professional development in the process of lifelong learning, and (7) ICT application in formal learning situations (at lessons) and other professional work (also for the needs of own professional development). With the exception of the first competence, the others are more or less common, transferable "teacher" competencies, presuming that each teacher disposes of enough specific expert knowledge of the fields he is about to teach (Razdevšek Pučko, C. and Rugelj, J., 2006, 34.)

The vision of lifelong learning and permanent professional development presupposes a teacher who is able to critically reason, to be qualified for reflection and evaluation, which is able to find and create the opportunities for the development of an individual pupil, who knows how to encourage and support pupils in the learning process. Learning and acquiring competences defined in such a way presumes a shift in teaching methods first (from »*subject-centred*« and »*teacher-centred*« to »*student-centred*«), which is also one of the goals of the Bologna process (Razdevšek Pučko and Rugelj, 2006; Zgaga, 2007). The efforts across the whole education vertical – the initial, undergraduate education, followed by further education and training should be supported with the same vision by the institutions in which teachers are employed and by the coherent state policy, the aim of which is to provide sufficient funding. This policy should thus aim at the initial teacher education and the continuation of the teachers' professional development, and should at the same time be part of the wider framework of the general educational policy (Haymore Sandholtz, 2002).

3. STRUCTURING THE KEY COMPETENCES MODEL OF PRIMARY TEACHERS

Competences in the sense of knowledge and skills of an individual in the education and employment system are explained in numerous theoretical approaches. The functional approach towards the competences, which served as a basis for the English government and some other governments to draw up professional standards in the eighties, mainly draws on analysing and segmenting work tasks. The opposite approach takes into consideration the viewpoint of an individual, which is most often applied nowadays, defining competences as a cluster of knowledge, personal traits, capabilities, abilities, motivation, self-concept and values (Spencer and Spencer, 1993). The fundamental characteristic of this approach focuses on observing the individual and not his work. The operationalization of competences on this basis seems most consistent in contemporary society and has the highest explanatory value, because working tasks and conditions are changing fast. At this point we are particularly interested in the very range of competences that can be adjusted to the researched sample of primary teachers, which is further described.

In literature we come across various attempts to operationalize a wider range of competences that are much different according to their application purpose. Among the many authors drawing on the American tradition (e.g. Klemp, 1980; McClelland, 1988; Schroder, 1989), who were describing the key management competences, Boyatzis' (1982) model of managers' competences is among the most known, representing the type and level of competences. Spencer and Spencer (1993) defined the key competences of technicians and professionals, sales persons, humanitarian workers, managers and entrepreneurs in the same way. It can be established that it is possible to subdivide and define key competences more precisely, whereby the OECD DeSeCo project (2001) took into account the cross-section of successfulness of the private life and the society offering a suitable methodological tool for the conceptualization of a wider range of key competences. When structuring these it can be very quickly established that the relevance of individual key competences is different among individual professional groups.

The above mentioned is a subject of examination within Reflex (2009–). On the basis of their own research concept of key professional competences, the mentioned researchers focus on the discrepancy between the expected and actually acquired competencies of the graduates five years after their studies finished. The framework of competences identified by the Reflex project consortium (table 1) was used as the framework to identify the secondary source competences (table 2) and to analyze the research model on the basis of the mentioned Reflex research (2009-) on the adapted sample of primary teachers.

Table 1: Key competences of higher education graduates (Reflex, 2009-)

1. Mastery of your own field or discipline	11. The ability to mobilise the capacity of others
2. Knowledge of other fields or disciplines	12. The ability to make your meaning clear to others
3. Analytical thinking	13. The ability to assert your authority
4. The ability to rapidly acquire new knowledge	14. to use computers and the internet S
5. The ability to negotiate effectively	15. The ability to come up with new ideas and solutions
6. The ability to perform well under pressure	16. Willingness to question your own and others ideas
7. Alertness to new opportunities	17. The ability to present products, ideas or reports to an audience
8. The ability to coordinate activities	18. The ability to write reports memos or documents
9. The ability to use time efficiently	19. The ability to write and speak in a foreign language
10. The ability to work effectively with other	

Source: Reflex, 2009-. See <http://www.fdewb.unimaas.nl/roa/reflex/>.

The Reflex research model shall be used as the initial framework to analyze the secondary sources of competences that are crucial for the primary teacher profession and for teachers' transfer from the sphere of education to the labour market. In Table 2 we assessed the noted competences appearing in the presented sources (Chapter 2 of this article) by applying the Reflex tool. When adapting this tool for primary school teachers, we used, in addition to some sources mentioned in the introduction three Eurydice documents (2002, 2003 and 2008), a document produced by David (2008) and research of Slovenian authors Pučko and Rugelj (2006). The classification of competences in the 'Reflex model' was performed by comparing the roots of the key words and the harmonization of the terms as per content. Both were carried out within the expert workshop at the Faculty of Education of the University of Ljubljana.

Table 2: Summary of the key competences identification of primary teachers on the basis of the sources and the framework provided by the Reflex research consortium

Source	Eurydice (2002) (1)	Eurydice (2003) (2)	Eurydice (2008) (3)	(Pučko and Rugelj, 2006) (4)	OECD Analyses (Instance, 2008) (5)
Reflex project (2009-)					
Professional competence in own field	–	‘developing own professional competency’	possessing ‘communication competencies’;	‘comprehensive knowledge on didactics and methodology; ‘developing own professionalism; ‘knowledge on psychology, enabling getting to know pupils’	‘ability to realize the holistic approach’
Ability to coordinate activities	‘school management’	‘organizing encouraging learning environment’; ‘qualification for new tasks and work in school outside the classroom and with social partners’;	–	‘organizing independent and team work: a teacher as a mentor’; ‘knowledge on communication and organization’	‘interactive tool application’; ‘ability to realize life goals and personal projects’
Ability to collaborate with others	-	‘team work’;	–	‘ability for team work’; ‘collaboration with other teachers and	‘ability to collaborate ’; ‘ability to connect

(team work)				education professionals'	with others'
Ability to motivate others	'conflict management';	'ability to develop new competencies and new knowledge with children'; 'appropriate approaches regarding the cultural, social and ethnic diversity of children'	'launching initiatives and entrepreneurship'	–	'ability to ensure, realize rights and interests, limitations and needs'; 'the ability to manage and solve conflicts'
Ability to use the computer and apply the internet	'ICT application'	'ICT application'	The development of 'digital competencies'	'ICT application'	–

List of used *sources*:

- (1) Eurydice (2002): Key Competences (2002). Survey 5. Brussels: Eurydice, European Unit.
- (2) Eurydice (2003): Defining competences and curriculum, European reference points for the teaching profession, Prepared by Eurydice for study visit (England, April 2003).
- (3) Eurydice (2008): Responsibilities and teacher autonomy. Working document. Slovenian Presidency of the European Union. Brdo, Slovenia. 8–10 April 2008.
- (4) Razdevšek Pučko, C. and Rugelj, J. (2006). Competences in Teacher Education. In: Tancig, S. and Devjak, T.: Contributions for Modernization of Educational Studies Programmes. Ljubljana: Faculty of Education.
- (5) Istance, D. (2008): Directions for Schooling and Educational Innovation from Recent OECD Analyses. Promoting Innovation and Creativity: Schools' Response to the Challenges of Future Societies. Brdo, Slovenia. 8–10 April 2008.
- (6) REFLEX project (2009-): Research into Employment and professional FLEXibility is a 6 Framework project of the European Commission. See: <http://www.fdewb.unimaas.nl/roa/reflex/>

On the basis of the Reflex's competence tool in Table 2, those competences were defined (five out of 19 from the tool displayed in the table 1) that most often appear in the selected theoretical sources relevant particularly for the primary school teacher. In this way the following competences were selected: 'expertise in own field' (four sources), 'ability to coordinate activities' (four sources), 'ability to collaborate with others in a productive way and team work, respectively' (three sources), 'ability to motivate others (all five sources) and 'ability to use the computer and apply the internet' (four sources). The gained selection of competences shall be used in the following chapters in structuring the empirical model and when analyzing.

4. DESCRIPTION OF SAMPLE, HYPOTHESIS AND RESULTS

The database for testing the hypothesis was developed in the frame of the Reflex project related to HE graduates 5 years after the end of study. Included in the analysis are only those countries in which we were able to clearly identify a larger number of graduates (35 and more), which have an education suitable for performing in the primary school teacher profession. Therefore we were able to incorporate 35 graduates from Germany, 150 from the Netherlands, 80 from the UK, 95 from Finland, 173 from Norway, and 377 from the Czech Republic into the sample. A total of 907 graduates were included in the analysis. In the analysis we did not pay special attention to the countries' effects, however we have indicated the average effect from all countries.

In the analysis we focused on those variables which measure the average grade during studies, effort during study, work experience during study, incorporation into social networks and professional values that are important for conducting the teaching occupation (autonomy at work, learning new things and new challenges). From the Reflex methodological tool we have chosen only those which were previously identified as the most relevant for performing the occupation of the profession.⁵

⁵ Besides the mentioned predictors, we assume that competencies are affected also by other variables that are related to the characteristics of individual countries. We are not going to pay a lot attention to this.

On this basis we created the following hypothesis:

H1: A higher than average grade during study the higher is the level of acquired competencies.

H2: The higher the student effort the higher is the level of acquired competencies.

H3: Relevant work experience during study positively affects a higher level of acquired competencies.

H4: The higher the level of inclusion in social networks the higher is the value of those occupational values that are important for performing the teaching profession, the higher the level of acquired competencies.

H5: More important the individuals' professional values, the higher the level of acquired competencies.

5. INTERPRETATION OF THE RESULTS WITH DISCUSSION

On the basis of the results of the linear regression in Table 3, we can learn in what way the selected predictor affects the occupational competences of primary school teachers. Mastery in own field gained the highest percentage of explained variance. This competence is shaped the most by occupational values and social networks. These two predictors have the highest impact on other competencies. The social network of the individual is most related to the ability to motivate others (0.243), ability to coordinate activities (0.200), mastery in own field or discipline (0.198) and the ability to work productively with others (0.196). The correlation between individual and social network and the ability to use computers and the internet is somewhat lower (0.133).

Table 3: Effects of relevant predictors during study and in the first year of employment to the level of acquired competencies

	Mastery in your own field or discipline	The ability to coordinate activities	The ability to productively work with others	The ability to motivate others	The ability to use computers and the internet
Average grades during study	0.107**	0.004	0.012	-0.031	0.005
Invested effort during study	0.004	0.067**	0.075**	0.092***	-0.020
Relevant work experience during study	0.007	0.051	0.104***	0.026	0.030
Social network	0.198***	0.200***	0.196***	0.243***	0.133***
Occupational values	0.240***	0.216***	0.154***	0.148***	0.136***
R	12.9 %	11.0 %	8.6 %	10.2 %	4.1 %
Var.Com. (Average country effect)	4.5 %	0.67 %	4 %	5.6 %	7 %

*** $p < 0.01$; ** $0.01 < p < 0.05$; * $0.05 < p < 0.10$

With the selected descriptors, (average grade during study, invested effort during study, relevant work experience during study, social network, and occupational values) we can explain 12.9 percent variance of mastery of your own field or discipline. In a similar way as in the case of mastery of your own field or discipline, the indicated descriptors affect also the ability to coordinate activities. In the model we can explain the 11% variance of the competence 'ability to coordinate activities' mainly with the descriptors social network and occupational values and less with invested efforts during the study.

Besides occupational values and individual inclusion into social networks, the ability to work productively with others (team work) impacts relevant work experience during study and also invested effort during study. Average grades during study do not affect the level of teamwork and the ability to cooperate with others. We can explain the 8.6 percent variance of these competences with these descriptors. The variable "ability to motivate others" is the most impacted in cooperation with the social network and individuals' effort during study. Lastly, we should mention the ability to use computers and the internet. The acquired level of this competence has a statistically significant impact on social networks and professional values: with this we can explain the variance of 4.1%.

The main finding based on the results from Table 3 is that the predictors that relate to the study programme of primary school teachers itself has a lower impact than those predictors that are related to the personal characteristics of individuals (inclusion in social networks and occupational values).

Moreover, in the analysis we have found that predictors related to countries' impact are very different from country to country. Countries' impact is the highest in the case of utilisation of the computer and internet. With this we can explain the 7% of variance, which is twice as much as other descriptors relating to personal characteristics and study programme combined. The impact of the country is also highly present in the ability to motivate others (5.6 percent of explained variance); followed by the impact on mastery of your own field or discipline (4.5 percent of explained variance) and the ability to motivate others people (4 percent of explained variance). It is interesting that country impact is minimal in the cases of coordination of activities and this explains the 0.67 percent of variance.

Findings related with individual hypothesis are the following:

H1: Before the analysis we predicted that the average grade during study will positively impact the level of acquired competencies. This hypothesis can be statistically significant and confirmed only in the case of the competencies mastery in own field. In the case of other competencies, the ability to coordinate activities, the ability to work with others, and the ability to use computers and the internet, we must reject the hypothesis.

H2: Positive impact has been envisaged between invested effort in study and acquired competencies. This hypothesis can be confirmed in the case of 3 out of 5 competencies that were incorporated into the analysis. Both positive and statistically significant are invested effort related to ability of coordination of activities, ability to productively work with others (1% risk) and with the ability to motivate others. In all cases the betas value was very low.

H3: With the analysis we have partially confirmed the relation between relevant work experiences on the ability to productively work with others. The value is low but statistically significant. In the case of other competencies we must reject this hypothesis.

H4: On the basis of the analysis we also confirmed the fourth hypothesis. The higher inclusion of individuals into social networks positively and statistically significantly impacted all competencies in the analysis.

H5: We also find evidence that a higher level of personal values that are important for performing the teaching profession, the higher the level of acquired competencies.

On the basis of these findings it is possible to draw conclusions which elements and processes the educational programme of the primary school teachers should contain.

First, supporting students for acquiring above average grades has only a limited impact on the development of competencies. Grades above average impact only mastery in ones own field or discipline, while it has a limited impact on other competencies. In line with the conclusions of the Reflex project (2009-), the contribution to competence development of standardised test as a form of assessing students is particularly weak. In this light we should pinpoint that HE institutions very often have too great expectations in the practical capacity of their graduates in the world of work, particularly in cases where the HE curriculum has not been supported with innovative teaching methods or they were not professionally utilised.

Second, the higher education curriculum for primary school teachers should support the development of professional interest and values. This significantly increases individual ability in the professional field and also the development of teamwork and cooperation with others – which are very important competences in the teaching profession. HE institutions should therefore reward those results and experiences which surplus standardised tests of knowledge.

The third recommendation is related to the second: relevant work experience during study significantly impacts the ability of graduates to develop team work. Accordingly, with practical occupational experiences acquired through cooperation with employers, the stress and support from

HE institutions should be given only to relevant and professional experiences: routine student work which does not improve professional abilities. This finding is very much in line with the general results of the Reflex project.

Fourth, the development of a social network highly impacts all 5 occupation competencies of primary school teachers that were identified on the basis of the analysis. The educational programme should, from the content point of view, methodologically and didactically, be focused towards supporting relevant forms of networking or the cultivation of communities of practice (Wenger *et al.*, 2002). Only in these networks can future primary school teachers develop their professional identity, fields of interest, but above all, acquire the necessary professional support and opportunities for social and team learning.

Fifth, educational institutions for the profession of primary school teachers should focus special attention on the creation and assessment of occupational values. It would be highly positive if these activities would start at the enrolment procedure and also later at all levels of the teaching process.

6. CONCLUSION

We can conclude that all personal and institutional factors that we have identified in theory and the Reflex framework (2009-) have a statistically significant impact on at least one of the key competencies of primary school teacher. There are also other important related conclusions. First, the statistical significance is mostly not high, which means that the development of competencies is also impacted by other factors that were not included in the analysis. Second, competence development is also impacted by country particularities: the developed system of values, particular characteristics of educational programmes for primary school teachers and the educational characteristics of particular national systems.

Other findings related to the main conclusions described above are related to the interpretation of the results from the analytical section of the paper. With the analysis we have established that studying the competence development of primary school teachers remains a very challenging field. The results of learning (learning outcomes) cannot be assessed only on the basis of an input/output model tied to HE institutions only. We have found proof in this paper that competencies are also impacted by work experience during study, social networks and occupational and personal values. The latest are formed in the time of study and in the early career stage. The relation between competencies and these factors should be assessed in the national context of educational employability and value horizon.

In this sense we can agree with Teichler (2009, 15), who, on the basis of decades of experience, has discovered that the learning outcomes of HE graduates are highly related to enrolment requirements and regional specifics. Taking into account these limitations, we were able to answer two key questions related to the competence development of primary school teachers: which are the key competencies of primary school teachers and which elements and processes should the educational process contain?

On the basis of our findings we can repeat the following recommendations on the development of HE curricula of primary schoolteachers. First, stimulating students to achieve above average grades focusing on pushing students has only limited impact on competence development. Second, the developers of primary school teacher curricula should encourage students to develop their own interest. Third, which also relates to previous point, relevant work experience during study highly impacts the ability of students to develop team work abilities. Fourth, establishing a social network importantly impacts all competency aspects. Fifth, educational institutions for training future primary school teachers should pay special attention to monitoring and creating occupational values. This process should begin at the enrolment procedure and later in the learning process.

We conclude this paper with a plea for the further study of HE programmes and their role in the development of primary school teachers' competencies. On the basis of the findings in this paper we can assume that an integrative approach should be utilised because occupational competences are interrelated and an innovative teaching approach can highly impact others. Therefore it is important to

learn what the profile of an individual who is entering a teaching career is, what is going on with them during their study and what they do in the years after study.

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GENİŞLETİLMİŞ ÖZET

Hızla değişen sosyal ve teknolojik gelişmeler, insan etkinliklerinin her alanında değişime yol açmaktadır. Değişim, zamanın kaçınılmaz olarak gerektirdiği bir olgudur. Son yirmi yılda değişimlerin kaçınılmaz olarak kavranması ve eğitim alanında da ortaya çıkmasında, uygulamalı çalışmaların yanı sıra kuramsal çalışmalar da bulunmaktadır. Geleneksel olmayan öğrenci sayısının artması, bireysel öğretimden grup öğretimine geçiş ihtiyacı, bilgi paylaşımından bilgi yaratımına geçiş, öğretmenlerin performansının ve eğitim sistemlerinin değerlendirilmesi ve okul yönetiminin sürekli değişerek gelişmelere ayak uydurmaya çalışması gibi zorluklarla başa çıkmak amacıyla eğitim sistemlerinde sürekli reformlar yapılmaktadır (OECD, 1999; OECD, 2001).

Ayrıca, gençliğin değişen ve öğrenen çoğulcu toplumda sorumluluk almaya ve diğerlerine hoşgörülü davranarak yaşamaya hazır olduğunu ifade etmek için “*eğitimin değişmesi*” ifadesi daha sık kullanılmaya başlamıştır. “*Birlikte yaşamayı öğrenin*” (Delors, 1996) ifadesi bilgiyi edinme ve içselleştirmenin aynı zamanda gerçekleştirilmesi – öğrenmeyi öğrenme; sorunları ele alma ve çözme yeteneğinin kazanılması ve geliştirilmesi; diğer insanları anlayabilmek için sosyal ve duygusal bir gelişimin sağlanması, birbirine bağımlı olma durumunun ve saygının kabul edilmesi; bağımsız, mantıklı ve sorumlu bir şekilde hareket edebilecek bir kişiliğin geliştirilmesi anlamına gelmektedir. Bu amaçlara ancak öğretmenin rolü değiştiğinde ulaşılabilir. *Avrupa’da Öğretmenin Eğitimi* (2001) konulu raporun yazarlarına göre, nitelikli bir yetiştirme yani eğitim ve öğretim yöntemi, “*bilgi Avrupalısını*” inşa etmek, “*öğrenen toplum*”u meydana getirmek, ekonomik gelişme ve sosyal kaynaşma sağlamak için son derece gerekli bir faktördür.

Yukarıda belirtilen amaçlara ulaşabilmek için ülkelerin stratejileri ve vizyonları göz önünde bulundurulmalıdır. Geleceğin öğretmenleri, modern bir okulda eğitim vermenin gerektirdiği koşulları karşılayabilecek yeterliklere sahip olmalıdır. Bu nedenle, onlara uygun çalışma yolları, biçimleri ve yöntemleri ile yeterliklerin geliştirilmesini sağlayan öğrenme koşulları sağlanmalıdır. Bu makalenin asıl amacı, ilköğretim öğretmenlerinin mesleki yeterlikleri kazanmalarına katkı sağlayan faktörlere ilişkin bir model belirlemektir. Bu nedenle, ilk olarak, modern bilim toplumunda öğrenmenin ve öğretmenin rolüne ilişkin çağdaş kuramsal bakış açıları sunulmuştur. İkinci olarak da, bu bağlamda ve REFLEX (2009–)¹ araştırma konsorsiyumu tarafından belirlenen ilgili kaynakların ve geliştirilen kapsamın analizine dayanarak, öğretmenlik mesleği için gerekli en önemli yeterlikler ile öğretmenlerin lisans eğitimleri sırasında kazandıkları yeterlikler üzerinde en fazla etkiye sahip bireysel ve kurumsal faktörler işlevsel hale getirilmiştir. Üçüncü olarak ise, ilköğretim öğretmenlerinin mesleki yeterlikleri ile bu yeterliklerini etkileyen faktörlere dikkat çekmiştir. Gerçekleştirilen analizin ve kurulan hipotezlerin değerlendirmesine dayanarak, ilköğretim öğretmenin eğitimine ilişkin programın hazırlanması ve uygulanmasına yönelik standart kurallar belirlenmiştir.

Hipotezi test etmek için kullanılan veri tabanı, Yüksek Öğretim (HE) mezunlarına yönelik REFLEX projesi çerçevesinde, proje kapsamına dâhil edilen öğretmenlerin mezun olduktan 5 yıl sonra geliştirilmiştir. Bu analiz kapsamına yalnızca ilköğretim öğretmenliği yapabilmek için eğitim alan çok sayıda üniversite mezununun (35 ya da daha fazla) kimliğini saptayabilecek ülkeler dâhil edilmiştir. Bu sebeple, Almanya’dan 35, Hollanda’dan 150, İngiltere’den 80, Finlandiya’dan 95, Norveç’ten 173 ve Çek Cumhuriyeti’nden 377 üniversite mezunu başka bir deyişle, toplam 907 üniversite mezunu analiz kapsamına dâhil edilmiştir. Gerçekleştirilen analizde ülkelerin üniversite mezunları üzerindeki etkilerine özel bir önem verilmemiş; ancak, tüm ülkelerin üniversite mezunları üzerindeki ortalama etkisi üzerinde durulmuştur.

Çalışmada, öğrenimleri sırasındaki ortalama düzeyleri, gösterilen çabaları ve iş deneyimini, sosyal ağlara katılım oranını ve öğretmenlik mesleğini yerine getirebilmek için önemli sayılan mesleki değerler (çalışmada özerklik, yeni bilgileri ve yeni zorlukları öğrenme) ölçen değişkenler üzerinde durulmuştur. REFLEX aracından yalnızca daha önceden öğretmenlik mesleğini yerine getirmek için en uygun kişiler olarak belirlenen bireyler seçilmiştir.

Kuramsal olarak ve REFLEX Projesi (2009-) çerçevesinde tanımlanan tüm kişisel ve kurumsal faktörlerin, ilköğretim öğretmenlerinin en azından en temel yeterliklerinden biri üzerinde

oldukça büyük bir etkiye sahip olduğu sonucuna varılmıştır. Bunun yanı sıra farklı sonuçlar da elde edilmiştir. İlk olarak, istatistiksel önem anlamlı değildir; bu ise, yeterliklerin geliştirilmesini, aynı zamanda analiz kapsamına dahil edilmeyen faktörlerin de etkilediği şeklinde yorumlanabilir. İkinci olarak, yeterlik geliştirme sürecini ülkenin özellikleri yani geliştirilmiş değerler sistemi, ilköğretim öğretmenlerine yönelik eğitim programlarının özellikleri ve ulusal sistemlerdeki eğitimin nitelikleri de etkilemektedir.

Elde edilen belli başlı sonuçlara ilişkin diğer bulgular, bu çalışmanın analitik bölümündeki sonuçların yorumlanmasıyla ilgilidir. Gerçekleştirilen analiz sonucunda, ilköğretim öğretmenlerinin yeterliklerini geliştirmeye yönelik çalışmanın oldukça karmaşık olduğu belirlenmiştir. Öğrenme çıktıları, yalnızca Yüksek Öğretim (HE) kurumlarına özgü giriş/çıkış modeline bağlı olarak değerlendirilememektedir. Bu çalışmada, yeterliklerin aynı zamanda öğrenim hayatındaki iş deneyimi, sosyal ağlar, mesleki ve kişisel değerlerden de etkilendiğine ilişkin bulgular elde edilmiştir. Mesleki ve kişisel değerler, öğrenim hayatında ya da mesleğin ilk aşamalarında kazanılmaktadır. Yeterlikler ve yukarıda bahsedilen faktörler arasındaki ilişki, öğretmenlik mesleğini yerine getirebilme kapasitesi ve değer ufku bağlamında değerlendirilmelidir.

Elde edilen bulgulara dayanarak, ilköğretim öğretmenlerine yönelik öğretim programlarının hazırlanmasına ilişkin öneriler şu şekilde sıralanabilir: İlk olarak, öğretmen adaylarını ortalamanın üstünde düzeylere ulaşmaya teşvik etmek, yeterliklerin kazanılması üzerinde sınırlı bir etkiye sahiptir. İkinci olarak, ilköğretim öğretmenlerine yönelik öğretim programlarını hazırlayanlar, öğretmen adaylarını kendi ilgi alanlarını geliştirmeleri konusunda cesaretlendirmelidir. Üçüncü olarak, bir önceki hususla bağlantılı olarak, öğrenim hayatında elde edilen iş deneyimi, öğretmen adaylarının ekip çalışması yeterliklerini geliştirmelerini sağlamaktadır. Dördüncü olarak, sosyal ağ kurulumu, yeterliklerin geliştirilmesini önemli ölçüde etkilemektedir. Beşinci olarak, geleceğin ilköğretim öğretmenlerinin eğitim aldığı kurumlar, özellikle de mesleki değerlerin izlenmesine ve kazanılmasına önem vermelidir. Bu süreç, eğitim kurumuna kayıt anından itibaren başlamalı ve öğrenme sürecinde de devam etmelidir.

Son olarak, Yüksek Öğretim programları ve bu programların ilköğretim öğretmenlerinin yeterliklerini geliştirmelerindeki rolüne ilişkin daha fazla çalışma yapılması gerekmektedir. Bu çalışmada elde edilen bulgulara dayanarak, mesleki yeterlikler birbiriyle bağlantılı olduğundan ve yenilikçi bir öğretim yöntemi diğer yeterlikleri de önemli oranda etkileyebileceğinden, bu bağlamda bütünleyici bir yöntemin kullanılması gerekmektedir. Dolayısıyla, öğretmenlik kariyerine adım atan bireyin profilinin ne olduğu, öğrenim gördüğü dönemde neler yaptığı ve öğrenimi sona erdikten sonra neler yaptığı öğrenilmelidir.