

**FINAL REPORT
KEY COMPETENCES FOR
LIFELONG LEARNING IN SERBIA**



etf
SHARING EXPERTISE
IN TRAINING

**THE EUROPEAN TRAINING FOUNDATION (ETF)
HELPS TRANSITION AND DEVELOPING COUNTRIES TO
HARNESS THE POTENTIAL OF THEIR HUMAN
RESOURCES THROUGH THE REFORM OF EDUCATION,
TRAINING AND LABOUR MARKET SYSTEMS IN THE
CONTEXT OF THE EU'S EXTERNAL RELATIONS POLICY.**

HOW TO CONTACT US

Further information on our activities, calls for tender and job opportunities can be found on our web site: www.etf.europa.eu

For any additional information please contact:

External Communication Unit
European Training Foundation
Villa Gualino
Viale Settimio Severo 65
I – 10133 Torino
T +39 011 630 2222
F +39 011 630 2200
E info@etf.europa.eu



FINAL REPORT KEY COMPETENCES FOR LIFELONG LEARNING IN SERBIA

*Belgrade, January 2007
Research Team Members: Mirjana Bojanić, Jelena Jakovljević,
Mirjana Milanović, Iskra Maksimović
Report edited by: Iskra Maksimović
Project Number: WP06-53-01*

© Reproduction is authorised provided the source is acknowledged.

The views expressed in this publication are those of the authors and do not necessarily reflect those of the ETF or the European Union.

CONTENT

1. INTRODUCTION	5
2. PROJECT: KEY COMPETENCES FOR LIFELONG LEARNING IN SERBIA	9
2.1 Definition of two competences: 'Learning to learn' and 'Entrepreneurship'	9
2.2 Project activities	10
2.3 Research approach	11
3. ASSESSMENT RESULTS	13
3.1 Methodology	13
3.2 Description of the sample	13
3.3 Research instruments	17
3.4 Procedure	17
4. OVERALL POLICY ASSESSMENT	19
4.1 Final year students (three-year and four-year programmes)	19
4.2 Teachers	26
4.3 School principals' opinions on the key competences	34
5. CONCLUSIONS AND RECOMMENDATIONS	37

1. INTRODUCTION

According to analysts, the contemporary world is in the process of transition from industrial era into an information and communication era, frequently defined as a learning society.

This new society demands various types of learning leading to constant and lifelong learning, employment and personal development of every individual. New demands and needs appear, above all, as results of three mutually connected factors:

- Wide diffusion of information technologies that influence working process in general in the majority of human life spheres, as well as direct production process;
- Economic competitiveness that tends to be more and more international and demands more efficiency, higher quality and much more innovation in both services and production. This inevitably leads to demand for highly valued goods and services and leaving cheap and mass production;
- Changes in companies, meaning abandoning traditionally rigid organisational and business structures.

For an individual, learning for employment means development of possibilities to find, keep or change job or to generate self-employment. These skills enable vertical and horizontal mobility of workers on the labour market and their possibilities to be adaptive on changes in technologies and new forms of work organisation. From the workers' needs point of standing, learning for employment means realisation of the fundament of lifelong learning and individual achievement of competences that strengthen professional mobility and security for a job. For enterprises and employers employment skills represent that their workers are capable to answer on changed demands of working positions that strengthen enterprises' competitiveness and development. For the state, this concept means design of labour force that possesses adaptive capabilities that meet the labour market demands. However, learning does not indicate automatic employability, because employment depends much more on individual's abilities and potentials to transfer key competences from one job to another.

Today, more and more demanded are workers that hold larger scale of skills, capability for individual work, those who are more adaptive in the production processes and are polyvalent. As a consequence, the concept of understanding competences has been changed – instead of traditional understanding of skills (pure technical skills), employers look for and insist on entirety of competences of an individual and especially on their abilities to communicate, solve problems, work in a team. Yet, the labour market sends opposing needs because the employers seek for an individual who is highly adaptive (generally oriented) and who can work immediately (specialist), which additionally burdens and causes difficulties for the vocational education and training response towards the labour market needs. Education, besides the balance of knowledge, skills and competences gained during education process and those that enables employment, should at the same time offer general basis that will enable individuals' further education and improvement.

1 Changed role of the government and other stakeholders in VET: Training policies and systematic employment according to fields of work, ILO

Key knowledge, skills and competences that lead towards the employment include:

- Intellectual abilities;
- Social and interpersonal skills and knowledge (communication, teamwork, decision making, taking responsibility);
- Business and entrepreneurial skills and knowledge (entrepreneurial capacities, creativity, ability for innovations, self-employability);
- Multiply technical skills and knowledge.

In practice, these two approaches are often connected and mutually complement. Contemporary interpretations define **competences** as *possessing and appliance of knowledge and skills according to defined learning outcomes and standards that correspond with working place demands and other professional needs*. In accordance with international studies, 'competence' is defined here as a combination of knowledge, skills and attitudes appropriate to a particular situation. Many of the competences overlap and interlock: aspects essential to one domain will support competence in another. Competence in the fundamental basic skills of language, literacy, numeracy and ICT is an essential foundation for learning, and learning to learn supports all learning activities. There are a number of themes that are applied throughout the framework: critical thinking, creativity, initiative taking, problem solving, risk assessment, decision taking, and managing feelings constructively play a role in all eight key competences.

Competence includes: i) cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially; ii) functional competence (skills or know-how), those things that a person should be able to do when they are functioning in a given area of work, learning or social activity; iii) personal competence involving knowing how to conduct oneself in a specific situation; and iv) ethical competence involving the possession of certain personal and professional values.

'Key competences' are those that support personal fulfilment, social inclusion, active citizenship and employment.

Key competences represent transferable, multifunctional package of knowledge and abilities necessary for the individual to achieve personal fulfilment, development, professional mobility and employment. An individual acquire key competences at the end of vocational education and training and they represent the basis for individual's lifelong learning.

This kind of definition especially stresses transferability and ability for adaptation of key competence in numerous situations and contexts. Multi-functionality implies that accomplished key competences may be used for achievement of different professional tasks and are a possibility for fulfilment in life, work and learning of every individual. This means that achieving key competences enables completion of three basic tasks important for every individual, but for the society in general as well:

- Personal fulfilment and professional development (cultural capital): achievement of professional goals and personal wishes related to continuous learning;
- Active citizens (social capital): creating possibilities for all to participate in the development of a society as an active citizen;
- Employment (human capital): ability of every individual to gain and keep work on the labour market.

2 *Learning outcomes* – set of knowledge, skills and abilities necessary for future education, initial capability for work and efficient realisation of jobs

3 European Commission, Implementation of working programmes "education and training 2010", working group "basic skills, entrepreneurship and foreign languages", November 2003

The EU framework on key competences for lifelong learning defines the following eight domains:

- **Communication in the mother tongue** — to express and interpret thoughts, feelings and facts in oral and written form, in the full range of societal and cultural contexts — in education and work, and at home;
- **Communication in a foreign language** — broadly overlaps with communication in the mother tongue, with the proviso that the degree of proficiency will vary between the four dimensions of listening, speaking, reading and writing;
- **Mathematical literacy, science and technology** — to use addition, subtraction, multiplication, division and ratios in mental and written computation to solve a range of problems in everyday situations;
- **Digital competence** — the confident and critical use of electronic media for work, leisure and communication;
- **Learning to learn** — the disposition and ability to organise and regulate one's own learning by managing time effectively, acquiring, processing, applying and evaluating key knowledge — at home, at work, and in education and training;
- **Interpersonal, intercultural, social and civic competences** — all that is necessary for effective participation in civic and social life, including the ability to resolve conflict, and to collaborate effectively with others in a variety of situations and contexts;
- **Sense of innovation and entrepreneurship** — the propensity to bring about change and to welcome, support and adapt to change brought about by external factors by taking responsibility for one's actions, developing strategic vision, setting and meeting objectives;
- **Cultural awareness and expression** — an appreciation of the importance of the creative expression of ideas, experiences and emotions through a range of media, including music, dance, literature and the plastic arts.

The “concept of key competences draws very much into question the traditional understanding of what should be taught in schools and how teaching should take place. Traditionally, schools or other educational establishments were educating people for jobs in companies with relatively stable jobs. Today, education needs to prepare people not only for possibly running their own firms, but for becoming innovative and ‘entrepreneurial’ also within the companies who employ them. Employers seek persons who are able to communicate within companies and with the outside world, if possible in two or three languages. They seek people who can confidently use a variety of computer applications, who are able to work independently and within teams, who can learn in a self-directed manner, who are innovative and have a broad cultural understanding.”

Based on the conclusions of the Regional Expert Meeting on Key Competences “competence develops through a holistic approach to teaching and learning which organises education as a total experience around the four pillars, namely learning to know, learning to do, learning to live and learning to be. The role of the teacher in this process is key, which is why increased efforts in the forthcoming years have to be laid on teacher training and whole-school development projects. It is also clear that life-relevant competences cannot be developed by initial education only. They “*change throughout the lifespan, with the possibility of acquiring or losing competences as one grows older*”; in addition, “*the demands on individuals can be expected to change throughout their adult lives as a result of transformations in technology and social and economic structures*”.

4 European Commission: Proposal for a Recommendation of the European Parliament and of the council on key competences for lifelong learning, COM(2005) 548 final, 11. November 2005.

5 Pirrie, A., Key competences for lifelong learning: A European Union reference framework, paper presented at the ETF workshop on 30 March 2006.

6 Viertel, E., *Developing key competences for lifelong learning*, European Training Foundation.

7 ETF, Second Regional Meeting: Key Competencies for lifelong learning, Krk, July, 2006.

8 D S Rychen, *ibid.*

2. PROJECT: KEY COMPETENCES FOR LIFELONG LEARNING IN SERBIA

“Key Competences for lifelong learning in VET in Serbia” is a research project aiming to present current situation and offer possible recommendations related to two key competences **Learning to learn** and **Entrepreneurship in VET in Serbia**. The objective in reshaping Serbia’s education system is to enable its present and future students to learn and build up their knowledge and skills with a view to finding their place in the rapidly and ever changing society and to implant in them the desire and competence for lifelong learning. Extensive educational reforms are implemented embracing all levels. However, not much attention has been paid so far to the development of key competences for lifelong learning. The concept has neither been considered in the process of developing the national core curricula nor is it sufficiently implemented in the existing school programmes.

This project has been realised with direct support and assistance of the Ministry of Education and Sports. This Ministry was involved in all phases of the project and provided all necessary support to the research team. The Centre for Vocational and Artistic Education of the Institute of Development of Education was also engaged in the project realisation.

2.1 DEFINITION OF TWO COMPETENCES: ‘LEARNING TO LEARN’ AND ‘ENTREPRENEURSHIP’

This project started from following definitions of competences ‘learning to learn’ and ‘entrepreneurship learning’:

The key competence ‘Learning to learn’ is the ability to pursue and persist in learning. Individuals should be able to organise their own learning, including through the effective management of time and information, both individually and in groups. This competence includes awareness of one’s learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. It means gaining, processing and assimilating new knowledge and skills as well as seeking and making use of guidance. ‘Learning to learn’ engages learners in building on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts – at home, at work, in education and in training. Motivation and confidence are crucial to an individual’s competence.

‘Entrepreneurship’ refers to an individual’s ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day to day life at home and in society, employees in being aware of the context of their work and being able to seize opportunities, and is a foundation for more specific skills and knowledge needed by entrepreneurs establishing social or commercial activity.

The ETF project on key competences for lifelong learning is a regional project, in which Albania, Croatia, the former Yugoslav Republic of Macedonia, Serbia and Montenegro are involved. The project aims are that:

9 Annex 1 –Table: ‘Learning to learn’ ‘Entrepreneurship’ (definition, knowledge, skills and attitudes)

Participants understand the concept of key competences and have adapted the EU framework to learners' needs and contexts in their own countries.

An internal debate has been launched on the inclusion of key competencies in future education and training reform projects in ETF partner countries.

This project has undertaken an analysis of the extent to which the environments for learning and pedagogical approaches are conducive to the development of key competences – with a specific focus on two selected key competences: 'Learning to learn' and 'Entrepreneurship' competences. The encouragement of students' creativity and innovation, as well as meta-learning skills and techniques are considered as very important to meet the above-mentioned educational goals. Serbian experts have been focused in their analysis and development work in particular on the area of secondary VET.

Following the analysis, the project is giving some recommendations as to how to improve environmental factors and pedagogical approaches and outline implications for the shaping of the teacher training, the curriculum framework especially. This way, **work on these two competences could be envisaged as a platform for the introduction of the concept of key competences for lifelong learning in the Serbian education system in general.**

2.2 PROJECT ACTIVITIES

The project aims were to assess to which extent the environment and pedagogical approaches are conducive to developing 'Learning to learn' and 'entrepreneurship' competences with students in secondary VET in Serbia and to identify what could be changed to improve the situation. In addition, through research-based advocacy, the project aims were introducing and promoting the 'Learning to Learn' and 'Entrepreneurship' competences in secondary VET in Serbia. Research into 'Learning to learn' and 'Entrepreneurship' competences and students' perceived needs have been conducted with students from secondary VET (final grades), reflecting different stages of the Serbian education system and a young person's development.

According to the agreement on the regional level (at a second meeting of experts – Krk, Croatia, July 2006) with partners from countries involved, research on the student's level in vocational education was conducted with students from the following fields of vocational education:

- Agriculture, Food Production and Food Processing
- Economics, Law and Administration
- Tourism and Catering
- Civic Engineering and Geodesies
- Machinery and metal processing

Research activities covered:

- a) Adaptation to the Serbian context of the following instruments :
 - i. 'Learning to learn' needs assessment inventories for students and teachers;
 - ii. 'Entrepreneurship' needs assessment inventories for students and teachers;
 - iii. 'Learning to learn' and 'Entrepreneurship' needs assessment inventories for school management.
- a) Development of a stratified, random, nationally-representative sample of Serbian students and teachers in secondary VET
- b) Development of data collection instruments
- c) Piloting of the instruments
- d) Collection of data
- e) Entry of the empirical data

2. PROJECT: KEY COMPETENCES FOR LIFELONG LEARNING IN SERBIA

- f) Statistical analysis
- g) Drafting of individual reports
- h) Qualitative analysis of institutional capacity (development of examine schedules, data entry, data analysis, report writing)
- i) Drafting of a comprehensive report based on the analysis of all empirical data, including data regarding institutional capacity building.

Advocacy activities covered:

- j) Composing a policy brief, containing unambiguous policy recommendations regarding 'Learning to learn' and 'Entrepreneurship' competences in secondary VET in Serbia.
- k) Development of a precise media plan based on the research results.
- l) Presentation of the results to high-level education policy officials (Ministerial level, Institute of Education, universities, school managers etc.)

Through an examination and promotion of the 'Learning to learn' and 'Entrepreneurship' competences in secondary VET schools, special attention of experts focused on the findings from the field of developmental psychology, that demonstrate different levels of cognitive functioning at different stages of a child's development. By combining these two competences, the present project aims to amplify the empowering elements intrinsic to the 'Learning to learn' competence.

2.3 RESEARCH APPROACH

The project incorporated direct research made in secondary VET schools in Serbia and assembled final year students, school teachers and school principles. Additionally, an analysis of curriculum, legislation, statistical data on VET development and strategic documents on future development of VET in Serbia was conducted within this project. During the visits to VET schools, number of discussion on an on-going VET reform were conducted, as well as on the first results and especially cooperation between VET schools and employers on local level. Information reached during this analysis was used as a foundation and addition for results gained in the research itself.

3. ASSESSMENT RESULTS

3.1 METHODOLOGY

The research was conducted on the sample of 16 VET schools that geographically almost “cover” the whole territory of Serbia (three schools are located in the north part of Serbia, three in the west part, one in the east part, nine in the central Serbia). The sample consisted of VET schools in small towns, bigger urban entities and cities. Both well-developed economic areas and underdeveloped communities were included.

The research was performed on the questionnaires for students, questionnaires for teachers and open questionnaire for schools’ principles and management. Questionnaires for students and questionnaires for teachers were based on the questionnaires developed by the Croatian Team, but were modelled and adjusted to VET in Serbia. During this process, special attention was paid to the questions that may reflect reform process effects in Serbia going on for the last 5 years. Furthermore, besides these adaptations, a Team also modified and merged questions for both competences in one questionnaire, so the research was run on combined joint questionnaires for both competences. This enabled testing students and teachers on both competences at the same time. All the questions in the questionnaire for teachers were closed, while the questionnaire for students had two open questions for the area of entrepreneurship.

The research included:

- Final year students in three year and four year educational profiles,
- Teachers teaching in final years, and in some schools almost complete teachers’ personnel.
- Statistical analysis of data was conducted supported by software SPSS.

3.2 DESCRIPTION OF THE SAMPLE

The research included a sample of 16 VET schools, providing education for final year students in **nine** chosen educational profiles.

At the beginning, it was planned for the sample to gather two classes of final years for each educational profile. However, during the first phase of the research, it became obvious that these classes had small number of students. Due to the significant difference between the number of enrolled in these classes at the beginning of education and their current number (dropout), it was decided to enlarge the sample on three classes for each defined profile. Final number of classes per profiles is a consequence of a lack of more classes for the educational profile bricklayer in Serbia and, on the other hand, not adequate organisation of schools principles included in the research, not providing the presence of the examinees during the researchers’ visit.

During the design of stratified sample of schools, besides the appropriate educational profile, it was taken care of the number of the field of activities presented in schools (one, two, three or four), the size of the school (the number of students), territorial dispersion (according to the VET schools network). Since VET reform in Serbia started by introducing experimental pilot curricula in 2002, part of the sample are students and teachers coming from schools which these experiment are held in.

The structure of the sample, defined by schools, number of students and teachers and examinees’ gender is presented in the tables 1.1 – 1.4.

FINAL REPORT OF THE PROJECT: KEY COMPETENCES FOR LIFELONG LEARNING
IN VET IN SERBIA

Table 1. Sample of teachers' structure (schools and gender)

SCHOOL		GENDER						TOTAL	
		mail		female		not defined			
Name	Town	No.	%	No.	%	No.	%	No.	%
First School of Economics	Belgrade	2	0.6	9	2.7	6	1.8	17	5.1
Economics-trade School "Knjaz Miloš"	Gornji Milanovac	1	0.3	15	4.5	1	0.3	17	5.1
Secondary School "Svetozar Miletić"	Novi Sad	6	1.8	34	10.2	7	2.1	47	14.1
Catering-tourism School	Belgrade	3	0.9	7	2.1	4	1.2	14	4.2
Catering-tourism School	Čajetina	3	0.9	13	3.9	/	/	16	4.8
School for Civic Engineering	Belgrade	5	1.5	2	0.6	9	2.7	16	4.8
Poly-technical School	Subotica	7	2.1	12	3.6	/	/	19	5.7
Schools for Shipbuilding and Hydro-building	Belgrade	1	0.3	11	3.3	1	0.3	13	3.9
Technical School "Jovan Vukanović"	Novi Sad	2	0.6	7	2.1	/	/	9	2.7
Secondary Machinery School	Novi Sad	15	4.5	8	2.4	/	/	23	6.9
Machinery-transportation School	Čačak	10	3.0	11	3.3	/	/	21	6.3
Machinery School "Radoje Dakić"	Rakovica	8	2.4	14	4.2	/	/	22	6.6
Polytechnica – School for New Technologies	New Belgrade	9	2.7	5	1.5	/	/	14	4.2
Agricultural – chemical School "Dr Đorđe Radić"	Kraljevo	7	2.1	15	4.5	5	1.5	27	8.1
Secondary Agricultural Food-Processing School	Sombor	11	3.3	11	3.3	1	0.3	23	6.9
Agricultural – chemical School	Obrenovac	11	3.3	24	7.2	/	/	35	10.5
TOTAL:		101	30.3	198	59.5	34	10.2	333	100.0

3. ASSESSMENT RESULTS

Table 1.2 Sample of students' structure (gender and duration of education)

Educational Profile		GENDER						total	
		male		female		not defined			
duration	name	No.	%	No.	%	No.	%	No.	%
three years	Chef	148	32.8	29	6.4	10	2.2	187	41.5
	Bricklayer								
	Mechanical engineering operator								
	Baker								
Four years	Economics technician	108	23.9	155	34.4	1	0.2	264	58.5
	Tourist technician								
	Civic engineering technician for hydro-building								
	Technician for robotics								
	Agricultural technician								
TOTAL STUDENTS:		256	56.8	184	40.8	11	2.4	451	100.0

Table 1.3 Sample of students' structure (type of profile – experimental and classic programs)

Educational Profile		Total	
		No	%
experiment	Agricultural technician	115	25.5
	Mechanical engineering operator		
	Baker		
"classic"	Economics technician	336	74.5
	Tourist technician		
	Civic engineering technician for hydro-building		
	Technician for robotics		
	Bricklayer		
	Cook		
TOTAL STUDENTS:		451	100.0

Table 1.4 Sample of students' structure (schools and educational profiles)

School			Educational Profile													Total						
			Economics technician		Tourist technician		Cook		Civic engineering technician for hydro-building		Bricklayer		Mechanical engineering operator		Technician for robotics				Agricultural technician		Baker	
Name	Town		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
First School of Economics	Belgrade		27	6.0															27	6.0		
Economics-trade School "Knjaz Miloš"	Gornji Milanovac		26	5.8															26	5.8		
Secondary School "Svetozar Miletić"	Novi Sad		35	7.8	16	3.5	18	4.0											69	15.3		
Catering-tourism School	Belgrade				18	4.0	31	6.9											49	10.9		
Catering-tourism School	Čajetina						21	4.7											21	4.7		
Technician School "Jovan Vukanović"	Novi Sad							15	3.3										15	3.3		
Schools for Shipbuilding and Hydro-building	Belgrade							22	4.9										22	4.9		
Poly-technical School	Subotica							19	4.2	17	3.8								36	8.0		
School for Civic Engineering	Belgrade									24	5.3								24	5.3		
Secondary Machinery School	Novi Sad											12	2.7						12	2.7		
Machinery-transportation School	Čačak											8	1.8						8	1.8		
Machinery School "Radoje Dakić"	Rakovica											16	3.5	20	4.4				36	8.0		
Polytechnica – School for New Technologies	New Belgrade													25	5.5				25	5.5		
Agricultural-chemical School "Dr Đorđe Radić"	Kraljevo															15	3.3	16	3.5	31	6.9	
Secondary Agricultural Food-Processing School	Sombor															11	2.4	11	2.4	22	4.9	
Agricultural-chemical School	Obrenovac															14	3.1	14	3.1	28	6.2	
Total:			88	19.5	34	7.5	70	15.5	56	12.4	41	9.1	36	8.0	45	10.0	40	8.9	41	9.1	451	100.0

3.3 RESEARCH INSTRUMENTS

The students' questionnaire covered the following themes:

1. How do students see themselves
2. The importance of learning in Serbia
3. What do students think about learning
4. What does learning mean to students
5. Characteristics of successful learning / student
6. Motives for learning
7. Strategies of students
8. Cooperation with other students
9. Private classes
10. Students' perspective on teaching process
11. Entrepreneurship

Teachers' questionnaire covered the following themes:

1. How do teachers see themselves
2. Meaning of learning for teachers
3. Characteristics of successful learning / student
4. Why do students learn
5. Happenings in school
6. How do teaching activities suit students
7. Problems in the teachers' work
8. Teachers job
9. Private classes
10. Final year students' learning skills
11. Appliance of learning skills on the school level and on the level of individual teacher
12. Teachers' view on final year students characteristics
13. School principles' support for teachers
14. Increasing teachers' ability for innovations
15. Introduction of new contents and working methodologies
16. Importance and usage of methods and activities that promotes entrepreneurship

3.4 PROCEDURE

The involvement of the Ministry of Education and Sports in the realisation of the project from the very beginning made the process of choosing, arranging and realisation of the research much easier and faster. On the suggestion of the research team, the Ministry accepted chosen schools, conducted introduction conversation and informed schools' principles. Regional Departments of the Ministry of Education and Sports were also involved in this process and they provided assistance in the direct organisation of the research. All selected schools accepted the invitation to participate in the research and enabled its realisation. Selection of schools and direct organisation of the research were performed in September. Part of the research has been conducted in October, while the rest was finished by the end of November.

The research system was as follows. Two members of the research team went to each school – each one was in charge for one group of examiners (teachers or students). These groups were separated, and the teachers filled the questionnaires in one room, while the students were in the other room. In most of the schools almost complete teachers teaching in final years filled the questionnaires, while the students of one class of related profile filled the questionnaires. The fundamental characteristic of the procedure was the fact that all the teachers filled the same modified questionnaire congregating both competences. Additionally, all examined students filled the same modified questionnaire congregating

FINAL REPORT OF THE PROJECT: KEY COMPETENCES FOR LIFELONG LEARNING IN VET IN SERBIA

both competences. This means that the complete sample responded to questions related to both competences. The questionnaires were not sent ahead but were given to the participants at the very examination. Examination lasted for 40 – 45 minutes for teachers and for 45 – 50 minutes for students.

During the visits to schools, schools' principles were examined as well. In some schools principles filled the questionnaire for teachers as well.

4. OVERALL POLICY ASSESSMENT

Results gained from this research showed the attitude of both students and teachers on two competences 'Learning to learn' and 'Entrepreneurship'. Having in mind its multi-level component and complexity of the research itself and provided results, this report will be in the manner the research was structured, i.e. we will give students' and teachers' results regarding both competences separately.

4.1 FINAL YEAR STUDENTS (THREE-YEAR AND FOUR-YEAR PROGRAMMES)

Views on learning and the development of the Learning to learn competence

How do students see themselves

The results show that students generally prefer activities that have strictly defined rules (3.1 on the 4-point scale). At the same time, they see themselves as persons who like to design new activities and participate in several different activities (3.3). They prefer to make decision themselves (3.4).

They think they should look for several different solutions for each problem (3.7), but eventually each problem has final one solution (2.3). They see themselves as very independent individuals, aware that if they do not do something the first time, next time will be more successful (3.4). They learn from their own mistakes (3.6).

The importance of learning in Serbia

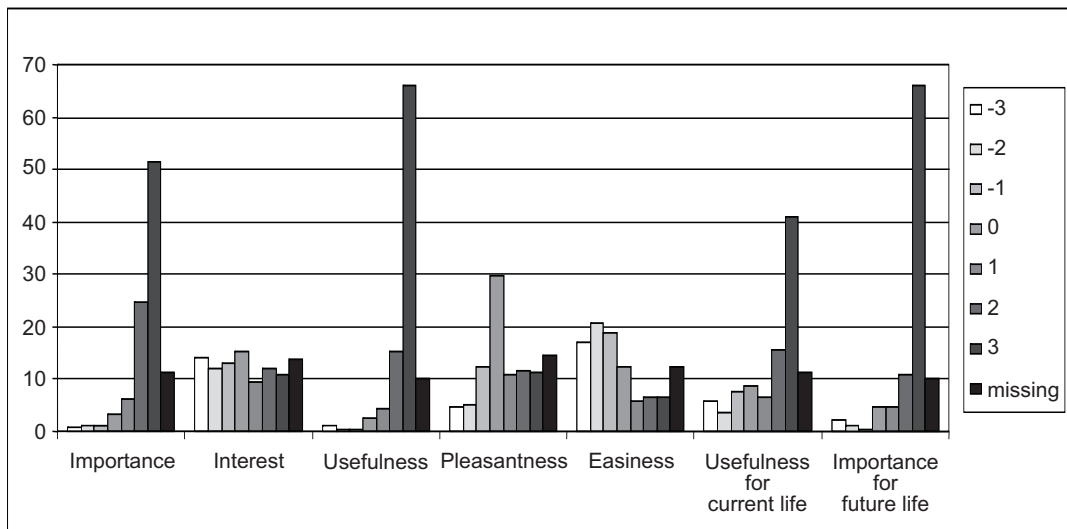
Final grade three-year and four-year students think that the majority of successful individuals in Serbia did not have to be successful students (2.2 on the four point scale). In order to become wealthy in Serbia, one did not have to be the most successful in learning (1.8) and for his / her professional success some other factors are important, not the ability to learn. (3.2).

This picture may be explained by the evident crisis on the society exhausted with the long-term economic and social crisis, wars and isolation. It is obvious that students see only those who are materially rich as successful people. Looking at the Serbian media, especially the electronic ones, these answers could have been expected.

What do students think about learning

Most of students find learning important and useful for current, but also for future life. Learning is mainly difficult, not boring nor interesting, not pleasant nor unpleasant. Students expressed their impression on learning on the 7-point scale, from -3 (for extremely negative experience) to +3 (for extremely positive experience) – Graph 1.

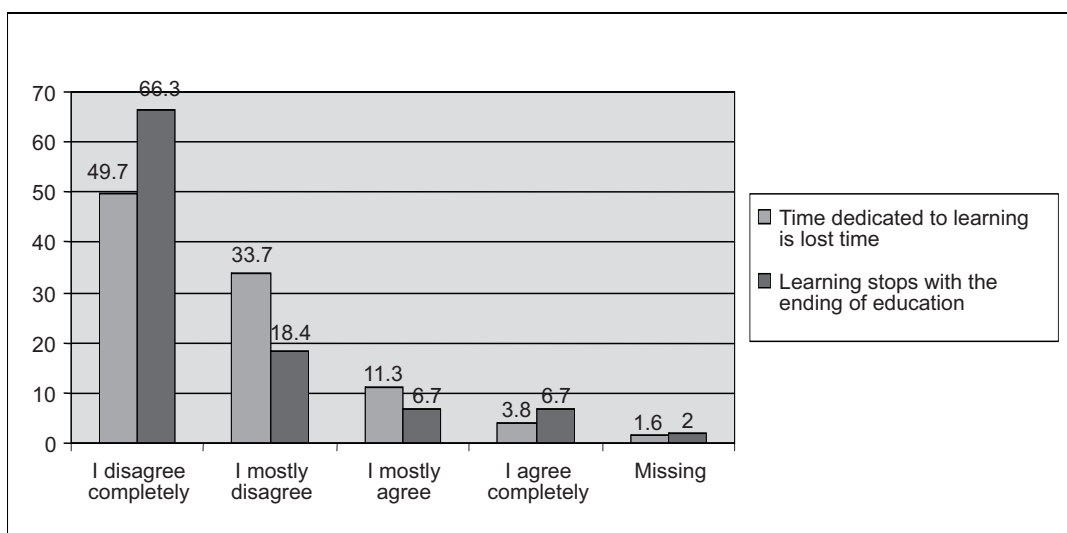
Graph 1. How do students feel about learning



What does learning mean to students

According to students, learning increases the number of information (3.2 on the 4-point scale) and things learnt are used for better coping in everyday life (3.4), but also for better understanding of the surrounding world (3.1). Students do not learn for school only, but for the activities outside (65.9%), and learning will enable them to find job they are studying for (3.4), but also to find a better job (3.2). They don't find time dedicated to learning lost and are aware that learning doesn't stop at the moment they finish their formal education (graph 2).

Graph 2. Graphic interpretation of the answers on questions related to lost time and finishing of education



Characteristics of successful learning / pupil

Successful student need to know how to have control over his / her time (3.4 on the four point scale), as well as to ask right questions and not just give correct answers (3.1). The level of success in learning is conditioned by the longer period of time of learning (2.6) and good marks in school can be gained also by those who do not know how to learn (2.7); but effort exclusively is not a guarantee for success in learning (2.7).

Students find themselves most responsible for their own success in school (3.6), and evaluate teachers as less responsible (2.7). Parents' impact on their success in school is significant (2.6).

Motives for learning

As the strongest motive for learning, students state the wish to become experts in the work they study for (3.3) and to find well-paid job in their profession (3.3) appreciated in the society (3.3), or to enrol the faculty of their desire or the post-secondary school (3.1). Most of the students find learning personally important (2.7), because they want to understand the curriculum (2.8). On the other hand they learn what they have to (2.4) and what the others expect them to do (2.2), but not having parents nagging (2.1).

The weakest motives for learning are desire that others find them good students (1.5), enjoy in learning (1.7) or fun (1.8).

Learning strategy

Learning techniques

Student pass through the same subject content several times until they learn it (76.1% do it often or always). Usually, they learn by separating most important parts (75.8%), repeat loudly (63.9%) and underline the text (61.7%). Students rarely (or never) use variety of sources – books, magazines, TV, Internet (59.9%); mainly they make tables, graphs or schemes (86%), or make notes based on textbooks or notebooks (54.5%).

When they learn, they prefer tasks they can solve immediately (72.9%), similar to those they had already done (60.1%) and those they need no effort investing for solving (67.8%)

On their practical classes, students use already gained knowledge from theoretical classes (75.3%). In learning practical skills, most of them need someone to present them practical class firstly (68.8%). Seldom only having written manual for practical class is sufficient for them (55.2%). They gain practical skills by repeating them for several times (77.2% do it often or always).

They try to learn when they can concentrate the best (80.2% do it often or always) or they try to isolate – switch off the TV, telephone (56.3%)

Motivation methods

The most frequent motive for students is that, after completion of education, they will be able to do something they really like (77.2% do this often or always).

Motivation for learning can also be gained by trying to learn interesting elements firstly (83.8%). They reminded themselves that it was also important to have good marks (75.3%), because those were prerequisite for enrolment on the faculty /post-secondary school (69%). 61.9% do not want to disappoint their parents.

61.2% are never or seldom motivated by others learning.

Cooperation with other students

During learning students work in teams with other students on solving of certain task or in certain tasks in practical lessons (75.4%). They know when it is more appropriate to work independently, and when with others (89.1). Not significant majority (51.4%) rather participate in the activities suggested by others, then suggesting and initiating themselves.

Private classes

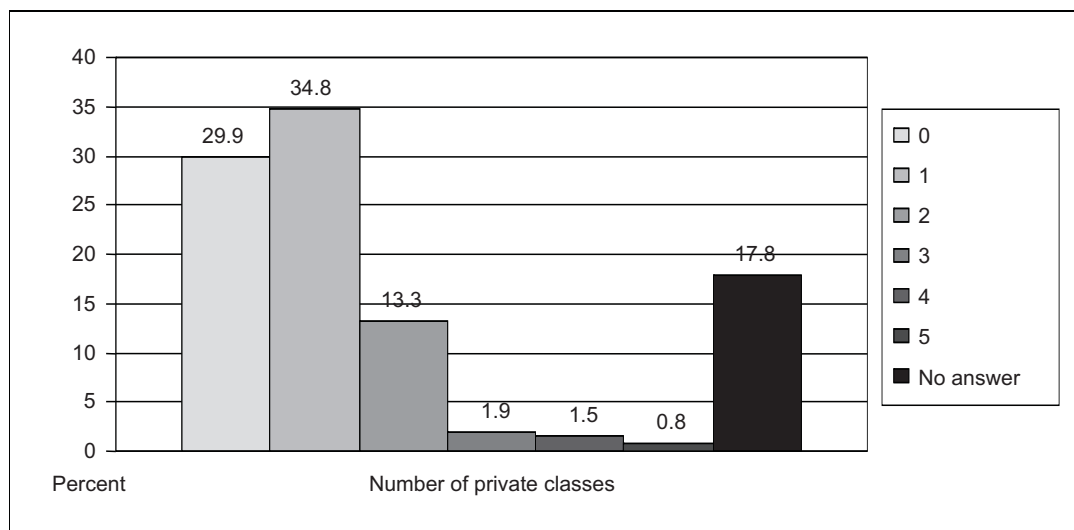
Private classes are getting more frequent. In order to at least partly clarify the importance of this kind of learning, a specific set of questions was included in this research.

Total sample

Answers on the group of questions related to private classes are very indicative. 68 students (15.1%) take private classes on regular basis, and 74 of them (16.4%) just before the examination. The same number of examinees (144 of them, i.e. 31.9%) take private classes in the area of special interests and in order to prepare themselves for further education, supposing it is the same group of students. For 158 students (35%) private classes enable them to understand school curriculum. Private teacher directs 120 students (26.6%) to learn independently.

The dispersion of the total number of students by the number of subjects they take private classes from can be seen in the Graph 3.

Graph 3. The dispersion of the total number of students by the number of subjects they take private classes from



One may see the discrepancy in the number of the examinees – 177 students (39.3%) in total take private classes from one up to five subjects.

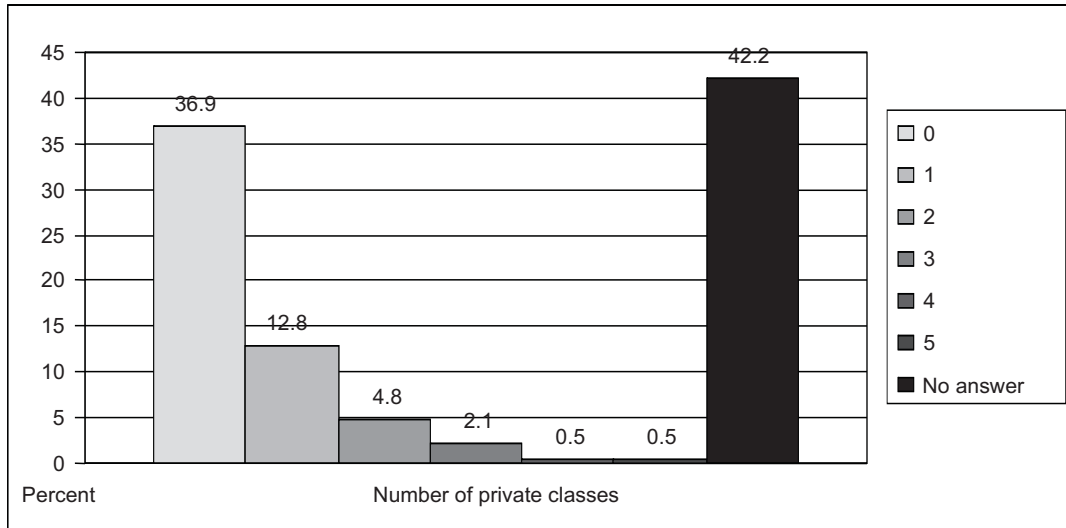
Students of the final third grade

14 students (7.5%) take private classes on regular basis, and 11 of them (5.9%) just before the examination. Almost the same number of examinees (46 of them, i.e. 24.6%) take private classes in the area of special interests, and 47 (25.1%) in order to prepare themselves for further education, supposing it is the same group of students. For 47 students (25.1%) private classes enable them to understand school curriculum. Private teachers direct 51 students (27.3%) to learn independently.

4. OVERALL POLICY ASSESSMENT

The dispersion of the total number of the final third grade students by the number of subjects they take private classes from can be seen in the Graph 4.

Graph 4. The dispersion of the total number of the final third grade students by the number of subjects they take private classes from



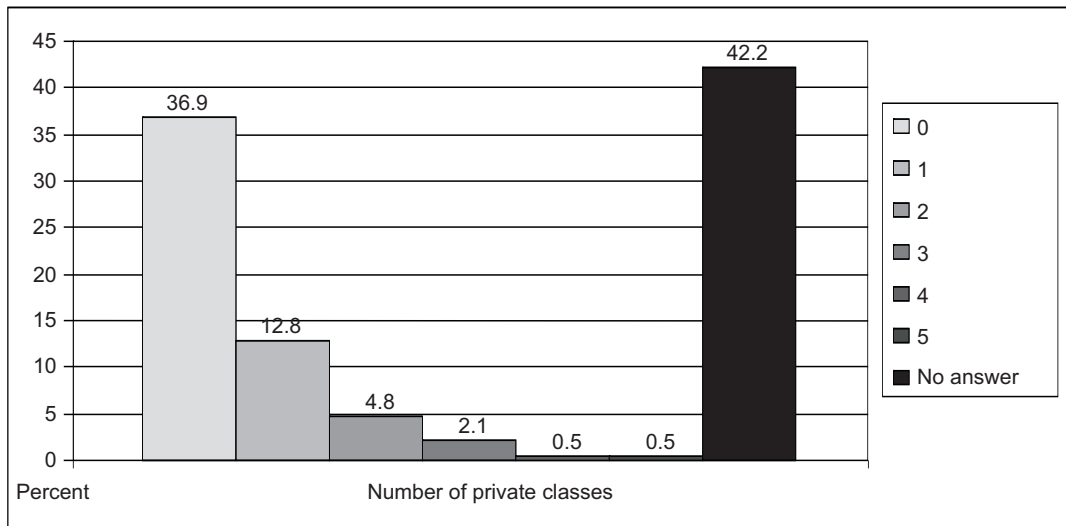
One may see the discrepancy in the number of the examinees –39 students (20,7%) in total takes private classes from one to five subjects.

Students of the final fourth grade

54 students (20.5%) take private classes on regular basis, and 63 (23.9%) just before the examination. Almost the same number of examinees – 98 (37.1%) take private classes in the field of their individual special interest, and 97 (36.7%) in order to prepare themselves for future education, supposing it is the same group of students. Private classes enable 111 students (42.0%) to understand school curriculum. Private teachers direct 69 students (26.1%) to learn independently.

The dispersion of the number of students of the fourth final grade by the number of subjects they take private classes from can be seen in the Graph 5.

Graph 5. The dispersion of the number of students of the fourth final grade by the number of subjects they take private classes from



One may see the discrepancy in the number of examinees – 138 students in total (52,3%) take private classes in one to five subjects.

The number of students taking private classes is expectably higher in the group of final fourth grade students (78%). This may be explained by the significant demand of the four-year programmes on the one side, and by the larger number of students in the VET system that apply for the admission exams on the faculties (four-year educational profiles) and post-secondary schools (four-year and three-year educational profiles). It would be interested to conduct a research of qualification structure of the enrolled students on the first year at faculties and post-secondary schools (the number of enrolled students who graduated from the gymnasias and VET schools, by the number and grades), at least on state universities.

On the other hand, the structure of students enrolled in the three-year educational profiles is pretty bad, so the number of these students taking private classes can be even considered optimal, if we are talking about those who need to fill in the gaps brought way back from the primary schools.

Students' views on the teaching process

Teaching

Generally speaking, teaching in our VET schools is frontal – 67.6% of teachers often or always stand in front of the class and talks for the whole time, while students have to listen. Teachers clearly say what students need to write down on the class (78.3%), preciously stress what needs to be memorised (69.4%) and also strictly define what students have to learn (64.7%). Never or rarely they suggest students to look for more information on the lesson thought in other sources – magazines, Internet, TV, etc (54.7%). Most of the teachers (50.4%) rarely leave time for their students to ask questions.

The position of furniture (desks and chairs) in the classroom is in 70.1% cases classic, which implies that the teachers seldom use active teaching methods. The fact that most of the teachers never (53.7%) or rarely (16.4) use teaching equipment – LSD projector, over-head projector, computer, VCR, etc, is rather discouraging.

The number of teachers that often suggest new methods for learning specific subject content (35.0%) is insignificantly larger than the number of those who do it seldom (32.2%). It is almost the same relation between the support to students to self-estimate themselves and evaluate how they solved certain task (35.9% of them do it rarely, and the same percentage do it often).

Teachers' encouragement to think of something new or do something in different manner also stands on the side of those who do it rarely or never (49.4), while 48.6% do it often or always.

From the students' point of view, teachers may equally be dispersed on those who rarely give possibilities for asking questions after classes and those who do it often. This rather severe, but balanced division of teachers points certain crisis of the teachers themselves.

Frequent statement that our teachers work more with bad students does not appear in this research. Namely, students think that teachers more often work with good students (67.6%).

Grading

Students are aware they need to learn for certain mark (3.2 on the four point scale), which can be also explained by the fact that during classes students take tests which congregate only the material covered in the class (3.0). At the same time, tests most frequently demand for students to apply knowledge in actual situations (2.7).

As far as the evaluation of homework and other students' work is concerned, the believes are divided (2.6).

It is interesting that students think they can learn useful things more from oral examination (3.0), while the results are split in regards to the possibilities of learning from written examination (2.5). The explanation might be in the fact that the tests are less used, and teachers more often use essays as an instrument for written examination.

Students have divided opinions on whether the teachers explain why they graded them on certain way (2.5), whether the grading is fair (2.4), whether the teachers encourage them to evaluate their work by themselves (2.6) or to evaluate the work of other students (2.3). Most of them believe that the interpreted understanding of subject content causes high grades (3.25). In most of the cases the way of getting to the solution is graded (2.6). On the other hand, students get support from teachers for improvement in learning (2.95).

Views on learning and the development of the 'Entrepreneurship' competence

Future job

Future job of the examinees has to be well-paid (3.5 on the four point scale), offer a lot of new opportunities (3.4), constant learning possibilities (3.2). The examinees want to start this kind of job by themselves, but at the same time they want a low-risk job (3.1).

Expressed fear of risk, wish for a job which secures safety and have set, clear roles, without a necessity of making a lot of decisions, can be interpreted by natural fear of consequences of current situation in Serbian transitional economy, where a lot of people are unemployed or inadequately paid for their work.

On the other hand, it is less important to students if jobs are near their homes (2.8).

Experiences with Entrepreneurship

Regardless of the fact that this research included final years' students in VET schools, who, by the nature of their education, had to have practical classes in enterprises, most of them never or seldom visited successful companies (62.7%), talked with entrepreneurs (68.5%), read business magazines (63.2%) or worked on the development of their own ideas (62.3%).

They were asked if they knew how the company functioned; whom they should talk to if they had business ideas.

Comparing the answers of students from experimental classes with those attending classic programmes, one may see the first effects of the introduction of 'Entrepreneurship' in curriculum. Namely, students from experimental classes are way ahead in comparison to their peers from classic programmes in knowing what to do to develop a successful company, but also whom to talk to if they have a business idea. They work a lot on development of individual ideas and on the research of possibilities of finding job in their basic profession. This is, more or less, expected, having in mind that curriculum defines the outcomes of learning within the subject 'Entrepreneurship' – content, recommended techniques and methodology.

Obviously, it is necessary to improve this curriculum, continue with teachers' training and implementation of all this segments in all curricula.

Basic economic terms

Most students are acquainted with the basic economic terms, on both macro and micro level – resources, taxes, productivity, effectiveness, enterprise, etc. However, they are not sure in how the process of establishing a company goes – idea and business plan are the most rarely represented answers, foundation capital more often, while the facilities, equipment and raw materials are supposed.

It can't be said with full certainty whether they are even familiar (at least basically) with administrative procedures for company foundation.

Regarding the relation between the costs and price of good they would produce in "their" enterprise, the answers might mostly be defined as satisfactory from the aspect of theory. When these answers are matched with the picture of future job, these students could be defined primarily as employees (set and well-known rolls and working conditions, without significant insisting on decision making and without unnecessary risks).

They express entrepreneurship as a characteristic they have, at least most of them, but this research does not provide the evidence whether and to which extent these students have developed wish and competences for entrepreneurship.

4.2 TEACHERS

Views on learning and the development of the Learning to learn competence

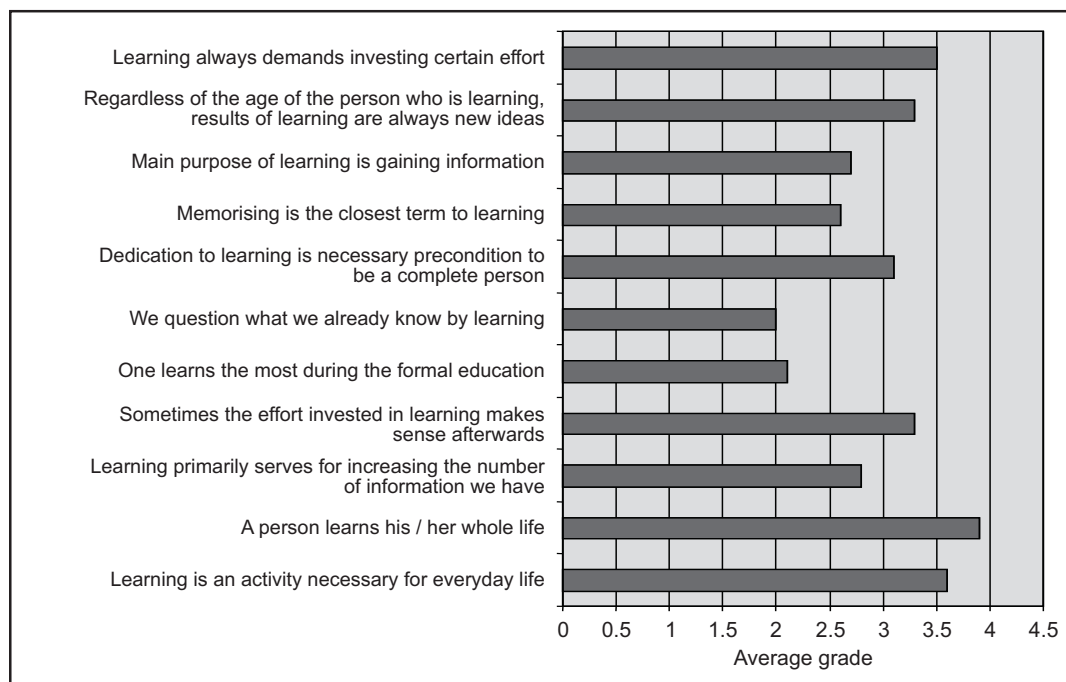
How do teachers see themselves

Research results show that teachers, most of all, like to think of new ideas and activities (3.4 on the four point scale), then to participate in several different activities (3.3), but they also like to do usual things using new, different ways (3.3). Basically, teachers like innovations in the work and like new challenges. Secondly, most of the examinees (3.7) believe that not just one, but several solutions need to be looked for in solving problems. However, contradictory to this is a large number of teachers (3.2) who, most of all, like activities with clearly set rules. This last attitude could mean that even when they are innovative and think of new ideas, teachers believe that these activities have to have clearly defined rules.

Meaning of learning

When it comes to learning and its meaning, for most of the teachers this is a lifelong process (3.9 on the four point scale), and more than half of teachers disagree with the statement that informal education offers the most for learning (2.1). Additionally, most of teachers believe that learning is a necessary activity in life (3.6), demanding investment of certain effort (3.5), and that the dedication to learning is a necessary prerequisite for a person to be completed (3.1). However, more than half of examined teachers agree (2.8, i.e. 66.0%) that the main purpose of learning is gaining information. At the same track is their agreement (2.7) on the fact that learning primarily serves for the increase of number of information we possess.

4. OVERALL POLICY ASSESSMENT



Learning in Serbia

Teachers' standing points regarding the status and valuation of learning in Serbia are very balanced and 91.5% of teachers think that learning is undervalued in Serbia. Most of the teachers (91%) think that a successful person in Serbia need not to be successful in learning and that learning is not that important for professional success (84.7%). Teachers think (84.9%) that in current social context students don't have enough awareness and believes that would prove learning worthwhile. However, most of teachers think that the role of education in Serbia in the future will be developed (75.4%), but they are clear in the position that the status of teachers represents the importance of education in the country (71.4%).

Successful learning and successful students

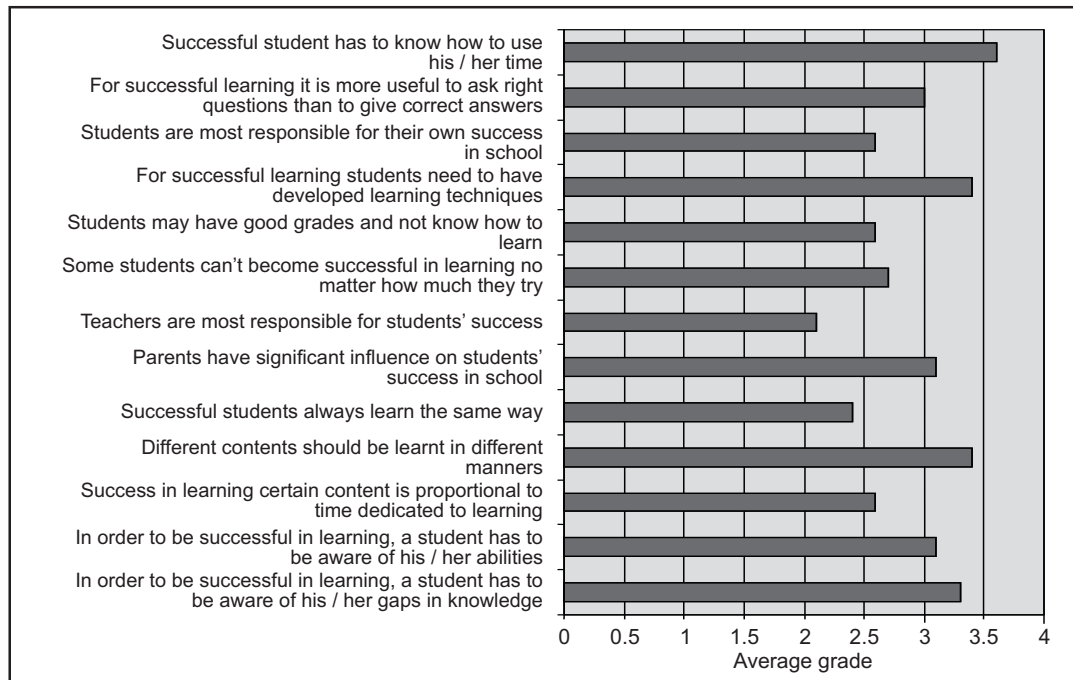
Most of the teachers have joint view regarding successful students. Basically, in order to be successful a student should:

- Know how to use his / her time (3.6)
- Have developed learning techniques (3.4)
- Learn different contents in different manners (3.4)
- Be aware of his / her disadvantages (3.3)
- Be aware of his / her abilities (3.1).

This attitude certainly imposes the question on how and who should help students develop these abilities and skills.

A significant question for teachers is also the level of their responsibility for successful learning and successful students, because 2/3 of examined teachers (72.7%) (2.1) don't agree that they are the most responsible for the success of students. This standing correlates with standing of 60.7% of teachers (2.6) that students themselves are the most responsible for their success in school. This means that 2/3 of teachers don't see themselves as the most responsible for students' success. If this joins with their view on all the important factors students need to be successful, a question is asked – how can a student develop his / her maximum self-responsibility and responsibility towards successful learning. For most of the teachers (3.1), parents have significant impact of students' success.

FINAL REPORT OF THE PROJECT: KEY COMPETENCES FOR LIFELONG LEARNING IN VET IN SERBIA



Why do students learn?

Most of teachers believe that students learn for their grades (3.7), and the other reasons are:

- Because others expect them to (3.5),
- To enrol to desired faculties (3.4),
- Because they want to learn practical skills in profession they are getting educated for (3.3),
- Because they want to find well-paid job they are getting educated for (3.2),
- Because their parents will award them if they achieve good results in school (3.2).

One third of teachers (3.2) believe that their students learn because learning is important to them personally, while the rest of teachers think that this does not relate to their students. Students' curiosity is not seen as a reason for learning by 60.3% of teachers (2.7). To summarize, according to teachers, their students learn only for grades, enrolment at the desired faculties and because others expect them to. Their students do not learn in order to become experts in their jobs (51.9% of teachers), or to work a socially appreciated and respected job (60.9%), nor because learning is fun (82.2 %).

Happenings in school

According to teachers' attitudes, more than half of examined teachers (2.9) feel that students often treat them with respect, often respect their opinions (2.85), and when it comes to discipline, half of the teachers (2.4) think that students seldom make their work hard. However, according to the standings of more than half of teachers' sample (2.3), students rarely ask teachers for assistance in learning, rarely ask for advice from teachers on the possibility to improve their learning (2.2), and rarely ask for advice on how to learn certain parts of subject content (2.1). These attitudes impose the conclusion that students respect teachers, their opinions, do not trouble their work, but also don't have developed habit or skill to communicate with teachers about their problems in learning, nor ask for assistance and advice from teachers.

The extent extra-curricular activities suit students

According to the majority of teachers (3.5), students prefer when teachers precisely tell them what to learn, which shows a relationship with teachers' previously stated attitude that most of students learn for grades. Correlated with this is also teachers' attitude (3.25) that students prefer examinations that include topics from areas exclusively covered in classes, although half of teachers (2.6) at the same time think that students are fond of examinations where they can show they understand what they learnt. Further more, most of teachers think (3.5) that when learning practical skills students prefer to be instructed at first, and that students like teachers to clearly present what they need to write down on class (3.3). 66.9% of teachers disagree with the statement that students like to be suggested to look for more on the topic covered in the class than offered during the class, additional to what they had to write down in order to participate in the examination. Slightly more than half of teachers think that students prefer teachers to examine them on areas they can learn by heart (2.3). During the realisation of tasks in practical classes, most of teachers (2.7) think that students like to be given written procedures. But, large number of teachers (3.0) believe that students like to be encouraged to complete some tasks jointly.

To summarize, according to teachers, students like to be told what to write on class, learn by heart, learn and prepare for examination only information covered in class, they like written procedures, but also to be encouraged to jointly perform some tasks.

Solving problems in teachers' work

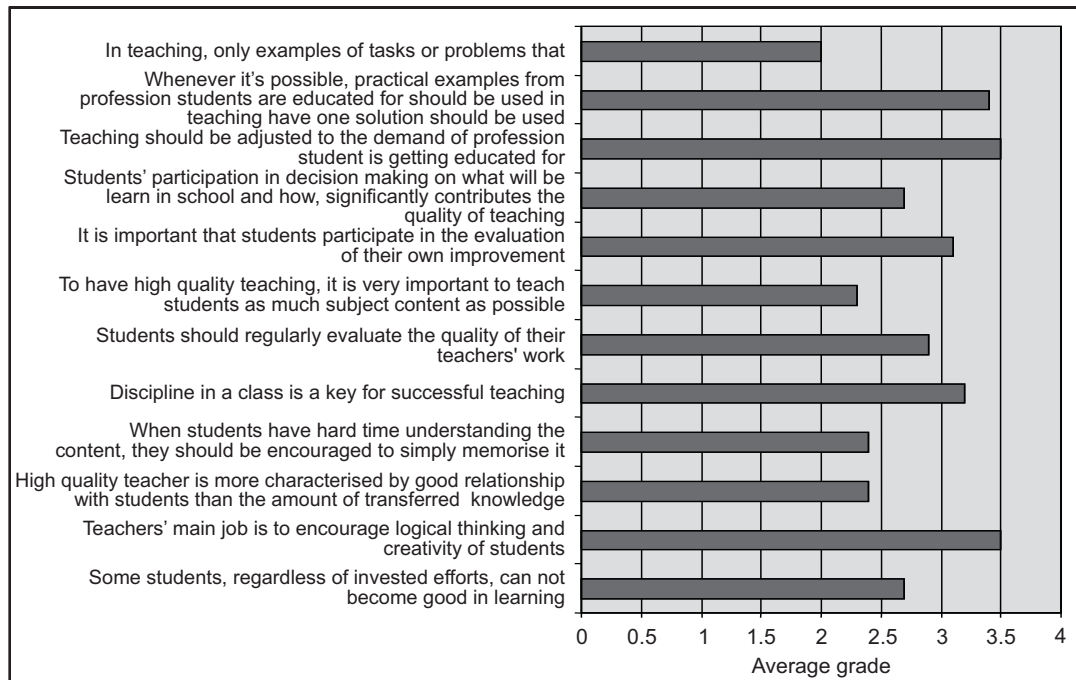
The answers in this group of questions are mainly on two levels of a five point scale – *moderately* and *plenty*. However, none of the answers have dominant or common majority. Most of teachers' answers are app. around half of the examinees. Areas where teachers can influence a lot and help in solving the problems are: increase of students' self-confidence (3.7), strengthening students' critical thinking (3.6%), and supporting students' creativity (3.6). Similar percentage of teachers (3.5) think they could significantly influence on students' development of responsibility for their own behaviour. However, when it comes to development of students' initiative, most of teachers (3.3) think they could influence that moderately. When it comes to students who have learning problems and students who need assistance to be more successful, most of teachers believe that can contribute moderately. 43.2% of teachers think that are able to moderately motivate students who are not very interested in learning, and 53.5% of teachers (3.1) think that can moderately influence students who have problems in learning to increase their success. Correlating with this is the standing of less than half of teachers (3.3) who states that can moderately support students who do not at home have support to learn, similar is the teachers' attitude that they can moderately influence on students to be determine on the task they find difficult (3.2). However, 39% of teachers can reach the most difficult students (3.3).

Common point may be that teachers can moderately assist students who have learning difficulties and need assistance, moderately can make students who are not very interested in learning more interested. Teachers' most significant influence is on the development of students' self-confidence related to learning, and least on the influence on students to learn regularly (49.8% can do it moderately) (3.0).

Teachers' work

Teachers' main job, according to the majority of teachers (97.3%) (3.5) is to inspire logical thinking and creativity of students. Further more, majority of teachers think that teaching should be adjusted to the demands of profession (3.5) and use good practice examples from the area student is getting educated for (3.4). Most of teachers agree completely or mostly (3.2) with the standing that discipline is a key of successful teaching and that it is important that students participate in evaluation of their own improvement (3.1). Teachers

also agree that students should evaluate the quality of teachers' work on regular basis (2.9) However, when it comes to participation of students in decision making on what will be learnt in school and how, slightly more than half agree it would contribute to the quality of teaching (2.7). For 40.7% of teachers a good relationship with students is crucial for the quality of teachers' work. In this group of questions teachers again follow their earlier standing and majority do not agree that examples of tasks and problems that have only one solution should be used in teaching (2.0).



Private classes

Based on teachers' answers, 89.5% of them do not give private classes regularly, and 26.7% of them give them occasionally. However, 66.7% of teachers think that private classes enable students to understand subject content, and 72.7% of teachers think their function is to help students in their future education. At the same time, 63.1% of teachers think that private classes do not direct students to learn independently, and 78.7% think that private classes are not necessary for coping with subject content, but are pure fashion.

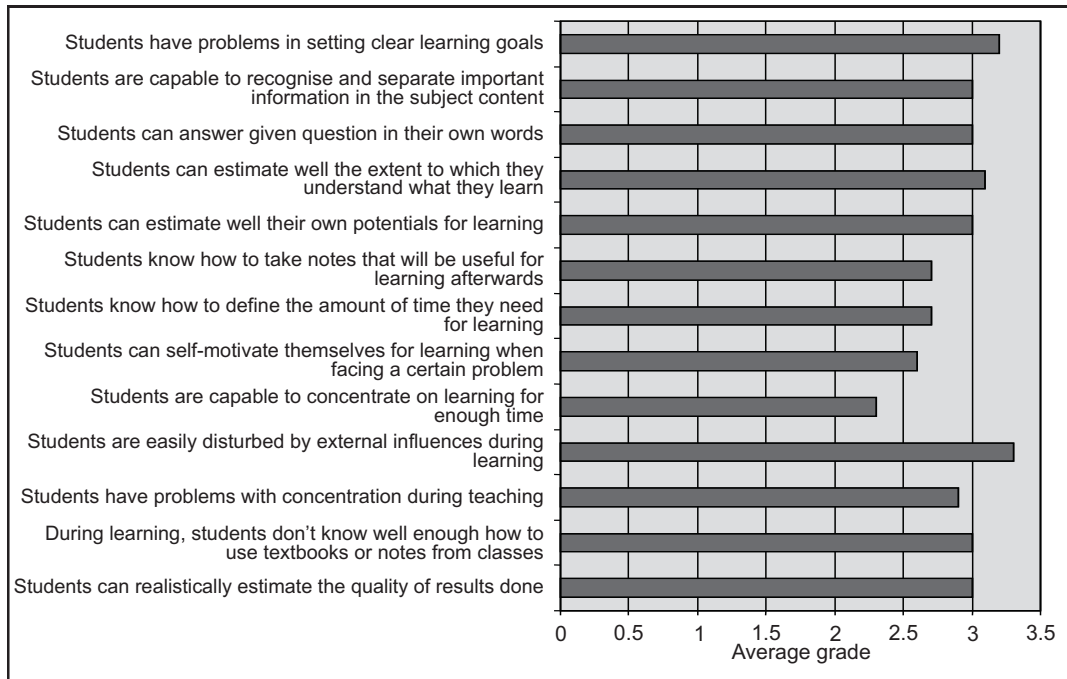
Final year students' learning skills

When discussing students' learning skills recognised by teachers, the results show highly separate teachers' attitudes. The highest level of agreement among teachers is gained on the standing that most of students are easily disturbed by external influences during learning (3.3). 44.7% of teachers (3.2) agree that majority of students have problems in setting clear learning goals. 1/3 of teachers (3.1) think that app. half of students can properly estimate to which extent they understand what they learn. 37.2% (3.0) think that app. half of students are capable to recognise and distinguish important information in subject content. Some teachers (3.0) think that app. half of students can answer given question in his / her own words. Teachers' answers related to the level students can estimate their own potentials for learning (3.0) are very interesting. 30% of teachers think it's a small number of students, 30.9% think that half of students can self-estimate themselves, while 30.9% think that most of students are able to estimate their own potentials for learning. It is obvious that such a dispersed answers demand additional research and investigation. Teachers' answers on the extent students know how to use textbooks and notes and evaluate the quality of what they accomplish were rather

4. OVERALL POLICY ASSESSMENT

balanced. 35.4% of teachers (3.0) think that app. half of students do not know how to use textbooks and notes well enough. This demands additional research. 1/3 of teachers (3.0) think that app. half of students can estimate the quality of performance realistically. However, slightly less than half or app. half of teachers think that the small number of students:

- Know how to take notes that will be useful for learning later (2.7)
- Know how to determine how much time is necessary for learning (2.7)
- Can motivate themselves to learn when facing certain problems (2.6)
- Are capable to concentrate on learning long enough (2.3).



Activities in teaching that might encourage development of learning skills (on the school level and levels used by teacher individually)

This set of questions was answered by teachers from the aspect of the level of frequency of these activities on the school level and on the level of importance of these activities for each individual examinee.

Activities on school level

Slightly less than half of teachers (3.2) see praising students for achieved success usual practice in their related schools. This is at the same time an activity chosen by the majority of teachers to be realised on the school level. 46.5% of teachers (3.1) think that students are often graded fairly on the school level. 37.8% of teachers think that fair grading is a constant in their school. Grades are always in detailed explained to students on the school level (2.9).

Approximately half of examinees think that following activities **often** happen on school level:

- Using examples from everyday life during learning new subject content (3.0),
- Connecting ideas with terminology students are already familiar with (3.0),
- Connecting new subject content with students experiences from professional practice (3.0),

FINAL REPORT OF THE PROJECT: KEY COMPETENCES FOR LIFELONG LEARNING IN VET IN SERBIA

- Clearly pointing on things expected from students in certain subject (3.0),
- Giving feedback information to students on their improvement in comparison to previous examination (2.9),
- Stressing the existence of several different ways to solve certain problem (2.8),
- Connection of new subject content with the other subjects' content (2.8),
- Cooperation with other teachers on setting teaching goals for specific educational profile (2.8)
- Encouragement of students to self-evaluate their work (2.6)
- Giving comments on the tasks' solutions in order to explain students why certain answer is correct and other incorrect (2.5)
- Discussion with students on the improvement of their learning skills (2.5)
- Cooperation with students on setting teaching goals for specific subject (2.4)

However, what happens **seldom** at school level, for almost half of teachers are:

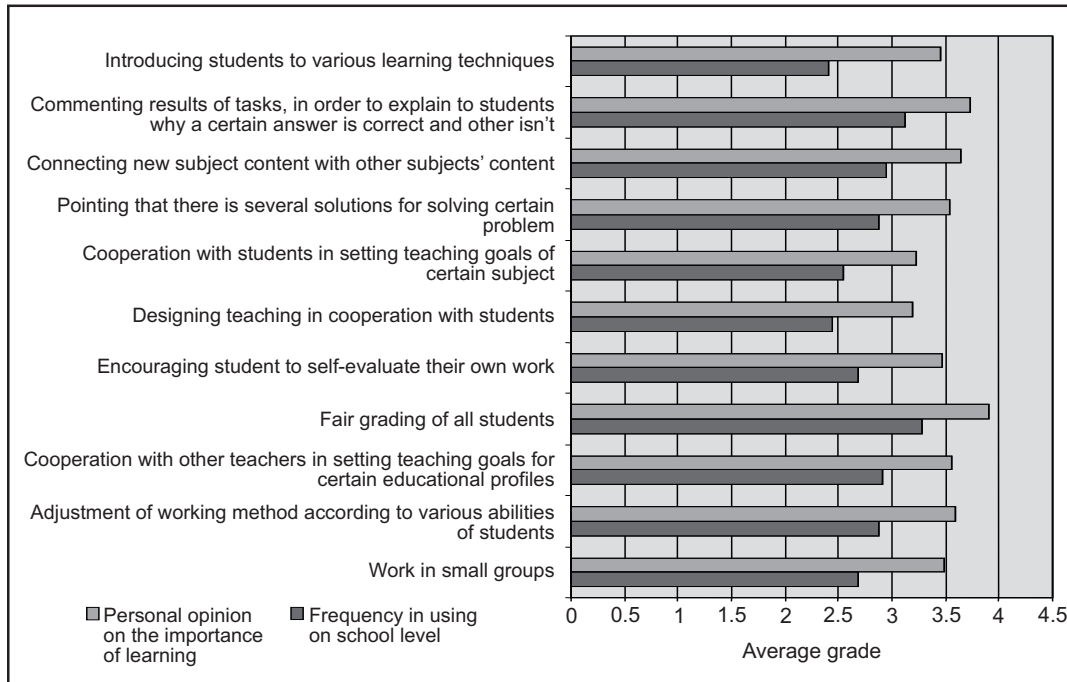
- Introducing students to various learning techniques (2.5)
- Instructing students on how to keep their own notes (2.5)
- Designing teaching in cooperation with students (2.4).

If we look how these questions were answered by teachers from the aspect of their own understanding of the importance of these activities for the improvement of learning, one may see that all of these activities were evaluated by teachers as mainly important and very important on the 5-point scale. For teachers personally, fair evaluation of all students is still the most important task (3.85%), and only then praising of students for achieved improvement in learning (3.7), giving comments on task in order to explain students why certain answer is correct and other is not (3.7). Other activities are also highly evaluated by teachers from their own personal aspect:

- Teaching students on how to take their own notes (3.6)
- Connecting ideas with terminology students are already familiar with (3.6)
- Using examples from everyday life during learning new subject content (3.6)
- Joining new subject content with students' experiences from professional practise (3.6)
- Stressing the existence of several different ways to solve a certain problem (3.5)
- Giving feedback information to students on their improvement in comparison to previous examination (3.5)
- Clearly pointing on things expected from students in certain subject (3.5)
- Detailed elaboration of grades to each student (3.5)
- Cooperation with other teachers on setting teaching goals for specific educational profile (3.5)
- Methodology adjustment according to the variety of students' abilities (3.5).

A smaller percentage of importance (3.4) teachers gave to the development of learning techniques and skills, among which are introducing students with variety of learning techniques, teaching students on how to take their own notes, supporting students to self-evaluate their own work, having discussions with students on the improvement of their learning skills, supporting students to evaluate their work and small-group work among themselves. The lowest percentage (3.2) got cooperation with students on setting goals for each subject and designing a class in cooperation with students.

4. OVERALL POLICY ASSESSMENT



Characteristics of final year students

According to the standings of the 1/3 of examined teachers, a **majority of** students are prepared to cooperate and make agreements with their peers (3.2).

However, teachers believe **half** the students are open to changes and new experiences (3.2), can communicate efficiently (3.1), are motivated for fulfilment of a set goal (3.0) and capable for team work (2.9). In addition, half of students feel competent and efficient (2.8), take responsibility for their own individual behaviour (2.8), work independently (2.8), are willing to take initiative (2.8), efficiently set goals they want to achieve (2.8), capable to solve problems creatively (2.8).

Support of schools' principals and colleagues

Most of the teachers' answers show that teachers can always come to schools' principles (3.4), that the schools' principles are trying to secure necessary working conditions (3.3), that schools' principles respect and use teachers' ideas (3.1). Schools' principles support and try to provide teachers' trainings (3.2), encourage teachers to give initiatives and suggestions (3.0), support cooperation among teachers (3.0). According to teachers' answers, teachers cooperate in various projects and activities in their respective schools (3.0) and teachers can rely on their colleagues' expert assistance (3.1).

Innovations in teachers' work

Most of teachers think that teachers in their schools are expected to constantly learn and innovate their work (3.1), that teachers are encouraged to apply new methodologies (3.0), and that various approaches and methods are used in their related schools (3.0).

Education system's support for introducing new contents and methodology of work

Teachers' dispersed in their answers of this group of questions on two levels on the 4-point scale – "insufficient" and "sufficient". Teachers think that following items are **insufficient**: teaching material availability (2.5), availability of equipment and teaching means (2.5), availability of training of teachers based on teachers' needs (2.5), constant informing on innovations and changes in the system (2.5), school autonomy (2.5).

Views on learning and the development of the 'Entrepreneurship' competence

Encouragement of students' entrepreneurship in school

Most teachers think that their schools communicate with students on possibilities for their future education (3.3), and on possibilities for students' future employment (3.0). Teachers agree that students have the possibility of individual decision making related to solving various situations and problems (2.8). Slightly less than half of teachers agree that students have the possibility to perform practical classes in successful companies (2.8), as well as to get acquainted with different jobs within their profession (2.8), students' team work is also supported in teaching (2.8). Large number of teachers agree that schools highly value and support students' individuality (2.9) and offer possibilities of independent decision making related to solving various situations and problems (2.8). Slightly less than half of teachers think their schools organise a range of activities in which students can express their personality and creativity (2.7), enables students to perform practical classes in successful companies (2.7). However, when it comes to basic knowledge on entrepreneurship students have – slightly less than half of teachers (44.7%) agree with it, while 36.6% teachers disagree.

4.3 SCHOOL PRINCIPALS' OPINIONS ON THE KEY COMPETENCES

This research gathered 16 VET school principals who answered open questions from a special questionnaire. Most principals were keen to cooperate and willingly became involved in the research.

Respecting teachers' ideas

Most principals (10) stated that the teachers' ideas are analysed on professional teachers' committees and teachers' councils. Among them 5 answered they made final decision (principals) if the idea was constructive, i.e. if the idea would be accepted and realised. Other principals (5) define their assistance through their role in providing financial means for the realisation of teachers' ideas that relate to introduction of new methods and contents.

Encouraging teachers to give initiative and suggestions

The question: How do you encourage teachers to give initiative and suggestions? We believe principals understood this question like the previous one, so the answers were:

- Support initiatives and suggestion for teachers' training financially (4)
- Verbally encourage every initiative (4)
- Enable teachers to present initiatives and suggestions on professional teachers' committees and teachers' councils (3)
- Find stakeholders (companies) to support initiatives and suggestions related to the modernisation of the content (1)
- "Pointing out" the person who gave suggestion on the teachers' councils (1).

Encouraging cooperation among teachers

Most principals answered:

- Through working in professional teachers' committee (15)
- Suggesting younger teachers to cooperate with older ones (3)
- Engaging them on projects (2)
- Preparing students for competitions (2)

4. OVERALL POLICY ASSESSMENT

- Organising excursions and gatherings (2)
- Designing creative workshops and seminars in schools (1)
- Stressing the importance of cooperation (1).

What are the most usual situations when teachers come to talk to principals

Principals replied:

- Purchasing teaching material and equipment (10)
- Personal problems (6)
- Problems with students (5)
- Problems in the conduction of teaching (methods, content) (3)
- Giving suggestions (2)
- Going to seminars (2)
- Writing project proposals and participating in projects' realisation (1).

Promotion of in-service teacher training

Most of principals said they sent teachers to seminars (15), while the other answers were:

- Trainings on school level (3)
- Visits to fairs (2)
- Through cooperation with stakeholders (1)
- Constant cooperation with related faculties (1)
- Visiting other schools (1).

Providing necessary working conditions

Most principals provide these from schools' own sources (7), from the local community (5), donations from parents', NGOs, EU (4) from projects (2).

Teachers' influence on principals' decisions

Most principals stated situation when suggestions for problems are argued (7),

- Related to school's current issues (division of subjects, master class teaching, purchasing teaching supplies, setting discipline measures, awarding students, setting time for extra-curricular activities, etc) (4)
- At the enrolment procedure (2)
- In situations regarding students and school's interests (2)
- In creation of school development plan (1)
- In acceptance of the professional titles of teachers (1)
- For issues related to professions (1)
- In all cases accept in choosing closest associates and forming working teams (1).

Encouraging teachers to cooperate on joint projects and activities

Principals stated:

- By forming project teams (of all interested) on the teachers council, financially supporting it from the school resources (5)
- By presenting the importance of projects for school (4)
- By writing project proposals (2)
- By writing curricula (2)
- By forming a team of teachers that should spread positive energy and need for a change (1)

- By providing team work on the improvement of school rating (result: 100% achieved enrolment plan) (1)
- By supporting more active individuals to cooperate with other teachers (1)
- By decreasing the level of obligation in school (1).

Solving problem

The question: In which cases do you encourage teachers to jointly solve school's problems? Principals answered:

- In solving students' problems (absences, grading criteria, etc) (6)
- In designing school's development plan (3)
- In conduction of curricula (3)
- In purchasing equipment and supplies (2)
- In designing enrolment policy (1)
- In division of classes (1)
- In performing annual school plan (1)
- In school's self-evaluation (1)
- In cooperation with parents (1).

Mutual expert's assistance of teachers

Principals think that mostly younger teachers rely on their older, more experienced colleagues (9). Certain number of principles think it happens rarely (5), while the others think this happens within the professional teaching committee (2) or depending on the fields of work (1).

Teachers' preparedness to receive comments on their work

Most principals think teachers are not open for comments (6); recently introduced obligation of evaluation and self-evaluation of schools significantly influence teachers' openness for comments on their work (4). A number of principals think certain teachers are willing to accept positive comments (2). It is interesting that some principals noticed flexibility for comments at younger teachers and those who teach in experimental classes (3).

Exchange new knowledge, experiences and ideas

Most principals stated that his happens on professional teaching committee and teachers' councils (12).

5. CONCLUSIONS AND RECOMMENDATIONS

This project's tasks were directed towards the research of scope and possibilities of environment for learning and pedagogical approaches enabling development of key competences, especially two chosen key competences – *Learning to learn* and *Entrepreneurship* in secondary VET. Furthermore, one of the project tasks was also an estimation of possibilities and preparedness of VET schools for introduction and further development of these two key competences in secondary VET in Serbia.

Basic findings, in students', teachers' and principals' answers, show that VET schools in Serbia have initial experience and willingness to develop both competences, as well as that there are significant needs for more intensive work on the development of these two competences. Such a need for more intensive work on development of especially Learning to learn competence is vivid in teachers' answers and imposes as one of priority in future work on development of these competences in Serbia.

Learning to learn

Students' answers showed that up to now secondary VET reform opened possibilities for strengthening of Learning to learn competence, which is obvious in total success of experimental classes in secondary VET. Students showed their openness and readiness for introduction of new types and methods of teaching, interactive relationship with teachers and gaining new learning skills.

When it comes to teachers and development of Learning to learn competence, basic conclusion of this research is that teachers are ready for further improvement of Learning to learn. However, intensifying of didactic-methodical training of teachers is necessary as a previous or first step in this process. This research suggests connecting the process of Learning to learn competence development directly to recommendations and suggestions of the Strategy for VET Development, accepted by the Government of Serbia in December 2006 in the area on teacher training. One of these document segments on further teacher training is the demand for **introduction of new pedagogical methods** in order to connect developing programmes at school level with the programmes for pedagogical and psychological training. This would encourage creative approaches in planning and performing teaching and professional practice for students. What characterises this system especially is the obligation to have contemporary methods of teaching and learning at the same time as content and as method of pedagogical-psychological teachers' training. Innovation of the working methods should lead to important changes – *moving the focus from teaching to learning*. This is actually an implementation of constructivist principle in the process of teaching and learning: instead of delivering knowledge, students should be enabled for constructing knowledge, which means that teachers' training should also have the same characteristics. In teachers' training, the stress should be put on the connection of expertise experience and new pedagogical ideas and solutions.

Introduction of new pedagogical methods would be the first level or step in the development of Learning to learn competence. This is especially important for teachers in secondary VET schools, having in mind the fact that many of them did not have initial teaching knowledge, but were educated in other areas – techniques, medicine, economic, law, social sciences and science. In respect to that, and based on answers of those participating in this research, we may conclude that **the first priority in the development**

of Learning to learn in VET in Serbia – VET school teacher training for the introduction of new pedagogical methods.

Second priority in the development of Learning to learn is innovating and improvement of cooperation among students and teachers, especially in the area of development of learning skills and improvement of teachers' general working style. Cooperation between students and teachers should include other spheres besides interpretation and justification of **grades**, following improvement, etc. Teachers should be more capable and prepared to help students in development of personal learning skills, solving problems especially learning ones, career guidance and development of team work.

The third priority relates to more intensive involvement of parents in the process of teaching and learning, because both students and teachers stated that the role of parents is very important and both these groups expect much more active and engaged approach from parents.

Entrepreneurship

The results within the 'Entrepreneurship' competence are rather similar; students' answers confirmed good starting experience resulted after the introduction of Entrepreneurship as an obligatory subject in experimental educational profiles (2004). For now, so to say beginning experience of VET schools in the development of entrepreneurship competence is a big reform step forward in education. The effects of this process can be seen in all experimental classes' students' and teachers' answers in this research. According to these results and answers, further engagement in development of this competence is necessary, above all through introduction of the subject 'Entrepreneurship' in all educational profiles, teachers' training in the area of entrepreneurship, developing general entrepreneurship philosophy in VET and systematic positioning of entrepreneurship.

Comparing the answers of the experimental classes' students' with the answers of those educated in classical programmes, one may say that the first effects of the introduction of the subject 'Entrepreneurship' are visible. Namely, experimental classes' students are ahead of their friends from classical classes in knowing what should be done to develop successful enterprise, but also whom to talk to if they have a business idea. They also worked a lot on development of their own ideas and researched possibilities for employment in their profession. This is partly expected, having in mind that curriculum defined learning outputs within the subject 'Entrepreneurship' – content, recommended techniques and methodology.

Obviously, curriculum, further teachers' training, as well as implementation of these contents in all curricula should be improved.

Speaking about principals and their role in the development of these two competences, future programme for principals' licensing and training ahead of it, should respect and include elements of both competences' development in both two areas: working with teachers and working with students.

Having in mind this research has showed successes, but also some weaknesses and difficulties present in current VET practice, especially in the sphere of development of learning skills, education authorities in Serbia should conduct this kind of research in VET in the areas not covered by this very research. Additionally, this kind of research should be conducted in Gymnasias, too. This would enable following and improving the development of these two competencies at the level of the whole secondary education in Serbia.