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COMPETENCE-BASED APPROACH TO INDIVIDUALIZATION OF STUDENT POTENTIALS

Abstract: The paper focuses on the problem issue of competencies and competency approach in education which has nowadays been a dominant trend in Europe and worldwide. Educational policy has appeared as a main advocate of competency approach, while scientists have had quite opposed standpoints in view of it. The fact that certain standards have been established in the form of competences to be achieved by all the pupils and externally evaluated has necessarily led to negligence of developmental and individual characteristics of pupils. A question has arisen as to how not to neglect developmental characteristics of pupils within competency approach, how to address the needs of standards through competencies and respect the principles of individualization. In regard to individualization of student potentials the starting point in the paper refers to notional determinations, pointing to different theoretical approaches and models, and suggesting certain simple ways of (self)evaluation. Empirical part of the paper deals with the research on standpoints of teachers as main factors of individualization of student potentials, aiming at determining the orientation and identifying the variables which might have influence on the orientation of standpoints. The results of the empirical part refer to encouraging and optimistic findings, indicating a positive attitude of research participants and identifying the variables influencing the differences in the orientation of attitudes (working experience of the research subjects and particular segments of upbringing-educational ecology). Concluding remarks appeal for caution and point to the problem issue of transferring responsibility to students, ascribing ability to make judgements decisions to students, and equating independence and self-determination.

Key words: individualization of teaching, student competences, competence approach, teachers' attitudes.

Competence-based approach and teaching process

A shift in curricular politics made from knowledge transfer to competence development has nowadays been a dominant trend both in Europe and worldwide. It has been considered that the priority changes in upbringing and education are those changes referring to acquisition of basic competencies defined in European competence framework which have been introduced in national curricula by all the members of the

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European Union. The key competences, as stated in the documents of the European Parliament, are the following: communication in mother tongue, communication in foreign language, mathematical competence, basic competencies in sciences and technology, digital competence, learning competence, social and civil competences, sense for initiative and entrepreneurship, as well as cultural sensibility and expression (according to: Key Competence for Lifelong Learning - European Reference Framework; 2007). The above mentioned competencies are the aims of national curricula of the countries European Union members and their development is at the same time the aim of European educational policy and national educational policies in European countries.

In pedagogical literature the notion of competencies has been defined as a special ability to do, perform, manage and act at the level of certain knowledge, skill and ability, what a person can prove in formal and informal way (Mijatović, 2000.) Palekčić accepts Weiner's definition of competence according to which competencies are "cognitive abilities and skills individuals have or can learn in order to solve certain problems, as well as related motivational, volitional and social readiness and abilities, for problem solutions to be successfully and responsibly used in varying situations." (Weiner, 2001: 27, according to Palekčić, 2007.) Coolahan (Council of Europe, 1996; according to Eurydice, 2002:13) suggests that competencies should be defined as "general abilities to act grounded on knowledge, experience, values and dispositions an individual has developed through being involved in educational practice. Jurić (2010) points out that competency is based on competition (Latin competere – competition, rivalry), which is rather important in school hierarchy, having in mind that it involves a student in a competition with other students, thus implying possible problems in competence-based approach. "If there is a difference between competence and ability (which are sometimes used synonymously), it is made in such a way that a competence is considered to be a proven ability, in other words, performed and efficient, while, on the other hand, ability is thought to be a potential source of ability and energy embodied in competency." (Jurić, 2010: 178.) Reviewing the ways in which the notion of competence has been defined through history, it is noticeable that the competence-based approach first appeared in the field of management as a response to the question of competency of candidates in their recruitment process; competence-based approach first appeared in education in USA in 1970ies. The approach developed in the end of the last century within educational reforms of Anglo-Saxon countries (Kerka, 1998). The demand for competence-based approach has been emphasized by society through the demands of employers who have the need to employ experts who are successful and excellent.

The notion of competence has been characterized by controversy in pedagogy, having in mind that international and national educational policies have different standpoints. The difference in standpoints is also expressed by some scientists within pedagogic science itself. The advocates of competence-based approach see in competencies the possibility to manage education quality, i.e. its efficiency through student achievements (Mijatović, 2003; Krstović, 2007; Domović, Cindrić, 2008; Lončar, Pejić-Papak, 2009.) What has been emphasized as the main advantage of competence-based approach in education is the connection between economic expectations and school tasks, as well as the fact that the focus on final result makes expectations from students clearer and more precise. Those who criticize competence-based approach regard competences with disapproval, since

they do not agree with the transfer of economic principles into the field of upbringing and education (Kerka, 1998; Westera, 2001; Korthagen, 2004; Prange, 2005; Lersch, 2005). Didactitians reliably know that teaching process cannot be evaluated solely through outcomes and final product. Many authors consider that competence-based approach is rigid, empirically and pedagogically unreliable, warning us about its potential role in deepening of social inequality (Kerka, 1998; Baranović, 2006).

Main critics of the approach have pointed out that excessive attention paid to efficacy might lead to the situation in which measurable effects actually jeopardize those less measurable or impossible to measure (values, social effects). These are at the same time the main shortcomings of competence-based approach to education. The major problem of competence-based approach in teaching process lies in the external control of teaching. Actually, external evaluation of teaching focuses exclusively on student outcomes and output competencies, i.e. students' achievements. Competence-based approach is not interested in the way those managing teaching process (i.e. school) achieve competency of students or what are students' initial potentials. Therefore certain authors emphasize the need for upbringing-educational process to be viewed in its complex totality, not only from economic aspect, having in mind that otherwise social role and purpose of upbringing-educational process will be replaced by the logics of market, individualism and competition. Focusing only on learning outcomes creates teaching situation in which the realization of given school programs is either confirmed or rejected, while a deformation appears in teaching practice of every school (as well as preschool) subsystem. Each part of school subsystem (preschool, class teaching and subject teaching in primary school, secondary school subsystem) has as its main task the preparation for the next subsystem. Consequently, kindergarten prepares children for school, in class teaching they are prepared for subject teaching in primary school, while in subject teaching they are prepared for secondary school and secondary school prepares students for university education. In this way already selective character of school system is empowered, while teaching is degraded to *teaching to test*. Desirable development orientation is for each subsystem to focus on *here and now,* preparing itself for the pupil, rather than some subsystem expecting the pupil in the subsequent period of schooling.

|Regardless of the taken standpoint or how firm and unshakeable our standpoint is, it is beyond dispute that the needs of contemporary society have imposed new demands on schools in regard of competencies of students based on development of student potentials in the field of innovativeness, creativity, problem solving, critical thinking development, reliability, |IT literacy and social relations. It is difficulty to develop the stated competencies in a school system which acts in the function of knowledge transfer. There is no doubt that shift in curricular approach from knowledge transfer to competence development has determined a significant didactic turning point in teaching process.

Teaching practice has raised the following question: Is it possible to consider the problem issue from the viewpoint which is neither extreme criticism nor idealisation of competence-based approach? Ćatić (2012: 185) offers a possible way to reconcile the two distant and opposed viewpoints according to broader determination of the notion of competence, i.e. "according to holistic approach to competencies, putting greater

emphasis on education for democratic citizenship and intercultural understanding, in order to avoid possible dangers of neglecting social as well as upbringing aims and of deepening social inequality potentially implied by competencies in education and teaching."

Individualization of teaching process

In view of respect of individual and social differences between students the fact that particular standards have been established in the form of competencies to be achieved by all members of society and whose acquisition is externally evaluated has necessarily led to negligence of developmental characteristics of an individual. A question has been raised as to how in the framework of competence-based approach not to neglect developmental characteristics of students, how to address the needs of standards through competencies and principles of individualization.

The principles of the National Curriculum the present paper relies on refer to equality of educational possibilities with each pupil having the right to the highest educational development, involvement of all pupils into the school system, emphasizing respect for upbringing-educational needs of each pupil, as well as respect for rights of children, with special emphasis on pupil oriented upbringing and education.

Pupil-oriented upbringing and education referring to individualization of pupils' potentials implies the following:

- selection of those teaching strategies, methods and procedures which will develop student potential,
- adjustment of teaching forms to individual needs and abilities of students,
- use of variety of sources of knowledge, providing the student with an opportunity to play an active role in teaching process,
- planning of teaching in accordance to initial assessment of student potential,
- respect for different learning style as well as developmental differences between students in a class,
- respect for emotional reactions of students as feedback relevant for creation of new teaching situations.

Even thought students in classes are most often nearly of the same age, it is possible to notice great individual differences between students in physical, intellectual and psycho-social development. These differences are the result of individual and cultural differences, as well as of specific developmental needs. It is crucial for teaching process to perceive and identify individual differences between students and organize upbringing-educational process accordingly. "Individualized teaching is an effort to optimally respect individual characteristics of each student in organization of upbringing-educational process. This is achieved through organization of individual work of students appropriate for their abilities" (Bognar, Matijević, 1992:286). There is a general educational aim in certain school systems (e.g. Finland) to provide equal educational chances, but not in the sense of right for schooling, rather in the sense of creating opportunities for optimal development of each individual. Basic assumption of general education aim is for students to feel school as a place of safety and a place where individual development is

encouraged (Bašić, 2007: 137). Certain authors hold that the notion of individualization of teaching implies acknowledgement and respect for specific features of each student, his/her abilities, talents and capabilities, as well as possible difficulties in following teaching, mastering teaching contents or learning in general (Messick, 1976; Reigeluth, 1983.). In this definition the authros put emphasis on students with special needs. It has for long been considered that individualization of teacning is needed and possible to realize only for the students with special needs – those who have developmental difficulties or are gifted students. During 20th century the demands for individualized approach to all students became increasingly louder (Arambašić, Vizek-Vidović, 2001; Andrić, 1989). Individualization of teaching implies institutionalized teaching mediated by a teacher according to chosen contents and professionally selected teaching methods. If a teachers is not able to recognize talents, abilities or inclinations of certain students for particular topics, he/she can neither conceive nor involve students in active learning (Vrcelj, 2000; Dryden, 2001; Jensen, 2003). The idea that teaching activities should be organized so that they are appropriate for each student dates back from the time in school history called "new school". Different solutions are as follows: learning according to agreement, Manheim's school system, child-friendly school... A good example of individualized approach in teaching can be found in Finland, having in mind that it puts individual support to development in the centre of educational culture as a continuous process. "The process of child's learning is documented as early as in preschool institution, e.g. a child has a portfolio to be taken to primary school. A preschool teacher and a class teacher work together, so that it is self-evident that support to a child starts from the very beginning of schooling and is a continuous process until the very end. There are institutions responsible for individual support at every level, so that students can develop according to their abilities and so that each student could meet minimal demands (Bašić, 2007: 137). Not all of students have the same inclination to all teaching methods. Some students use the method of conversation in teaching reluctantly, since the feel unpleasant or they do not like to speak in public, i.e. in front of their peers; they are much better at the method of written assignments. It can happen in teaching practice that some acts of students are explained through discipline problems, while what is hiding behind indiscipline is his/her need to move and be active (Willis, Hodson, 2004).

Individualization of teaching can be modelled in a variety of ways. It is possible to focus on development of student's potentials, while adjusting teaching methods to initially identified abilities of a student; consequently, most desirable outcomes are achieved (Messick, 1976). Elimination or compensation of reduced or insufficiently developed abilities of students is oriented to students who do not possess certain capabilities (Reynolds, 1988). Regardless of student abilities, stimulation-based individualization approach is based on the fact that teaching methods are not adjusted to a student, but a student is stimulated to adjust to the given teaching method. Another well-known model of individualization of teaching is the one grounded on teaching contents (Jonassen, 1982) which is based on the adjustment of teaching to students in such a way that the demands imposed on students are formed and adjusted to them. Key demand of the model is that it is more important to rearrange teaching contents and make them accessible to students than to adjust teaching methods (Gradner, 1995). In any of the stated models of individualization of teaching it is necessary to point out the importance of student participation in creating the purpose managing student activities in learning

process (Dewey, according to Ellis, 2004). If we succeed in these efforts, we abandon the approach which puts a student in the position of being passive, receptive and in numerous aspects of teaching process deprived from his/her rights. On the other hand, if we fail, we are determined by an approach according to which a student serves to school, i.e. successful realization of the school program, instead of school to be in the service of a student promoting the development of his/her potentials. To recognize specific educational needs of students, to be in service of a student and to meet his/her needs appropriately is a true teaching mastery. The most common mistakes related to individualization of teaching typical for teaching practice is fixed groupings of students in three groups (above-average, average and under-average), leading to a danger of labelling, as well as lower personal and teacher's expectations (Pastuović, 1999; Kyriacou, 2001). In order to make as little number of mistakes as possible in the process of individualization of teaching, it is necessary to permanently reconsider and evaluate the process. The approach oriented to students establishes the needs of students as an important criterion of evaluation of individualization of students' potentials. In regard to this Podmore (2004; according to Miljak, 2007) suggests self-evaluation which goes in five directions, relying on five simple questions from student perspective:

Is this place created for me? (The question refers to individualization in the field of upbringing-educational ecology and its suitability for students' needs.)

Do you know me? (In this question the process of individualization focuses on getting familiar with the interests, needs and abilities of each student.)

Do you care about me? (Individualization guides teachers on their way to respect student needs on daily basis, respecting the rule of moderation.)

Do you let me "fly"? (The answer to this question is in the greatest degree oriented to reconsideration, fulfilment and good use of student's potentials, creation of challenges for students, opening up possibilities for putting a student into active relationships.)

Can you hear me? (When the process of individualization is in question we have to listen carefully to students so that we could answer their questions and meet their needs and involve them in communication.).

Answering these simple questions we can easily evaluate our approach and find out if we have succeeded in the process of individualization of student potentials, as well as establish guidelines form subsequent teaching. Dealing with the improvement of teaching quality and respecting student-oriented approach, ISSA has proscribed pedagogic standards monitoring and evaluating the features of teaching process classified within seven standards: individualization of teaching, learning environment, family participation, teaching strategies for meaningful learning, planning and assessment, professional development, social inclusion (ISSA, 2006: 3). Individualization of teaching has significant place in the stated standards. Teachers are the most important factors of teaching individualization when implementing the standards. Consequently, the empirical part of the paper will focus on examination of attitudes of the most significant factors of individualization of teaching – i.e. teachers. Those teachers who apply individualization with their students and their families:

- are familiar with individual features and characteristics of children they work with
- know the sequence and characteristics of children development

- harmonize planned upbringing-educational activity with the level of development, abilities and needs of each child
- adjust schedule of activities to the needs of each individual child
- create learning environment in which teaching methods, means and daily timetable are adjusted to children in the class
- get into interaction with each child
- treat children with warmth and respect
- know history, culture and values nurtured in the families of children they work with
- adjust the space in the classroom to the differences between children (ISSA, 2006: 9).

The above determinants make theoretical construct and guidelines when forming the scale of individualization in the empirical part of the paper having for its research problem issue identification of the conditions related to paper problem issue as an initial state existing before the introduction of competence-based approach to teaching process.

Research methodology

The **aim** of the research refers to the establishment of attitudes of teachers related to the segment of individualization of teaching, as well as identification of variables which could influence the orientation of attitudes of the research participants. Research **hypotheses** are grouped in two general hypotheses:
H1 – Teachers' attitudes related to individualization of teaching are predominantly positively oriented.
H2 – Standpoints of teachers in regard to individualization of teaching significantly differ depending on working experience of the research subjects and the size of the school.

Dependant variable refers to attitudes of teachers as research participants, and independent variable refers to working experience of participants and the size of school in which they work.

Research **sample** consists of 1308 teachers evenly distributed in all regions of the Republic of Croatia, out of which there are 1210 female and 98 male teachers.

Table 1: Sample structure according to working experience of the subjects

YEARS OF WORKING EXPERIENCE	N	%
less than 2 years	113	8,64
between 2 and 5	111	8,49
between 5 and 10	152	11,62
from 10 to 15	204	15,6
from 15 to 20	197	15,06
more than 20 years	531	40,6
Total	1308	100

Working experience of teachers is classified in six categories. *Table 1* shows that the percentage of subjects in the sample grows almost analogously with each subsequent

category. There is the smallest number of teachers who have short working experience (less than 2 years or between 2 and 5 years of working experience), while there is largest number of teachers for whom it can be justifiably said that they are highly experienced in their profession of a teacher (more than 20 years). The data in regard to the structure according to working experience of research participants can to a great extent contribute to the quality of results of the research, having in mind that we are dealing with the attitudes of experienced teachers.

Table 2: Sample structure according to school size

SCHOOL SIZE	N	%
small – up to 300 students	374	28,59
middle – between 300 and 700 students	511	39,07
large – more than 700 students	422	32,26
no response	1	0,08
Total	1308	100

The number of students is often crucial for school functioning, school and class management. Therefore the fact influenced structuring of the sample into three sub-samples. The first consists participants working in small schools (less than 300 students). The second is made of the teachers working in middle schools (between 300 and 700 students), and the third category involves the teachers employed in the so called "mammoth" schools. Categorisation was carried out in advance according to the categorization of schools in regard to their size established by the Ministry of Science, Education and Sport of the Republic of Croatia.

The method of survey and evaluation is used in the research, and the instrument is the combination of a questionnaire and evaluation scale (Likert-type scale). Participants' standpoints related to individualization of teaching are examined in the research. The instrument was verified on a smaller number of subjects and necessary additions and changes were carried out subsequently. The instrument consists of 21 statements related to the determinants of individualization of teaching.

The subjects responded to the statements according to five-point Likert-type scale:

1. I strongly disagree or *never*
2. I mostly disagree or *rarely*
3. I neither agree nor disagree or *neither rarely nor often*
4. I mostly agree or *often*
5. I strongly agree or *always.*

Statistical program package SPSS (*Statistical Package for the Social Sciences*) was used for data processing. In order to determine descriptive indicators of certain items and scales, descriptive parameters were used. In order to establish latent dimensions in the basis of inter-correlation of items factor analysis of common factors was used. In order to make comparisons between subjects in view of certain features, we calculated one-way analyses of variance. If analysis of variance has shown significant differences, subsequent post-hoc tests were carried out for between group comparisons of clusters.

Research results and interpretation

In order to determine descriptive indicators of certain items the following descriptive parameters were used: arithmetic mean and standard deviation. The highest arithmetic mean was found in the case of items "I address each of my students by name" (M = 4,84) and "I try to be a role model to my students when I teach them respect individual differences between themselves" (M = 4,71). Having in mind that we are dealing with class teaching which, according to its upbringing-educational style, resembles family atmosphere, it is quite understandable that pronouncedly high arithmetic mean was found in the case of these items. Class teachers working with children from the 1st to the 4th primary school grade share everyday experiences with their students for four years, each school day for several hours; the fact that they spend so much time together creates more intimate and closer relationship, thus manifesting individual approach to great degree. It might be assumed that within secondary school population in the case of secondary school teachers who have one school lesson a week in large classes, the level of individual approach would be significantly lower. The lowest arithmetic mean appeared in the case of the item "I encourage students to create class newspapers and books describing history and values of different ethnic groups" (M = 3,42). The reasons why in the case of this very item the lowest value of agreement with the quoted statement was expressed might be hiding in intercultural competences of teachers – subjects which are actually not developed and awakened to satisfactory degree or due to the fact that the method of creation of class booklets and newspapers is insufficiently present in the work of teachers.

Table 3: Descriptive parameters of items used for measuring individualization

	M	SD	N
My pedagogic aims pay sufficient attention to students' needs, abilities, interests, motivation.	4,42	0,63	1307
I often get into interaction with each student individually.	4,04	0,71	1307
I talk to a student making efforts for our eyes to be in the same level, i.e. to make direct eye-contact.	4,17	0,84	1307
I manage to address and talk to all students in the class during the day.	4,28	0,81	1307
I address each student by name.	4,84	0,47	1307
I establish positive verbal and non-verbal communication with students.	4,41	0,64	1307
I recognize strengths of each student's personality and the progress they make in the course of time.	4,37	0,63	1307
I talk about the progress of each student on daily basis.	3,8	0,76	1307
I work in such a way that each of my students gets an acknowledgement during the day.	3,89	0,75	1307
I harmonize teaching strategies with students' abilities.	4,25	0,66	1307
I show personal interest and care for progress of each student.	4,55	0,6	1307
I provide students with equal opportunities to participate in all the activities.	4,52	0,63	1307

I try to be a role model to my students when I teach them respect individual differences between themselves.	4,71	0,54	1307
I design teaching with the respect for different learning styles.	4,31	0,64	1307
I think that the teaching I carry out is suitable for different personal learning styles of my students.	4,14	0,65	1307
I consider myself sufficiently trained to realistically estimate learning styles of my students.	4,16	0,72	1307
I offer my students various choices, i.e. I design situations in which students can independently choose projects they will work on.	3,9	0,75	1307
I give students enough time to work on their own in small groups they have chosen themselves according to their own interests.	3,97	0,77	1307
I respect culture and traditions of students and their parents.	4,58	0,63	1307
I encourage students to create class newspapers and books describing history and values of different ethnic groups.	3,42	1,03	1307
I encourage students to organize various celebrations and public events in accordance to their national tradition and customs.	3,8	1,03	1307

Factor analysis of common factors was carried out at the 21st item according to the content of individualization measure. Adequacy of correlation matrix of the items of the Scale of individualization for factor analysis is confirmed by Kaiser-Meyer-Olkin's coefficient which is 0,93, leading to a conclusion that the observed items of the scale belong together psychometrically. Bartlett's test of sphericity (χ^2 [210, p<0,01] =7954) shows that there is no linear dependence between the items of the scale thus confirming adequacy of the matrix for analysis.

Table 4: Indicators of adequacy of items correlation matrix for factor analysis

Kaiser-Meyer-Olkin's measure		0,93
Bartlett's test of sphericity	estimated χ^2	7954
	Df	210
	P	0

Table 5: An overview of explained variance of the items of the Scale of individualization (common factors method)

Item	Initial variance	Explained variance
My pedagogic aims pay sufficient attention to students' needs, abilities, interests, motivation.	0,31	0,3
I often get into interaction with each student individually.	0,21	0,18
I talk to a student making efforts for our eyes to be in the same level, i.e. to make direct eye-contact.	0,21	0,19
I manage to address and talk to all students in the class during the day.	0,22	0,2
I address each student by name.	0,25	0,16
I establish positive verbal and non-verbal communication with students.	0,26	0,26
I recognize strengths of each student's personality and the progress they make in the course of time.	0,34	0,32

I talk about the progress of each student on daily basis.	0,37	0,32
I work in such a way that each of my students gets an acknowledgement during the day.	0,37	0,29
I harmonize teaching strategies with students' abilities.	0,36	0,37
I show personal interest and care for progress of each student.	0,4	0,39
I provide students with equal opportunities to participate in all the activities.	0,3	0,27
I try to be a role model to my students when I teach them respect individual differences between themselves.	0,28	0,22
I design teaching with the respect for different learning styles.	0,41	0,37
I think that the teaching I carry out is suitable for different personal learning styles of my students.	0,46	0,42
I consider myself sufficiently trained to realistically estimate learning styles of my students.	0,38	0,37
I offer my students various choices, i.e. I design situations in which students can independently choose projects they will work on.	0,42	0,37
I give students enough time to work on their own in small groups they have chosen themselves according to their own interests.	0,39	0,33
I respect culture and traditions of students and their parents.	0,24	0,21
I encourage students to create class newspapers and books describing history and values of different ethnic groups.	0,41	0,21
I encourage students to organize various celebrations and public events in accordance to their national tradition and customs.	0,39	0,26

Factor analysis was carried out according to the results of 1308 research participants through combination of criteria of predetermined number of factors and according to the Scree diagram. The Scree diagram clearly shows that after the first factor there is a great decrease in explanation of variance, meaning that none of the rest of the factors, except from the first one, contributes independently and to a great extent to explanation of variance of items. One preserved factor explains 28,60% of variance and according to the item content it can be called the Factor of individualization.

Graph 1: Scree dijagram (plot)

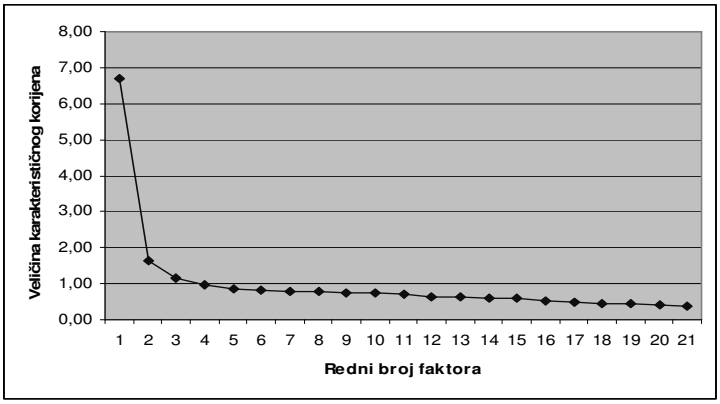

Table 6: The table of explained variance (common factor method)

Factor	initial variance			explained variance		
	Total	% variance	Cumulative % Variance	total	% variance	cumulative % variance
1	6,7	31,9	31,9	6,01	28,6	28,6
2	1,63	7,75	39,66			
3	1,16	5,52	45,18			
4	0,95	4,53	49,71			
5	0,87	4,15	53,86			
6	0,82	3,91	57,76			
7	0,79	3,77	61,54			
8	0,77	3,66	65,2			
9	0,74	3,53	68,73			
10	0,74	3,53	72,26			
11	0,69	3,31	75,56			
12	0,65	3,08	78,64			
13	0,62	2,96	81,6			
14	0,59	2,79	84,39			
15	0,58	2,77	87,17			
16	0,51	2,44	89,6			
17	0,5	2,39	91,99			
18	0,45	2,15	94,14			
19	0,44	2,07	96,21			
20	0,41	1,95	98,16			
21	0,39	1,84	100			

Table7: Factor structure matrix

No	Items	Factor 1
1.	I think that the teaching I carry out is suitable for different personal learning styles of my students.	0,65
2.	I show personal interest and care for each of my students.	0,63
3.	I design teaching so that it respects various learning styles.	0,61

4.	I harmonize teaching strategies with developmental abilities of students.	0,61
5.	I consider myself sufficiently trained to realistically estimate learning styles of my students.	0,61
6.	I offer my students various choices, i.e. I design situations in which students can independently choose projects they will work on.	0,6
7.	I give students enough time to work on their own in small groups they have chosen themselves according to their interests.	0,58
8.	I recognize strengths of each student's personality and the progress they make in the course of time.	0,57
9.	I talk about progress of each student on daily basis.	0,56
10.	My pedagogic aims pay sufficient attention to students' needs, abilities, interest and motivation.	0,55
11.	I work in such a way that each of my students gets an acknowledgement during the day.	0,54
12.	I provide my students with equal opportunities to participate in all the activities.	0,52
13.	I establish positive verbal and non-verbal communication with my students.	0,51
14.	I encourage students to organize various celebrations and public events in accordance to their national tradition and customs.	0,51
15.	I try to be a role model to my students when I teach them respect individual differences between themselves.	0,47
16.	I encourage students to make class papers and books describing the history and values of various ethnic groups.	0,46
17.	I respect culture and tradition of students and their parents.	0,46
18.	I manage to address and talk to all my students during one school day.	0,44
19.	I talk to a student making efforts for our eyes to be in the same level, i.e. to make direct eye-contact.	0,44
20.	I often get in interaction with each of my students individually.	0,42
21.	I address each student by name.	0,4

It can be seen according to the *Table of factor structure* that the first factor called the factor of individualization has high saturation with the items "I think that the teaching I carry out is suitable for different personal learning styles of my students" (saturation = 0,65), "I show personal interest and care for each of my students" (saturation = 0,61), "I harmonize teaching strategies with developmental abilities of students" (saturation = 0,61), "I consider myself sufficiently trained to realistically estimate learning styles of my students" (saturation = 0,61), as well as "I offer my students various choices, i.e. I design situations in which students can independently choose projects they will work on" (saturation = 0,60). All the items have moderate saturation with the first factor and according to their content they describe individual approach of a teacher to a student. The item "I address each student by name" has the lowest saturation (saturation = 0,40); out of all the items on the scale it has the lowest initial and explained variance.

Research results indicate that the fist hypothesis can be accepting, having in mind that it confirms positive attitude of the research participants related to various categories of individualization of teaching. Research participants are obviously aware of the importance of teaching individualization, they feel well in view of the established principles of individualization and they apply them in their teaching practice to significant degree.

In order to confirm or reject the second hypothesis referring to the relation between research subjects and certain variables, we have established correlation between teachers' attitudes and their working experience and the size of school they work in.
In order to confirm or reject the second hypothesis we carried out...

Table 8: Descriptive statistics for the Scale of individualization according to years of working experience of research participants

Years of working experience	M	SD	N
less than 2 years	4,16	0,36	113
between 2 and 5	4,11	0,38	110
between 5 and 10	4,17	0,37	152
from 10 to 15	4,17	0,42	204
from 15 to 20	4,22	0,43	197
more than 20 years	4,28	0,39	531
Total	4,22	0,4	1307

Table 8 shows that teachers estimate that they mainly agree with individualization as significant factor of teaching process management; the degree of agreement grows along with the number of years of working experience. On the average, there is the lowest level of agreement in the case of the teachers who are classified within the first two categories (less than 5 years of working experience), even though they also mainly agree that individualization is significant factor of teaching process management. The highest degree of agreement with the offered items was manifested by the teachers who have more than 20 years of working experience. In order to find out if there is a significant difference, we carried out a one-way analysis of variance, since there are more than two groups of subjects for comparison.

Table 9: Variance analysis according to working experience in individualization

	Sum of quadrate	Df	Average sum of quadrate	F	p
Between groups	4,23	5	0,85	5,42	p<0,01
Within groups	203,09	1301	0,16		
Total	23429,75	1307			

Undertaken analysis of variance shows that there is a significant difference between age groups in regard to their opinion on individualization (F=45,42; df1=5; df2=1301; p<0,01). In order to establish which are the age groups manifesting significant difference in opinions and attitudes towards individualization we carried out a post-hoc test (Scheffe test).

Table 10: The results of post-hoc test (Scheffe test) for individualization according to working experience of the subjects

Years of working experience	Years of working experience	Arithmetic means difference	p
less than 2 years	between 2 and 5	0,05	p>0,05
	between 5 and 10	-0,02	p>0,05

	from 10 to 15	-0,01	p>0,05
	from 15 to 20	-0,06	p>0,05
	more than 20 years	-0,12	p>0,05
between 2 and 5 years	between 5 and 10	-0,07	p>0,05
	from 10 to 15	-0,06	p>0,05
	from 15 to 20	-0,11	p>0,05
	more than 20 years	**-0,17**	**p<0,01**
from 5 to 10 years	from 10 to 15	0	p>0,05
	from 15 to 20	-0,05	p>0,05
	more than 20 years	-0,1	p>0,05
from 10 to 15 years	from 15 to 20	-0,05	p>0,05
	more than 20 years	-0,1	p>0,05
more than 20 years	more than 20 years	-0,05	p>0,05

It turned out that there is a significant difference between the subjects who have working experience between 2 and 5 years and those who have more than 20 years of experience (razlika = -0,17; p<0,01), while more experienced subjects expressed more agreement with individualization as important feature of teaching process, i.e. they implement it more in their work. It can be easily noticed that more experienced teachers show more respect for individual approach to teaching, probably due to their long working experience.

Table 11: Descriptive statistics for Scale of individualization according to the size of school

School size	M	SD	N
small – up to 300 students	4,25	0,39	373
middle – between 300 and 700 students	4,18	0,4	511
Large – more than 700 students	4,23	0,4	422
Total	4,21	0,4	1306

Table 11 shows that the teachers in certain sub-samples mainly agree with individualization as relevant factor of teaching process management. Arithmetic means imply out that the level of agreement is the highest in the case of the subjects who work in small (less than 300 students) or large schools (more than 700 students). Those participants working in middle schools manifested slightly lower level of agreement (M = 4,18). Standard deviations in all the sub-samples are almost identical. In order to establish if there is significant difference, we carried out one-way analysis of variance, having in mind that there are more than two groups of subjects for comparison.

Table 12: Variance analysis for size of the school where the subjects work according ot individualization principles

	Sum of quadrate	Df	Average sum of quadrate	F	p

Between groups	1,2	2	0,6	3,79	**p<0,05**
Within groups	206,03	1303	0,16		
Total	23409,28	1306			

Undertake analysis of variance shows that there is a significant difference between the subjects depending on the size of the school where the subjects work in regard to their opinion on individualization (F = 3,79; df1=2; df2=1303; p<0,05). In order to identify the sub-samples manifesting significant difference in opinion and standpoint about individualization, post-hoc test (Sheffe test) was carried out.

Tablica 13: Rezultati post-hoc testa (Scheffe testa) za individualizaciju prema veličini škole

School size	School size	Difference of arithmetic means	p
small – up to 300 students	middle – between 300 and 700 students	0,07	**p<0,05**
	large – more than 700 students	0,02	p>0,05
middle – between 300 and 700 students	large – more than 700 students	-0,05	p>0,05

It was found that there is significant difference between the subjects who work in small schools and those who work in moderately large schools (difference = 0,07; p<0,05), so that the subjects who work in small schools agree with individualization as significant feature of teaching process, i.e. they apply it more in their work. The finding can be explained according to the fact that in the school where in all the classes there are less than 300 students more intimate and closer relationships are established between the subjects of upbringing-educational process. Teachers know the pupils who do not attend their classes. Therefore they are probably more focused on the principle of individualization in their teaching work. In the schools between 300 and 700 schools, due to large number of pupils, the level of individualization is obviously significantly lower.

According to the research findings related to confirmation or rejection of the second hypothesis it can be concluded that it is confirmed, having in mind that the research has proven that the subjects significantly differ in view of their standpoints about individualization of teaching in relation to the tested features.

When implementing individualization of teaching numerous factors have to be born in mind. One of them is a teacher on his/her way from a novice teacher to an expert teacher. This is also confirmed by research on professional development of teachers differentiating between the ways of development of a teacher – beginner and an experienced teachers, so that the teachers who have just begun their practice are usually inflexible in their actions and decision making and have not become sensitive for the context of events. There are noticeable sociological differences in the culture of practice between these categories, found by former research (Berliner, 1992; Farnham-Diggory, 1994).

Upbringing-educational ecology has significant influence on numerous determinants of teaching process and thus on the process on individualization. School size as a determinant of upbringing-educational ecology has, according to the research, turned out to the significant in so that smaller school is desirable for respect for individualization of teaching process; in other words, the task of pedagogic service in larger schools is to pay more attention to the process of individualization.

Concluding remarks

Attitudes of teachers seem to be crucial for the process of individualization, having in mind that teachers are the main factor highly influential for successful process of individualization of teaching. Beliefs and knowledge of teachers, as well as their emotional reactions in regard to individualization have significant influence on their intention how to behave in teaching situations in view of the examined segment.

Results of the empirical research presented in the paper bring encouraging and optimistic findings, implying positive attitudes of research subjects. The research has proven that the orientation of these attitudes is also influenced by certain characteristics of the subjects. It seems important to emphasize the specific current moment in professional development of a teacher, having in mind that it has significant influence on the process of individualization, arising out of already proved features of professional development of a novice teacher and an expert teacher (counsellor, mentor). Having in mind that the research question was to record the initial state according to attitudes of teachers in view of individualization of teaching before introduction of competence-based approach leading to focus on outcomes of teaching, it would be interesting to undertake a longitudinal research after competence-based approach becomes our reality in the school system. It would be also useful to establish some other variables, apart from working experience and school size and examine the attitudes of practitioners in view of competence-based approach to teaching. In more studious research on attitudes of research participants, it would be desirable to differentiate between attitudes according to dimensions, paying respect for three-component analysis of attitudes to cognitive (beliefs), affective (feelings) and conative (intention to act).

It might be concluded that competence-based approach requires significant changes from teaching process in view of teaching methods and forms. Process of individualization of teaching is facing an extraordinary challenge, having in mind that teachers should at the same time meet externally imposed demands in the form of student competences, standards and given expected outputs, and the demands oriented to students, which might actually be contradictory. The problem issue might be a great didactic challenge, not only for teachers – novices, but also for teachers – experts. In order to respond to such a challenge, open didactic-teaching methodological systems are suggested, providing students with possibility to choose not only contents but also the form of teaching, ensuring independent learning, and learning according to shared decision making. As a response to the stated demands teaching practice uses holistic teaching – integrated teaching in all its manifesting forms, research teaching, constructivistic approach to teaching, problem learning, cooperative learning… Main

orientation towards a student develops trust in a student, i.e. that they are those who know their own needs the best, that they are able (starting from early age) to independently choose learning contents and (self)responsibly shape their learning process. Having in mind the far-reaching consequences of such an approach, I feel the need to appeal for cautious and critical reflection. Certain authors point to problematic aspects of the concept, emphasizing "transfer of responsibility to students (1), ascribing the ability to make judgements and make decisions in view of activity content/learning to students (2), as well as equation of independence and self-determination (3)" (Bašić, 2009:36). On the other hand, other authors do not see a problem in this and estimate readiness of school system to abandon traditional paradigms and transfer responsibility for their own learning to students as insufficient (Tot, 2010). Newly opened problem issue goes beyond the framework of the present paper, but it will certainly be a subject of study in pedagogic research if (or when) teaching practice points to such a need. Until then, when implementing individualization in teaching and competence-based approach, we have to bear in mind that numerous problems might appear if responsibility is prematurely required from a student in view of both content choice and relationship, so that autonomy and self-determination as externally proscribed norms can be a burden for students and, being inappropriate, might cause more damage to those the concept is oriented to, i.e. the students.

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