# Competency Profile of the Teaching Profession in Croatia After Initial Education

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#### Abstract

The teachers' competence profile is in a constant discrepancy due to demands posed by life in the contemporary world of change. The base for the development of teachers' professional competences is set during initial education, although professional qualifications continue to be developed further through internship, teaching practice and lifelong professional training. Teachers' competences have to be expanded from traditional to new ones, such as the skill to diagnose pupils' needs for learning, the ability to methodically designate the environment for active learning and the development of competences, the ability of critical deliberation about achieved work results and individual research with the aim to implement innovations in teaching, develop collaboration and organization skills and other competences necessary to the teacher who searches for his or her way, and is not only the realiser of other people's ideas. This paper presents the results obtained by comparing teachers' competences quoted in some teacher study curricula in Croatia (Universities of Pula, Rijeka and Zadar) as to determine if the description of competences implies a teacher who is the leader and animator of the learning process, the one ready for reflection and research, or it indicates a teacher who is the technical realiser of the curriculum.

Keywords: Competence Profile, Professional Competences, Teacher, Animator, Researcher

#### Introduction

In the period between the 60s and 90s of the 20th century the notion of competency gradually passes from economics to pedagogic terminology, often replacing the meaning of one or more of the following terms: knowledge, ability, skill, art, attitudes and values, at the same time creating chaos of different definitions and interpretations (Perini, Puricelli, 2013: 14-15). Between the years 2000 and 2010 the competency approach becomes the base of the overall design of the European educational policy and slowly enters the Croatian educational policy and school practice. It is an extremely complex, controversial and ambiguous notion which has lately been preoccupying Croatian pedagogues, but does still not have a unique pedagogic interpretation or is recognised in the area of pedagogy (Palekčić, 2007: 146; Strugar, 2012: 38-40). Among the important domestic documents on education, the ones based on the concept of competences are *The Croatian Framework of Qualifications* (2009) (abbreviated as CFQ) and *The National Curriculum Framework for Preschool Education, General Compulsory and Secondary Education* (2014) (abbreviated as NCF). The former document, CFQ, recognises the following definition of competences: a set of knowledge and skills, as well as autonomy and responsibility, with an explanation that competences relate to all that can be acquired by learning. The CFQ differentiates *factual* (information) and *theoretical* (links of information) *knowledge*, as well as *cognitive*, *psychomotor* (practical) and *social skills*. The latter, NCF, does not give an expressed definition of competence, but it can be read between the lines that the term used implies knowledge, skills, abilities, values and attitudes.

Numerous Croatian pedagogues have dealt with competences in their theoretical deliberations and empirical research, some of them being: Mijatović, 2002; Vizek Vidović, 2005; Domović, 2006, 2009, Hrvatić, Piršl, 2007; Peko et al., 2007;

Kostović Vranješ, Ljubetić, 2008; Bežen, 2008; Lončarić, Pejić Papak, 2009; Matijević, 2009; Cindrić, Miljković, Strugar, 2010; Jurčić, 2012; Strugar, 2012; Piršl, 2014. According to Bežen (2008) the notion of competence can be considered a replacement for traditional terms as knowledge, abilities and skills used in defining an individual's qualifications to perform certain works. Bežen (2008: 26-27), lacking an accepted definition in Croatian pedagogy, quotes Weinert's (2001:22) definition and derives from it the minimal criteria to determine this ambiguous concept: a) competence is derived from the task which should be performed, b) it consists of cognitive, motivational, wilful, ethical and social components, c) it is complex and enables the performance of whole tasks, d) it is different from a skill which is an automated activity, e) to achieve it, it is necessary to learn. Piršl (2014: 48-49) differentiates among the "cognitive (knowledge), functional (application of knowledge), personal (behaviour) and ethical (principles and values in behaviour) dimension" of a competence integrated by individuals during their activities in a specific context. The author emphasizes one's personal creativity in applying the resources, but also the dependence of an individual's action on contextual characteristics.

The advocators of using the concept of competences in the area of pedagogy (Kerka, 1998; Lersch, 2005; Poglia, 2006, Moscato, 2007; Capperucci, 2008; Puricelli, Perini, 2012) think that the concept is a consequence of the operative integration of scientific knowledge and technical skills occurring after the superiority of scientific knowledge, ruling for centuries in the European society, has been overruled. By applying the notion of "competence" the problem of correlating theory and practice, general and vocational education, school knowledge and life reality, gets resolved. However, in the area of educational sciences the correlation between those two components still encounters a low level of practical application. On the one hand, a reason for that can be found in the necessary increase of practical activities in the teaching practice necessary for the development of competences. On the other hand, there are objective limitations to the educational process revealed by this concept (Perini, Puricelli, 2013; Perrenoud, 2000, 2010). It is questionable how much an educational institution can achieve, assess and evaluate the process of competence development which is by its definition dynamic and long-lasting, and depends on the pupil's integration of abilities, knowledge and skills. The knowledge and skills not integrated by pupils into their overall system of personal competences do not have an educational importance and are, in fact, useless and inefficient. However, teachers have a limited influence on the integration process because the activation of this process depends exclusively on individual pupils' decisions. Furthermore, the complexity of the competence concept brings difficulties in the evaluation of its level of development and makes it inseparable from the context they developed in, while the greatest difficulty is found in studying their real genesis, and the controlled monitoring of their development (Castoldi, 2009: 51-62: Palekčić, 2007: 146-147), Namely, human competences have a high degree of vagueness linked to character traits, values and attitudes, so it is very difficult to transform them into coded behaviour patterns and developmental programmes. Moreover, in the school context it is very hard to design a valid assessment of competences for each individual, apply their quantitative assessment and ensure their efficient confirmation. Besides, competences development depends on the overall life environment, both formal and informal (family, friends, sports, religious and cultural organisations, media), not only on school, and it extends over the developmental age in the narrower sense. However, the advocators of competences development at school (Capperucci, 2008; Moscato, 2007; Castoldi, 2009: 22-27; Perrenoud, 2000, 2010; Pellerey, 2004; Perini, Puricelli, 2013) claim that this concept is encouraging and brings along positive shifts in pedagogy and didactics, thus becoming worth of attention from both the psychological-pedagogic research and the educational practice point of view. Therefore, acknowledging competences as the key category for an effective renewal of the school encourages the revision of existing teaching and learning methods, methods and styles of assessment, while demanding from teachers to critically reassess them and find an adequate replacement. Perrenoud (2010:113) agrees with that. He is of the opinion that the process of changing the learning method and assessment of pupils' achievement has to be radical and necessarily demands for giving up usual teaching methods and standardized assessment of individuals' knowledge and skills in favour of active learning and global, holistic evaluation of competences, where the criteria would be publicly agreed on and pupils would participate in the educational process.

## The teaching profession competence profile

Since the society's demands, new cognitive paradigms postulates and new findings in educational sciences gradually change the traditional teacher's role, it is clear that they cannot just be passive realisers of other's ideas, but have to become persons searching for their own pedagogic path (Mušanović, 2001; Stoll, Fink, 2000; Cindrić, Miljković, Strugar, 2010). This implies a radical change of the teaching profession: instead of teaching teachers organise and form supportive learning environments, include pupils in activities and activate all their abilities, engage in studying educational issues, actively cooperate with colleagues, professional school's service, the school's administration, pupils' parents, representatives of the wider social community with the aim to commonly achieve the educational activity and improve

activities for the individualisation and personalisation of teaching. Teachers' competences should, therefore, be expanded from knowing, planning and programming the subjects' contents, their methodological processing and transfer to pupils, as well as the evaluation and assessment of knowledge to the skill of diagnosing individual needs for learning, classroom management, methodical designation of active acquisition of knowledge and development of competences, critical deliberation on chosen strategies and achieved results of work, research aiming at the implementation of innovations in teaching, development of cooperative and organisation competence, self-motivation in achieving goals and the control over one's own moods and reactions. It is not easy to reach those changes. First of all, it is necessary to define the basic teacher competences and how to efficiently develop them during the initial education. Their choice can be done in line with theoretical starting points set by professionals in teacher education, respecting the determined competences possessed by successful teachers, the chosen model of the ideal teacher in a certain social context, results of international evaluation studies about quality teachers, research done by teacher associations and institutes for pedagogic research, and documents about international and national educational policies and other criteria (Fumarco, 2006; Razdevšek Pučko, 2005. Terhart. 2005). Terhart (2005:71) emphasizes that the procedure is always similar in its internal logic: the competences which a "good" teacher should possess are derived from the image of a good teacher. Such a choice of teacher's competences is necessarily based on their standardisation and norming which neglects the development of special personal skills. The Italian author Margiotta (2002:51) is of a similar opinion, while the Croatian pedagogue Jurčić (2012) and the Italian Fumarco (2006:51) take the area of professionalism necessary for the performance of the teaching profession as the starting point.

The aforementioned authors quote different classifications and teacher competence lists. Jurčić (2012:16) includes personal characteristics in the list (communicativeness, flexibility, balance, openness, empathy), as well as the subject, communicational, didactic-methodical, reflexive, social and organisational competence. Fumarco (2006:76) mentions subject-content, methodical-didactic, research, pedagogic-psychological, communicational competences and personal characteristics (openness, flexibility, balance, empathy, communicativeness, etc.). The author Vizek Vidović (2011:67) doubts the possibility of development and assessment of such complex competences during teachers' initial education where university instruction and school practice are poorly correlated and students do not have a sufficient possibility of practicing what they have learned in the study programme. Meyer (2002:224) remarks that practicums, pedagogic workshops and school practice should have an prominent place in the study programme to ensure enough space for the correlation of theoretical education and practical teaching.

From the many existing models, the one presented here as an example of teachers' competence profile is the model by the Swiss sociologist and pedagogue Perrenoud (2002), a long-time researcher in this area. His model is structured around 10 competences, grouped into three areas: the area of learning, administrative and extracurricular activities, and contemplation about the profession. He is also interesting due to his innovative vision of the teaching profession and the school it is based on, without turning it into a utopia. What follows is the presentation of the mentioned model:

### A) The area of learning

- 1. Organise and animate learning situations (know the learning content, express contents in learning outcomes, plan and conceive teaching sequences, include pupils into research activities, etc.).
- 2. Manage learning progress (conceive and manage problem situations in line with pupils' capabilities and long-term educational aims, correlate teaching with learning theories, observe and assess pupils in learning situations, prepare periodical reports about developed competences and consider them when planning follow-up activities).
- 3. Conceive and develop differentiation systems (manage the group heterogeneity, remove obstacles, practice integrated teaching, offer support to endangered pupils, develop cooperation among pupils).
- 4. Actively include pupils in learning and instruction (encourage the wish to learn, raise consciousness about the relationship to knowledge, link learning to life reality, develop the pupils' ability for self-assessment, set up pupils' councils and negotiate conduct rules with them, make a contract about class rules, offer the possibility of choosing elective modules or subjects).
- 5. Organise group work (develop group work projects, animate the work group, conduct meetings, form and renovate the work group, face and analyse complex situations and problems, manage crises or conflicts among individuals).
- B) Area of administrative or extracurricular activities

- 6. Participate in school management (take part in the creation of the school curriculum, manage school resources, coordinate and animate school's external associates: local political authority representatives, parent associations, etc., organise and improve the participation of pupils in school management).
- 7. Inform and include parents into the educational process (animate informative meetings and discussions on school activities, conduct talks with parents, include parents in the valorisation of teaching activities).
- 8. Use information technology (use the multimedia in teaching, document editing programmes, pictures, audio and video recordings, the educational software potentials in line with educational aims, as well as communication via e-mail and e-learning).
- C) Area of contemplation about the profession
- 9. Face the professional obligations and dilemmas (analyse the pedagogic relationship with pupils, teacher's authority, classroom communication, develop the sense of responsibility, solidarity, sense of justice, prevent school violence, fight prejudices against ethnic, social, religious and sexual discrimination, participate in the creation of classroom rules).
- 10. Manage their professional training (know how to present their teaching practice in front of others, evaluate their professional competences themselves, conceive their personal programme of continuous professional training, agree upon a project of education individually or with colleagues).

The presented model lacks *organisational* and *research* competences, as well as teachers' personal characteristics like openness, balance, flexibility, communicativeness, empathy. The last ones are not included into the competence profile by some authors because they should be general conditions for the access to the teaching profession and, besides, they can be limitedly affected during education (Fumarco, 2006:76). Each model is different and does usually not explain in details all teacher competences, and this should certainly not be aimed at since long lists of fragmented skills lose sight of global competences. Beginning from the chosen profile a curriculum for the education of teachers is being prepared, and the activities are directed toward the development of competences. If the students are going to really develop advisable competences during their study depends on the structure, organisation and dynamics of the study. Research has shown that in designing the teachers' initial education curriculum certain elements make the difference, and they relate to:

- 1. content of teacher's education what is learnt and how it is correlated, how much are candidates helped to form the mental map of the teaching structure which would help them to notice relations among areas of pedagogic knowledge and to correctly correlate theory and practice which support their professional training
- 2. *learning process* to which extent does the study programme develop competences and enable candidates' readiness to work in schools, and to what extent is it based on experiential learning and teacher training to understand the context and reach decisions in the classroom
- 3. learning context to what extent is the future teacher's learning carried out in contexts which enable the development of the professional practice; such contexts include areas of subject methodologies and communities of practice which encourage the exchange of personal experience through the presentation of good practice examples and deliberation about them, which enriches the acquired knowledge. (Darling Hammond, Bransford et al., 2005:394-395).

We completely agree with Perrenoud's (2010:144) opinion stating that the necessary integration of theoretical and practical knowledge is possible only if teachers' initial education is distneed from the prevailing acquisition of academic and pedagogic-psychological knowledge which should be reduced to a smaller, but more conscious part in the overall study programme. What does not contribute to the development of future teachers' professional profile at all is, as claimed by Terhat (2005:71), to rely full of enthusiasm and hope on planned effects, perseveringly claiming that with more education the teachers' actions will become more efficient.

Besides, university institutions for teacher education are not completely independent in designing the curriculum of teachers' initial education because they have to take care about the prescribed national standards and international recommendations to ensure the acquisition of necessary competences (Domović, 2009:28). This is also introduced in Croatia, where the professional standards for the teaching profession are to be prepared based on the European Framework of Qualifications and the Croatian Framework of Qualifications which has been designed in line with the former one. This European Union initiative represents a tendency toward the standardization of competences which could hinder

the flexibility of initial education and the development of the teaching profession, as well as limit the teaching profession to the technical training to perform teaching instead of research and reflexive competences to be developed as the priority.

## Research methodology, aim and sample

The research is based on the qualitative methodology which includes the analysis of Teacher Study programmes at Universities of Pula, Rijeka and Zadar (Croatia). The research base was the analysis of Teacher Study curricula with the aim to define the pedagogic concept of competence, as well as to determine which competences are developed during the teachers' initial education. The research sample consists of collected teacher study curricula at Universities of Pula, Rijeka and Zadar.

# Results of the analysis of teacher study syllabuses in Croatia regarding the development of general and specific competences

During the university reform in 2005, all higher education institutions in Croatia opted for the introduction of learning outcomes in curricula. Since "during the designation of new curricula what was lacking (...) was the definition of the national standard in the area of teachers' professional competences" (Domović, 2009:16), in 2005 the institutions of the analysed sample introduced learning outcomes only at the intermedial and micro level, which means that they are operatively defined only in certain subject's syllabi (detailed performance teaching plans) and during teaching the teaching units. In the academic year 2013/2014 the Ministry of Science, Education and Sport officially demanded for the list of competences developed by single teacher studies. In the meantime, university institutions were preparing teacher competence profiles using as the starting point the referential guidelines given in different European educational policy documents, the basic provisions of national and international documents about competences which teachers should develop in pupils, the existing examples of list of competences which contemporary education demands from teachers and the analysis of professional jobs and tasks which should be done by teachers. A few years ago most teacher studies carried out a revision of the 2005 curricula, or were completing this ample work during the academic year 2013/2014. That is why it is important to remark that the following lists of competences are only a working version of the higher education institutions from the sample and during this research they were not found in the curricula available at university web pages, except for the Zadar University. The first in Croatia to publicly publish a study of a possible teacher competence profile for their teacher study were authors from Rijeka, Lončarić and Pejić Papak in 2009. This programme is presented in the following part and it is compared to working versions of the teacher study competence profile of the Universities of Pula and Zadar.

There are many doubts in understanding the concept of competence which influences its formulation. Clearly and precisely defined competences at the level of the syllabus are a support in planning the expected outcomes at the syllabus level and have to be in agreement with competences in a certain profession and CFQ. Initial education has to ensure to students the development of competences demanded by the contemporary teaching profession and the realisation of the national framework curriculum for lower grades of primary school. In any case, the concepts of works and competences cannot be equalised. Namely, competences imply a set of knowledge, abilities, skills, attitudes and values which an individual is able to use to perform certain works and solve familiar and unfamiliar problem situations. Competences as a concept are a nuance to pedagogy and educational institutions which have to operationalise this concept. It is normal that the need for contemplation is present to form a theoretical and practical-operational framework for the application of this concept for pedagogic-didactic purposes. All the more since the concept is primarily used in the area of sociology, economy, occupational psychology and linguistics, all being areas not close to pedagogy and education (Perini, Puricelli, 2013). Therefore, the disagreement found among pedagogy expert in defining, classifying, identifying and using this concept in the area of pedagogy is not surprising. The aforementioned definition points out, besides the skill to perform a certain work, personal creativity, style of behaviour, engagement of the whole self, including convictions, values, attitudes and emotions. Competences unite all those characteristics into a unique approach to solving a certain working task. Besides, an individual's activity is to a great extent conditioned by the social context and an actual educational situation. To equalise competence with the qualifications necessary to perform a certain job means that the complexity of this concept is not accepted, and neither are the consequences it brings along in planning and realising the educational process.

Before starting to analyse curricula according to the competence development principle, it is necessary to clarify differences in the formulation of educational aims as transfer of knowledge and acquisition of skills compared to the development of competences. Contrary to knowledge and skills which can be simply expressed as educational process aims, it is much harder to define competences as learning aims. To notice the difference, a competence will be defined as a complex learning outcome: each student has to know how to successfully do a task in any situation using the skills and knowledge at his/her disposal. The unknown in the former description of a competence is linked to the unique approach of each individual to a defined concrete situation, as well as to the specificity of the context in which this individual will act. The mentioned characteristics of the concept of competence lead to the conclusion that it is possible to describe it as an educational aim only by excluding the personal component, i.e. by eliminating all the unpredictable dimensions of learning. The following conclusion is derived from the formerly mentioned stating that it is not completely possible to teach or learn competences.

It is possible to study usual procedures and practice the use of various teaching tools and aids used to solve a task successfully, while everything else depends on the students' personal reaction and procedures. Furthermore, since competences are not culturally defined and transferable knowledge, it is not possible to manage the process of their acquisition externally, but individuals have to build and develop them themselves. It can be derived that teaching understood as the traditional transfer of knowledge does not contribute to the development of competences. It is much more useful to give support in learning and organising adequate environment. Next, during the assessment and evaluation of competences, since they are not completely predictable, it is not possible to use a unified assessment model which would suit each individual because students are significantly different. Accepting competences as indeterminate and unpredictable, subject to only partial learning and teaching, their implementation in pedagogy opens for the possibility of personalizing education and evaluation of personal differences, accepting the free and responsible expression of the individual self.

In the following part the competence definition which excludes elements of personal interpretation of competent actions will be used. Although there is no definite version of analysed curricula' competence profiles at disposal, it will be presented since one of the aims of this research was to determine which competences are developed during initial teacher education. For reasons of transparency, the criteria of general and specific competence was applied which the Rectorial Court (2004) suggested in its instruction for the design of new curricula during the implementation of reforms linked to the Bologna process. What follows is the analysis of the working version of general and specific competences in the chosen sample of curricula.

Table 1: The competence profile of teachers at the University of Pula, Zadar and Rijeka Teacher Study (general instrumental competences)

| General competences  | General competences  | General competences   |
|--|--|---|
| Teacher Study - Pula   | Teacher Study - Zadar  | Teacher Study - Rijeka  |
| Demonstrate a wide general culture.  | Communicate mathematically, make logical conclusions and give arguments for personal mathematical ideas as part of elementary mathematics.                         | -   |
| Plan and organise one's own learning and training (lifelong learning) individually | -  | Reassess one's own work and work upon its improvement.  |
| Communicate in the mother tongue fluently and with arguments.                      | Communicate in the mother tongue in spoken and written forms; apply standard linguistic norms at all levels (spelling, grammar, lexical, orthoepic and stylistic). | Apply knowledge and understanding as to responsibly encourage linguistic literacy adequate to situations, age and level of education. |
| Use one foreign language at the level of active communication.                     | Communicate in one foreign language in spoken and written form.  | -   |

| Actively use information technology (ECDL)   | Use computer technology to create and edit texts and photographs, and to communicate. | Apply knowledge and understanding to responsibly encourage information and communication literacy. |
|--|---|--|
| Demonstrate the possession of personal qualities significant for the teaching profession (communicativeness, empathy, openess, flexibility, etc.). | -   | -  |

It is important to remind that all educational areas are responsible for the development of general or transferable competences. Transferable competences can be used in many situations which are not exclusively linked to the specific academic context and they include instrumental, interpersonal and system competences. Specific competences relate to theoretical and practical knowledge, skills and techniques characteristic for a certain study programme or area, including the specific demands of aimed professions (e.g. teachers). The level of the competence profile abstraction has to be high, but applicable in practice and based upon a real possibility of developing the planned competences by successfully mastering a programme.

Table 2.: Expected general competences at the University of Pula, Zadar and Rijeka Teacher Study (general interpersonal competences)

| General competences  | General competences   | General competences   |
|--|---|---|
| Teacher Study - Pula   | Teacher Study - Zadar   | Teacher Study - Rijeka  |
| Establish cooperation relationships with work colleagues and the society as a whole (organise team work, peacefully solve disputes, take over responsibility for the performance of tasks, respect set deadlines). | -   | Collaborate with colleagues, professionals and others to promote learning.  |
| Respect the professional ethic.  | -   | Appreciate oneself as a professional. Appreciate the community and work devotedly for the community.  |
| Respect differences and multiculturality.  | Apply the principles of human rights, democratic values, differences, social sensitivity. and tolerance in working with children. | Appreciate and show devotion for social justice. Respect children's rights and the principle of equal possibilities for development through education. Describe traits in pupils with special needs' behaviour and notice their developmental potentials. |

The aforementioned general competences (Table 1. and 2.) are under the influence of European documents about key competences<sup>1</sup> which should be acquired by each citizen and which each successful learning outcome, employment and coping with everyday life depends on. Those are the following competences: a) communication in the mother tongue, b) communication in a foreign language, c) mathematical literacy and basic knowledge of science and technology, d) digital competence, e) learn how to learn, f) interpersonal and citizenship competence, g) entrepreneurship, h) cultural expression.

Taking into consideration that general competences are not linked to a certain area and that such a division was not used in the analysed curricula, it was extremely difficult to determine how much and which part of a certain curriculum includes their development. All the analysed programmes have mother tongue and foreign language courses, at least one, and it is possible to learn more foreign languages as elective courses. Two programmes consist of the module training students to become English language teachers in lower grades of primary school. Computer science has also been included in all programmes, while two programmes consist of the module of information and communication technology which prepares students to teach computer science in primary schools. The reinforcement of personal characteristics significant for the successful performance of the teaching profession, and the knowledge about how to study on their own, depend to a great extent on subjective factors which can be only partly influenced by teaching. Most of the aforementioned competences have a high level of vagueness, and without indicators transforming them into coded behaviour patterns and enabling the assessment of their presence in curricula it is not possible to determine if their development was planned. Therefore, attention was directed toward the analysis of specific competences representation.

Table 3.A: Expected specific competences at the University of Pula, Zadar and Rijeka Teacher Study

| Specific competences   | Specific competences   | Specific competences   |
|--|--|--|
| Teacher Study - Pula   | Teacher Study - Zadar  | Teacher Study - Rijeka   |
| Demonstrate knowledge of artistic areas and basic sciences and their disciplines which interpret laws, occurrences and processes included in the first cycle programme of primary education.   | Describe and display kinesiological operators with the aim to make an advancement in pupils motor, functional and cognitive abilities.   | Use thorough practical knowledge in the class.   |
| Plan, programme and evaluate curricula in all educational areas (linguistic-communicational, mathematical, scientific, technical and information, social-humanistic, artistic, and physical-health) according to pupils needs and interests. | Define and apply elementary mathematical definitions, procedures and concepts in the methodical designation of mathematical contents according to the prescribed syllabus for lower grades of primary school. Define and apply elementary scientific concepts in the methodical designation of content in teaching nature and society according to the prescribed syllabus for lower grades of primary school. | Individually plan teaching for efficient learning. Correctly interpret fundamental educational concepts. Design a teaching plan which supports efficient learning. Determine teaching aims with regard to learning outcomes. |

Available at: http://eurlex.europa.eu/LexUriServ/site/en/oj/2006/l\_394/l\_39420061230en00100018.pdf. Report on *Key Competencies for a Successful Life and a Well-Functioning Society* Available at: http://www.oecd.org/dataoecd/47/61/35070367.pdf.

<sup>&</sup>lt;sup>1</sup> Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. // Official Journal of the European Union L394/10, 2006, p. 4-9.

The list of expected specific competences (tables 3.A, 3.B, 3.C) in three teaching programmes has a different level of abstraction and degree of correlation with contents of appropriate courses. Common elements of analysed programmes are teachers' competences relating to programming and preparation of teaching, methodical processing of teaching contents, the conduction of teaching and classroom management, monitoring and assessment of pupils' achievements, or the capability to perform traditional teaching jobs.

Table 3.B: Expected specific competences at the University of Pula, Zadar and Rijeka Teacher Study

| Specific competences   | Specific competences   | Specific competences   |
|--|--|--|
|  | ·  |  |
| Teacher Study - Pula   | Teacher Study - Zadar  | Teacher Study - Rijeka   |
| Individually conduct the teaching of all subjects and areas represented in the primary school lower grades' syllabi, in Croatian or Italian, in all forms of work they are realised (compulsory, elective, remedial and additional classes, extracurricular activities, cultural and public activity). | Articulate and analyse the Croatian language, Mathematics, Nature and Society, Physical Education, Art, Music lessons according to the prescribed syllabus for primary school lower grades. Apply practical knowledge and skills in the realisation of music activities (singing, playing and instrument, listening to music and music creativity). Understand and apply various art media and techniques and articulate the Art lesson in primary school. | Individually conduct organised forms of work in educational areas. Correctly interpret the fundamental concepts for subject methodologies. Analyse and critically reflect upon programme contents. Show the ability to teach individuals, groups and classes. Encourage creativity in interest areas at the focus of pupils. Individually plan, programme and conduct pupils out-of-school activities. |
| Efficiently use the information and communication technology in the educational process.   | Use computer technology to create and edit texts and photographs, and for communication.   | Individually use the computer in the realisation of educational aims. Apply different multimedia teaching activities in practice.  |
| Actively correlate and evaluate the theoretical principles and practical experience in the area of education.  | Manage the teaching process in changeable conditions, respecting pedagogic principles and principles of differences.   | Individually practically apply the fundamental psychological-pedagogic-didactic processes of cognition. Understand and use the main elements of the educational system; show their attitude and opinion about educational issues; understand the nature and areas of the primary school curriculum. Justify their approaches to learning and teaching and understand their effect on the pupil.        |
| Create and apply different teaching strategies and encourage learning and the development of the child's self and monitor and note down advancement done by each child in all developmental areas (cognitive, emotional, social and motor).  | Apply various teaching methods, depending on the children's developmental dimension and possibilities.   | Use various strategies and approaches to work adapted to the topic, subject and pupils needs. Harmonise expectations and working pace to the pupils' needs. Discipline pupils' behaviour in a right, socially sensitive and consistent way. Evaluate and advance teaching using evaluation results.  |

Table 3.C: Expected specific competences at the University of Pula, Zadar and Rijeka Teacher Study

| Specific competences   | Specific competences  | Specific competences   |
|--|---|--|
| Teacher Study - Pula   | Teacher Study - Zadar   | Teacher Study - Rijeka   |
| Create and apply various strategies of the teaching process and pupils' achievements evaluation (including the evaluation of the personal practical experience, organisation and efficiency of work).  | -   | Apply the principles of monitoring and assessment. Show knowledge in the use of various methods of evaluation adequate to the children's age and determine the levels of achievement. Monitor advancement according to aims, identify problems, confirm achievements and outcomes. Use evaluation to determine the following aims of work. |
| Creatively and efficiently designate the educational environment according to pupils' needs and possibilities.   |   | Efficiently organise work and teaching.  |
| Recognise and together with other members of the expert service team evaluate children's special needs (giftedness, developmental impairment)  | Recognise specific pupils' needs conditioned by their differences and peculiarities at the individual level.  | Show the capability of adequate reactions to gender, social, cultural, religious and language differences among pupils. Designate creative contents to work with gifted children.  |
| Collect, create and keep simple and complex didactic means of working with children and take care about the aesthetic and functional arrangement of the space where teaching and other activities are conducted.   | -   | Plan and ensure a well organised class aiming at pupils' safety and motivation, with various social forms of work. Use the environment and resources out of the school to enrich teaching.   |
| Establish close cooperation relationships with parents, members of the school expert team, and other professionals and participators of children's education in the local community, and engage into the achievement of active participation of the school and pupils in the local community life. | Organise activities for the inclusion of parents into their children's education Organise and conduct various extracurricular and out-of-school activities. | Cooperate with colleagues, professionals and others to promote learning. Have a successful cooperation with parents. Respect the need for scientific and nature education and show responsibility for their personal progress and the community.   |
| Actively follow and critically evaluate relevant professional and scientific literature in the area of education with the aim of lifelong training.  | Critically evaluate various sources of knowledge in the area of education.  | Understand research and its contribution to education. Find and evaluate professional and scientific literature.   |

| Conduct a scientific research and thus achieve new knowledge with the aim of improving the educational process. | the advancement of the profession,   | Competently conduct scientific research and thus create new knowledge in the interdisciplinary area of education.                                    |
|---|--------------------------------------|--|
| -   | Understand the pedagogical aspect of | Apply knowledge and understanding to responsibly support mathematical and scientific literacy adequate to the situation, age and level of education. |

Competences formulated in the area of teaching indicate the different conceptualisation of the teaching profession in certain programmes: a) "Plan, programme and evaluate curricula ... according to the pupils' needs and interests." b) "Create a teaching plan which supports efficient learning." c) methodically shape "contents of Nature and Science teaching according to the prescribed curricula for lower grades of primary school" or "articulate and analyse the Croatian language, Mathematics, Nature and Society, Physical Education, Art and Music lesson according to the prescribed curriculum for lower grades of primary school".

The first and the second description of competences implies a teacher leader and animator of the learning process, while the third formulation indicates a teacher who is the technical realiser of the curriculum. When there is a transfer from teacher competences for the performance of the traditional function of the teaching professional to new roles and adequate competences, like for instance, the explorer of the educational reality, organiser and animator of social occurrences, professional who recognises the pupils' special needs, the described competences are more a reflection of the idealised professional profile of a good teacher than the really possible development of these competences during initial education. Descriptions of competences which cannot be developed based on syllabi planned for that purpose also appear. This is confirmed by course syllabi which are included in the study programmes with the aim to develop certain competences, and they include all the typical characteristics of teaching directed to the transfer of knowledge, beginning form the planned teaching methods to tests as a method of knowledge assessment.

## Conclusion

The teaching profession is very complex, multidimensional and extremely demanding in the contemporary society of continuous changes. To be a competent teacher demands for a synergic integration of knowledge, abilities and action, because teachers act in complex, changeable, insecure situations which almost never repeat in the same form. To achieve autonomy and responsibility for work, the future teacher has to develop dynamic qualities of their professional profile, namely the art of critical thinking, initiative, creativity, research abilities, which are contrary to static characteristics like order, discipline and the feeling of duty. The latter are sufficient if teachers fulfil the prescribed curriculum and face the familiar educational situations, but not in the new and unfamiliar ones, when they have to find an original solution themselves. According to Donald Schön (1987) in facing a problem situation, teachers can act in two different ways:

Applying the technical rationality (familiar behaviour patterns)

Applying the reflexive rationality (there are no familiar solutions, but teachers have to find them contemplating on the formed experience)

The level to which students change and integrate the theoretical cognition and teaching practice as part of their study programme has an unmeasurable importance for the development of abilities of deliberation and correlation of the acquired knowledge with practical experience. This goes along the educational theses characteristic for the postmodern period which avoid the separation of theory and practice present in traditional curricula, and emphasizes the importance of personal experience in learning and deliberating about the same, instead of remembering huge amounts of factual and procedural knowledge.

To become a competent practitioner who thinks of his/her activities includes intellectual engagement, the theoretical understanding of educational reality and the autonomous application of found solutions. Thus, the development of teacher competences is impossible without the constant practicing of procedural and metacognitive knowledge, and organised research and deliberation. Initial education is only an introduction to the process of "becoming" a teacher, but it has to set the foundations to the critical-reflexive competence for a continuous reorganisation of personal emotional and cognitive resources.

#### References

- [1] Bežen, A. (2008). Metodika, znanost o poučavanju nastavnog predmeta. Zagreb: Učiteljski fakultet, Profil.
- [2] Capperucci, D. (2008). Dalla programmazione educativa e didattica alla progettazione curricolare. Modelli teorici e proposte operative per la scuola delle competenze. Milano: Franco Angeli.
- [3] Castoldi, M. (2009). Valutare le competenze. Percorsi e strumenti. Roma: Carocci editore.
- [4] Cindrić, M.; Miljković, D.; Strugar, V. (2010). Didaktika i kurikulum. Zagreb: IEP D.
- [5] Darling Hammond, L.; Bransford, J. (2005). Preparing teachers for a changing the world. San Francisco: Jossey Bass.
- [6] Domović, V. (2006). Profesionalne kompetencije studenata nastavničkih fakulteta i predmetnih nastavnika. Metodika, 7(1), 43-52.
- [7] Domović, V. (2009). Kurikulum osnovni pojmovi. In: V. Vizek Vidović, (ur.) Planiranje kurikuluma usmjerenoga na kompetencije u obrazovanju učitelja i nastavnika, Zagreb: Filozofski fakultet Sveučilišta u Zagrebu i Učiteljski fakultet Sveučilišta u Zagrebu. Available at: http://infed.org/mobi/david-a-kolb-on-experiential-learning/ 28 October 2018.
- [8] Fumarco, G. (ed.). (2006). Professione docente. Ruoli e competenze. Roma: Carocci.
- [9] Hrvatski kvalifikacijski okvir. Uvod u kvalifikacije. (2009). Zagreb: Vlada Republike Hrvatske. Ministarstvo znanosti, obrazovanja i športa.
- [10] Jurčić, M. (2012). Pedagoške kompetencije suvremenog učitelja. Zagreb: RECEDO.
- [11] Kerka, S. (1998). Competency-based education and training. Myths and Realities http://academicos.iems.edu.mx/cired/docs/tg/macroacademiaquimica/Competency-based%20education%20and%20training%20myths%20an%20realities Kerka.pdf 9 August 2018.
- [12] Kostović- Vranješ, V.; Ljubetić, M. (2008). "Kritične točke" pedagoške kompetencije učitelja. Život i škola, 56(2), 147-162.
- [13] Lersch, R. (2005). Nastava kao čin ravnoteže. Didaktičko-metodička razmatranja o novoj kulturi učenja. *Pedagogijska istraživanja*, 2(1), 85-99.
- [14] Lončarić, D., Pejić Papak, P. (2009) Profiliranje učiteljskih kompetencija, Odgojne znanosti, 11 (2), 479-497
- [15] Margiotta, U. (ed.). (2002). L'insegnante di qualità. Valutazione e performance. Roma: Armando editore.
- [16] Matijević, M. (2009). Od reproduktivnog prema kreativnom učitelju. U: Bognar, L.; Whitehead, J. (ed.). Poticanje stvaralaštva u odgoju i obrazovanju: zbornik radova; Encouraging creativity in education: proceedings, Zagreb: Profil International. 17-23.
- [17] Meyer, H. (2002). Didaktika, razredne kvake. Rasprava o didaktici, metodici i razvoju škole. Zagreb: Educa.
- [18] Mijatović, A. (2002), Obrazovna revolucija i promjene hrvatskoga školstva. Zagreb: Hrvatski zemljopis.
- [19] Moscato, M. T. (2008). Diventare insegnanti. Verso una teoria dell'insegnamento, Brescia: Edizioni La Scuola.
- [20] Mušanović, M. (2001). Teachers educational philosophies and action research /Odgojno obrazovne filozofije učitelja i akcijska istraživanja. In: Theoretical and Methodological Foundations of Educational Research. Rijeka: Filozofski fakultet u Rijeci, 133-143.
- [21] Nacionalni okvirni kurikulum za predškolski odgoj i obrazovanje te opće obvezno i srednjoškolsko obrazovanje (2014). Zagreb: Ministarstvo znanosti, obrazovanja i športa.
- [22] Nastavni program Integriranog preddiplomskog i diplomskog sveučilišnog učiteljskog studija. Odjel za odgojne i obrazovne znanosti Sveučilišta Jurja Dobrile u Puli. Available at: http://www.unipu.hr/index.php?id=113 26 October 2018.
- [23] Nastavni program Integriranog preddiplomskog i diplomskog sveučilišnog učiteljskog studija. Učiteljski fakultet Sveučilišta u Rijeci. Available at: http://www.ufri.uniri.hr/ 23 October 2018.

- [24] Nastavni program integriranog preddiplomskog i diplomskog sveučilišnog učiteljskog studija. Odjel za izobrazbu diece Available odgojitelja predškolske Sveučilišta u Zadru. http://www.unizd.hr/Default.aspx?alias=www.unizd.hr/ucitelji-odqojitelji 9 November 2018.
- [25] Palekčić, M. (2007). Od kurikuluma do obrazovnih standarda. Previšić, V. (ed.), Kurikulum: teorije metodologija sadržaj - struktura. Zagreb: Školska knjiga, 39-115.
- [26] Palekčić, M. (2008). Uspiešnost i/ili učinkovitost obrazovanja nastavnika. Odgojne znanosti, 10(2), 403-423.
- [27] Peko, A.; Mlinarević, V.; Sablić, M. (2007). Učitelj i zahtjevi nastavnih kompetencija. In: Babić, N. (ed.). Zbornik radova Kompetencije i kompetentnost učitelja. Competences and teacher competence. Osijek: Sveučilište Josipa Jurja Strossmayera, Učiteljski fakultet, 327-331.
- [28] Pellerey, M. (2004). Le competenze individuali e il Portfolio. Milano: RCS Libri.
- [29] Perini, R.; Puricelli, E. (2013). *Didattica per competenze*. Roma: Editoriale Anicia.
- [30] Perrenoud, P. (2000, 2010). Costruire competenze a partire dalla scuola. Roma: Anicia.
- [31] Perrenoud, P. (2002), Dieci nuove competenze per insegnare: invito al viaggio, Roma: Anicia.
- [32] Piršl, E. (2014). (Re)definicija pojma kompetencije i interkulturalne kompetencije. In: Hrvatić, N. Interkulturalno obrazovanje i europske vrijednosti. Znanstvena monografija. Zagreb, Virovitica: Odsjek za pedagogiju -Filozofski fakultet u Zagrebu. Visoka škola za menadžment u turizmu i informatici u Virovitici, 47-67.
- [33] Piršl, E.; Hrvatić, N. (2007). Kurikulum pedagoške izobrazbe učitelja. In: Previšić, V. Kurikulum. Zagreb: Školska knjiga, 333-356.
- [34] Poglia, E. (2006). Competenze: concetto efficace ma problematico? In: Quaderno dell'Istituto Comunicazione Istituzionale e Formativa Competenze e loro valutazione in ambito formativo, n. 12. Università della Svizzera Italiana. Lugano: Facoltà di Scienze della Formazione.
- [35] Razdevšek Pučko, C. (2005). Kakvog učitelja/nastavnika treba (očekuje) škola danas (i sutra)? Napredak, 146(1), 75-90.
- [36] Rektorski zbor. (2004). Prijedlog Povjerenstva Rektorskog zbora za pripremu i praćenje implementacije Boloniske deklaracije. Available at: http://www.public.mzos.hr 12 September 2018.
- [37] Schön, D. A. (1987, 2006). Formare il professionista riflessivo, Ed. Striano, M., trad. Capperucci, D. Milano: Franco Angeli.
- [38] Stoll, L.; Fink, D. (2000). Mijenjajmo naše škole. Zagreb: Educa.
- [39] Strugar, V. (2012). Znanje, obrazovni standardi, kurikulum. Teorijsko-kritički pristup obrazovnoj politici u Hrvatskoj. Zagreb: Školske novine.
- [40] Vizek Vidović, V. (ed.). (2005). Cjeloživotno obrazovanje učitelja i nastavnika: višestruke perspektive. Zagreb: Institut za društvena istraživanja.
- [41] Vizek Vidović, V. (ed.). (2009). Planiranje kurikuluma usmjerenoga na kompetencije u obrazovanju učitelja i nastavnika. Priručnik za visokoškolske nastavnike. Zagreb: Filozofski fakultet Sveučilišta u Zagrebu. Učiteljski fakultet Sveučilišta u Zagrebu.
- [42] Vizek Vidović, V. et al. (ed.). (2011). Učitelji i njihovi mentori. Uloga mentora u profesionalnom razvoju učitelja. Zagreb: Institut za društvena istraživanja.
- [43] Weinert, F. E. (2001). Concept of Competence: A Conceptual Clarification. In: D. S. Rychen; L. H. Salganik (eds) Defining and Selecting Key Competencies. Seattle: Hogrefe & Huber Publishers.