Vol. 8, No. 2, December 2012, pp. 140-148

Reflecting Education
http://reflectingeducation.net

The role of research in curricula reform in initial education for primary school teachers in Croatia

Vlasta Vizek Vidović
Institute for Social Research, Centre for Educational Research and Development

Vlatka Domović
Faculty of Teacher Education, University of Zagreb

Maja Drvodelić
Faculty of Teacher Education , University of Zagreb

ABSTRACT

In the paper we examine the relationship between extensive empirical research on teacher education carried out in Croatia since 2003 and educational reform of university curricula for prospective teachers within the Bologna process. The research overview enabled a comparison between different initial teacher education models in EU countries with empirical data on teachers' educational needs in the Croatian context. First, we discuss the structural and content changes in the initial teacher education curriculum based on the suggestions from comparative and empirical analysis. The empirical data, collected from several target groups – prospective teachers, university teachers, employed primary and secondary school teachers – gives an insight into teachers' educational needs at the beginning of the educational reform starting in 2005. The content analysis of new curricula has been carried out in order to examine whether the needs assessment data were taken into account in new curricula development. Secondly, the data from the new cycle of empirical research starting in 2010 are presented offering an insight into some effects of curricula reform at student outcome level. We conclude that the impact of comparative analysis data was stronger at the structural and formal level than in the curricula implementation process. Nevertheless, in the first generation of students who studied under the new programs some positive shifts in their perception of achieved competences have been identified.

INTRODUCTION

Since 2005 the initial teacher education system in Croatia has been profoundly transformed due to implementation of the Bologna process in higher education. Croatia joined the Bologna process at the Ministerial Conference in Prague in 2001. The general framework for implementing the Bologna process in higher education was outlined in the Act of Science Activities and Higher Education in 2003, which covered the key issues of Bologna Declaration: introduction of three cycle system, ECTS credits, emphasis of academic mobility, student centred approach to teaching and learning as well as implementation of quality assurance system in higher education (Domović and Vizek Vidović, 2010; Domović and Vizek Vidović, 2011).

 ISSN 1746-9082

Parallel to the creation of a legislative basis for higher education reform, researchers in the field of teacher education intensified policy-orientated research in order to offer an evidence-based platform for the transformation of initial teacher education. Most of that research put an emphasis on an investigation of primary teacher education since it had been recognized that this area of teacher education would undergo the most significant changes. In that segment of teacher education the new Law opened a possibility for major structural reform, which surpassed the scope of curricula reform. In order to answer the key questions: Why do we need to reform the initial education of primary teachers? What are the benefits of the Bologna process in Croatia? How do the stakeholders perceive the needs for changes in initial teacher education for prospective primary teachers? What are the capacities for implementing structural and curricular reform in primary teacher education? several larger scale research studies were launched supported by the Croatian Ministry of Science, Education and Sport such as: Development of a model of teacher lifelong education (2003-2006), Programme for acquisition of educational competencies of subject teachers (2003-2006), Teacher Education in Croatia and Other European Countries (2005) and Structure of lifelong teacher education (2007-2010). Besides those policy-orientated research projects, the development of new curricula in initial teacher education was also supported by participation of Croatian experts in several EU and regional projects (e.g. The Tuning Education Structures in Europe, Improving of teaching quality in South Eastern Europe, Enhancing professional development of education practitioners and teaching/learning practices in SEE countries, Tuning Teacher Education Curricula in the Western Balkan, and Regional Tuning – Towards the European Higher Education). That kind of research was relatively new in Croatian educational tradition and the support of international programs, experts and funds (EU – CARDS, World Bank, OECD, OSI, etc.) had an important role in initiating such studies (Vizek Vidović and Domović, 2008).

A large scale study *Development of a model of teacher lifelong education*, carried out from 2003 to 2006 can serve as an illustration of the above-mentioned projects (Vizek Vidović, 2005). The study combined multiple sources and multiple methods approach in examining European trends in that sector as well as the needs of Croatian teacher education system. That study was based on analysis of key international documents, which offered insights in teacher education systems in countries, which served as examples of good practice for Croatia, such as: Austria, Denmark, Finland, Ireland, Netherlands, Nord-Rein Westfalia (Germany), Slovenia, Sweden. The countries were chosen according to the following criteria: expressed interest by key stakeholders in Croatia similar population to Croatia (human capital), long experience with teacher education reform and a similar tradition to Croatia in teacher education. In the next step foreign experiences were compared with the Croatian context. Also, an extensive survey of teacher education was carried out in the Spring of 2003 with a sample of 1334 primary school teachers from 121 primary schools (15% of the total number of primary schools in Croatia) and 330 teacher students in programs for class – teachers as well as 62 university teacher educators. The survey covered issues such as teachers' and student teachers' perceptions of a quality of different aspects of initial teacher education, preferred approaches to teaching and learning in teacher education as well as a need for post – graduate studies and sources of satisfaction in initial teacher education. The empirical data from that study served as a reference point for advising new curricula development in teacher education.

Based on the results of that and other similar studies some recommendations for the development of a new structure and curriculum in initial teacher education for class teachers were given:

- upgrading of initial teacher education to university master level and opening possibility for post-graduate specializations and doctoral studies
- reconsideration of the most appropriate model and degree structure (cycles) of programs for class teacher education
- development of competence-based curricula for teacher education
- making curricula more coherent by grouping of courses into larger modules
- enrichment of curricula content (e.g. topics emphasized by Croatian teachers were: classroom management, special needs education, ICT, research methodology, communication skills, education system and school management, cooperation with parents, human rights and civic education)
- implementation of student-centred approach to teaching and learning;
- close collaboration of academic disciplines and organized practice in schools;
- development of quality assurance mechanisms in teacher education institutions,
- development of research competences in teacher education;
- staff development for university teachers and school mentors involved in teacher education.

CONTRIBUTION OF RESEARCH INSIGHTS TO INITIAL TEACHER EDUCATION REFORM

The contribution of research to initial teacher education reform could be discussed from two points – structural changes and curricula changes based on content analysis of relevant documents. The impact of these changes has been also examined from students' perspective.

Structural changes

In order to get a better understanding of the scope of changes related to the Bologna process in initial teacher education a short description of the "pre-Bologna" teacher education system will be outlined. Before 2005-06, the academic year when new Bologna programs were launched, the primary school teachers who teach from grade one to four (lower primary school) were educated at "Pedagogical academies", which had the status of higher professional schools. Study programs lasted for four years (8 semesters) ending with a professional BA degree, which did not allow access to postgraduate studies at university level (Domović and Vizek Vidović, 2011).

The introduction of the Bologna process has led to major structural changes in initial teacher education. The education of prospective primary school teachers has been upgraded from higher professional school to university level. After profound discussions between main stakeholders in the field of teacher education, instead of the two-cycle structure, the integrated five-year structure was finally adopted. That decision had been supported by comparative studies results indicating that the simultaneous model of initial primary school teacher education was more effective in comparison to the consecutive model. Therefore, it

was presumed that the 5-year integrated program would be more appropriate for development of teacher competences within a simultaneous model than within two-cycle degree structure. The consequence of the upgrading of initial teacher education to the university level was the establishment of doctoral studies for primary teachers.

These changes also reflect an attempt to incorporate *Common European Principles for Teacher Competences and Qualifications* (2004) into the Croatian teacher education system, with special emphasis on first and second principles: a graduate profession, requiring that teachers are graduates from higher education institutions and have the opportunity to continue their postgraduate studies and a profession placed within the context of lifelong learning.

Curricular changes

The overview of curricula changes is based on content analysis of three university programs for initial teacher education for prospective primary school teachers (University of Zagreb, University of Rijeka, and University of Zadar)[1]. Although, there are some differences in programs structure and content, they share common elements of curricula reform.

The major shift in the development of a new curriculum has been from a discipline (content)-based to competence-based approach, meaning that the goals of the study programs were redefined in terms of key competences required for the teaching profession. Moreover, the aims of each course were related to the key competences and described as learning outcomes. The attempt to introduce a student-centred approach to learning could be recognized in course syllabi where the idea of constructive alignment (Biggs, 2001) was introduced. However, it should be noted that the student-centred approach was not always successfully and consistently implemented because that approach was new to the majority of university teachers. At the time of the development of new curricula they did not have sufficient knowledge and skills for changing their teaching from traditional lecturing to creating conditions for meaningful interactive and experiential learning.

The study program structure shows that four major components common to traditional teacher education courses (Buchberger at al., 2000) could be identified in new curricula as well:

1. academic/subject studies
2. education studies/studies in the educational sciences
3. studies in subject matter methodologies/ subject didactics
4. teaching practice.

A closer look at each curriculum component reveals that the major changes occurred within the educational science component. The differences between former professional programs and actual university programs will be described with focus on that component of teacher education curricula. The basic courses in educational sciences (Pedagogy, School Pedagogy, Developmental and Educational Psychology, Didactics, Educational Philosophy) appear in all three study programs as a traditionally accepted part of teacher education, but a number of new courses have been introduced based on a needs assessment of practicing teachers

and developments in educational policies. As an illustration, a list of newly introduced courses is presented covering both perspectives: *Motivation and Social Relations, Teaching Curriculum, Methodology in Social Sciences and Qualitative and Quantitative Methods, Sociology of Education, Evaluation in Primary Education, Educational Law*, *Education of children with special needs, Prevention of risk behaviour and drugs abuse, Professional ethics, Communication skills, Pedagogy of lifelong learning, School violence, School management, Classroom management, ICT in classroom.* At present, most of these new courses are offered as elective courses or elective modules. The 5-year study program attempts to enrich competences in pedagogy and teaching methodology (Domović and Cindrić, 2008).

The perception of changes – students' perspective

Within the study *Development of a model of teacher lifelong education* (Vizek Vidović, 2005) a survey was carried out with a sample of 330 student teachers. The students involved in that survey were in the final (4th) year of the "pre-Bologna" study. The second wave of the same survey was carried out in 2010 with a sample of 109 prospective teachers at their final (5th) year of "Bologna" study. One of the survey goals was to examine the prospective student teachers' perception of the acquired level of professional competences.

Both groups of students were asked to rate the level of knowledge and skills acquired during their initial teacher education on a scale from 1 to 4 (1-lowest, 4-highest). The mean values of each category were ranked from 1 to 20 (1-lowest level of the knowledge and skills acquired, 20 – highest level of the knowledge and skills acquired) (Table 1).

A high correlation between two rank lists was obtained (Spearman rho coefficient 0,905**). The inspection of the rank lists shows that the 5 competences at the top and bottom of the list hold mainly the same positions regarding the students' perception of the acquisition of these competences at the end of their study time. Competences listed as the least developed in both groups of students are *School legislation* and *Communication and cooperation with parents* while those perceived as best developed are *Subject knowledge* and *Use of teaching methods and skills.*

KNOWLEDGE AND SKILLS	2004 (N=330)		2010 (N=109)		t-test
	Rank	Mean(SD)	Rank	Mean (SD)	(df=437)
Communication and cooperation with parents	1	1.58 (0.70)	2	2.49 (1.22)	7,33**
School legislation	2	1.59 (0.64)	1	2.12 (1.14)	4,59**
Classroom management	3	1.75 (0.83)	8	2.67 (1.20)	7,47**
Working with pupils with learning difficulties	4	1.89 (0.78)	4	2.54 (1.10)	5,75**
Working with pupils with emotional and behavioral disorders	5	1.89 (0.78)	5	2.59 (1.12)	6,36**
Working with gifted pupils	6	1.92 (1.11)	3	2.51 (1.06)	5,01**
Application of practical skills	7	1.92 (0.77)	12	2.83 (1.07)	8,24**
Education on human rights and civil society	8	1.95 (0.76)	9	2.75 (0.97)	7,92**
Evaluation of educational process and self-evaluation	9	2.11 (0.75)	6	2.61 (1.05)	4,59**
Pupils' evaluation and assessment methods	10	2.18 (0.74)	7	2.64 (1.17)	3,89**
Developing pupils' ethical reasoning and behavior	11	2.24 (0.79)	13	2.87 (0.98)	6,09**
Development of pupils' learning skills	12	2.24 (0.78)	10	2.82 (0.91)	5,98**
Application of ICT in the classroom	13	2.28 (0.71)	16	2.99 (0.93)	7,33**
Development of ecological awareness	14	2.37 (0.85)	15	2.92 (0.98)	5,27**
Encouragement of pupils' critical thinking and creativity	15	2.54 (0.71)	14	2.87 (0.98)	3,25**
Development of pupils' self-awareness and self-respect	16	2.59 (0.85)	11	2.83 (1.07)	2,13*
Encouraging open communication and collaboration amongst pupils	17	2.75 (0.817)	18	3.02 (0.916)	2,74**
Establishing learning outcomes and lesson planning	18	2.85 (0.811)	17	3.00 (0.989)	1,43
Subject knowledge	19	2.88 (0.582)	19	3.14 (0.820)	3,06**
Use of teaching methods and skills	20	3.11 (0.676)	20	3.36 (0.728)	3,16**

*sig< 0,05 **sig>0,01 Spearman rho coeff. – 0.905**

Table 1: Comparison of students' estimations of the level of the knowledge and skills acquired in the course of their studies (1= lowest level of the knowledge and skills acquired, 20 = highest level of the knowledge and skills acquired)

On the other hand the inspection of mean values in Table 1 reveals significant differences between two groups of student in their perception of the acquired competences. T-tests were computed for each item and 18 of them reached the significance level of 1%. Mean values for all categories are significantly higher in the second wave of the survey (2010), which indicates that "Bologna students" have a more positive perception of the acquired level of professional knowledge and skills.

In general, from the data showing the overall higher mean values and some positive shifts in ranking of certain categories, it can be assumed that the Bologna generation students in the final year of their studies (2010 year) perceived themselves as more competent in comparison with the generation of pre-Bologna students (2003 year). One of the possible explanations of the differences in students' perceptions might be related to curricular changes, such as: introduction of new educational sciences courses, introduction of student-centred methods of teaching and new methods of assessment and quality assurance mechanisms (student evaluation of teaching process). The differences in students' perception could also be related to the extension of study length from four to five years, which ensures students have more time to acquire knowledge and skills. Also, upgrading studies from a four-year professional program to five-year university master level might

have attracted students with higher capabilities and better educational backgrounds and achievements.

Although the preliminary follow-up data indicate a positive shift in competence acquisition of prospective teachers enrolled in new Bologna programs further efforts should be invested in monitoring and evaluating different aspects of recent developments in initial teacher education.

CONCLUDING REMARKS

The comparison of the recommendations derived from research on teacher education and the analysis of curricula of three initial teacher education programs indicates that in some areas there is a clear correspondence between them, especially regarding structural changes, as well as changes in the course enrichment within the educational science component. Although, it would be too farfetched to assume a direct causal relationship between research results and curricula changes, it can be assumed that the research findings and recommendations informed the academic community and raised their awareness of the reflective approach to curriculum development.

In spite of these encouraging findings regarding possible positive effects of recent curricula changes on students' perceptions of their competences, it is still necessary to continue evaluation studies using different methods and data sources, and it is also desirable to open new discussions regarding further improvements. From our perspective one of the main challenges for the Croatian teacher education still is enhancement of the professionalization of teacher occupation through:

- introduction of national teacher competence standards as a basis for curriculum development;
- meaningful linking of academic learning to school practice experiences;
- partnership between universities and schools in conducting educational research projects;
- staff development programs for university teachers on student-centred approaches to teaching;
- enhancement of critical and reflective learning of both teacher educators and teacher students;
- creating opportunities for CPD of school teachers involved in supervision/mentoring of teacher students;
- greater involvement of universities in consolidation of beginning teacher competences during induction phase and CPD.

REFERENCES

Act on science activities and higher education. (*Zakon o znanstvenoj djelatnosti i visokom obrazovanju)*. (2003). http://narodne-novine.nn.hr/clanci/sluzbeni/306330.html (last accessed 5 March 2011)

Biggs, J. (2003). *Teaching for Quality Learning at University*. Buckingham: The Society for Research into Higher Education and Open University Press.

Buchberger, F., Campos, B.P., Kallos, D., & Stephenson, J. (eds.) (2000). *Green Paper on Teacher Education in Europe.* www.see-educoop.net/**education**_in/pdf/**green**_book-oth-enl-t02.pdf (last accessed 5 March 2011)

Common European Principles for Teacher Competences and Qualifications (2004) http://ec.europa.eu/education/policies/2010/doc/principles_en.pdf (last accessed 5 March 2011)

Domović, V. (2006). Profesionalne kompetencije studenata nastavničkih fakulteta i predmetnih nastavnika (Professional competences of teacher students and subject teachers). *Metodika - časopis za teoriju i praksu metodika u predškolskom odgoju, školskoj i visokoškolskoj izobrazbi*. 7 (2006), 12; 43-52.

Domović, V. and Cindrić, I. (2008). Key Competences Reflected in the Program for Primary School Teacher-Education and Primary Foreign Language Teacher Education. In: Cindrić, Mijo ; Domović, Vlatka; Matijević, Milan (eds.). *Pedagogy and the Knowledge Society*, Volume 1. Zagreb: Učiteljski fakultet, Sveučilište u Zagrebu, 2008. 83-101.

Domović, V. and Vizek Vidović, V. (2010). Development of quality culture in initial teacher education in Croatia. In: Hudson, B., Zgaga, P. and Astrand, B. (eds.). *Advancing Quality Culture for teacher education in Europe: Tensions and Opportunities*. Umea: Umea school of Education , Umea University, Sweden. 105 – 120.

Domović, V. and Vizek Vidović, V. (2011). Recent developments in teacher education in Croatia (2005 – 2010). In: Zuljan, M. V. and Vogrinc, J. (eds.). *European Dimensions of Teacher Education – Similarities and Differences.* Ljubljana: Faculty of Education; Kranj: The National School of Leadership and Education. 253 – 270.

Vizek Vidović, V. (ed). (2005). *Cjeloživotno obrazovanje učitelja i nastavnika: višestruke perspektive.* (Lifelong teacher education: multiple perspectives) Zagreb: Institut za društvena istraživanja.

Vizek Vidović, V. and Domović, V. (2008). Researching Teacher Education and Teacher Practice: the Croatian Perspective. In: Hudson, B. and Zgaga, P. (eds.). *Teacher Education Policy in Europe: A voice of higher Education Institutions.* Umea: Faculty of Teacher

Education, University of Umea and Centre for Educational Policy Studies, University of Ljubljana. 303 – 312.

Correspondence:

Vlasta Vizek Vidović
Institute for Social Research, Centre for Educational Research and Development, Zagreb
Amruševa 8/II
10000 Zagreb
Croatia
E-mail: vvizek@ffzg.hr

[1] Teacher Education Faculty, University of Rijeka: http://www.ufri.uniri.hr/; Department of Teacher education, University of Zadar: http://www.unizd.hr/Default.aspx?alias=www.unizd.hr/ucitelji-odgojitelji; Teacher Education Faculty, University of Zagreb: http://www.ufzg.hr/