



Strengthening the Capacities of the Chambers and Partners to Help SMEs to Engage in Apprenticeship

Analysis of the Current Status of the Apprenticeship Scheme in
Croatia

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¹ The contents of this paper has been translated and drafted by SEECCEL and can under no circumstances can be regarded as language edited and revised text.

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Chapter I - Background paper

1. THE VET SYSTEM IN CROATIA

1.1. VET in Croatia's overall education system

The education system in Croatia² consists of the following educational levels:

- Early and pre-school education (*rani i predškolski odgoj i obrazovanje*) – ISCED level 0³
- Basic education (*osnovno obrazovanje*), which incorporates primary and lower-secondary education – ISCED levels 1 & 2
- Upper-secondary education (*srednje obrazovanje*) (ISCED level 3)
- Tertiary education (*visoko obrazovanje*) – ISCED 5 & 6

Basic education in Croatia is compulsory and lasts for eight years, between the ages of six and fifteen. Following the completion of basic education, students can enrol in general or vocational tracks of upper-secondary education, with programmes lasting from 1 to 5 years. Access to upper-secondary education is selective and is based on academic and extra-curricular achievements during basic education, which are calculated according to a transparent scoring system. The main types of upper-secondary schools in Croatia⁴ are the following:

General education

- **Gymnasiums (*gimnazije*)**⁵: These schools offer **four-year programmes** in general education that primarily prepare students for enrolling in tertiary education. Vocational gymnasiums with experimental programs such as medicine, tourism, agriculture, sustainable development and medicine had also existed.

² Data in this section compiled based on Ministry of Science and Education (2016), Eurydice (2016).

³ The International Standard Classification of Education (ISCED 97) is a classification system developed by UNESCO that is used in international education statistics and that enables the comparability of data on education at the international level.

⁴ These schools enrol around 97% of all regular upper-secondary students in Croatia, as will be shown in the following section. In addition to these schools, upper-secondary art schools (*umjetničke škole*) offer programmes lasting up to four-years, and which can allow for progression to higher education.

Furthermore, apart from so-called “regular schools”, certain specialised schools or programmes exist in Croatia for adult education, as well for basic music and ballet education, for basic and upper-secondary education for education of disabled children and youth. At the upper-secondary school level, 4339 students have enrolled, which accounts for around 2.5% of all students (including both regular and specialised school students). The above institutions will not be covered in this report.

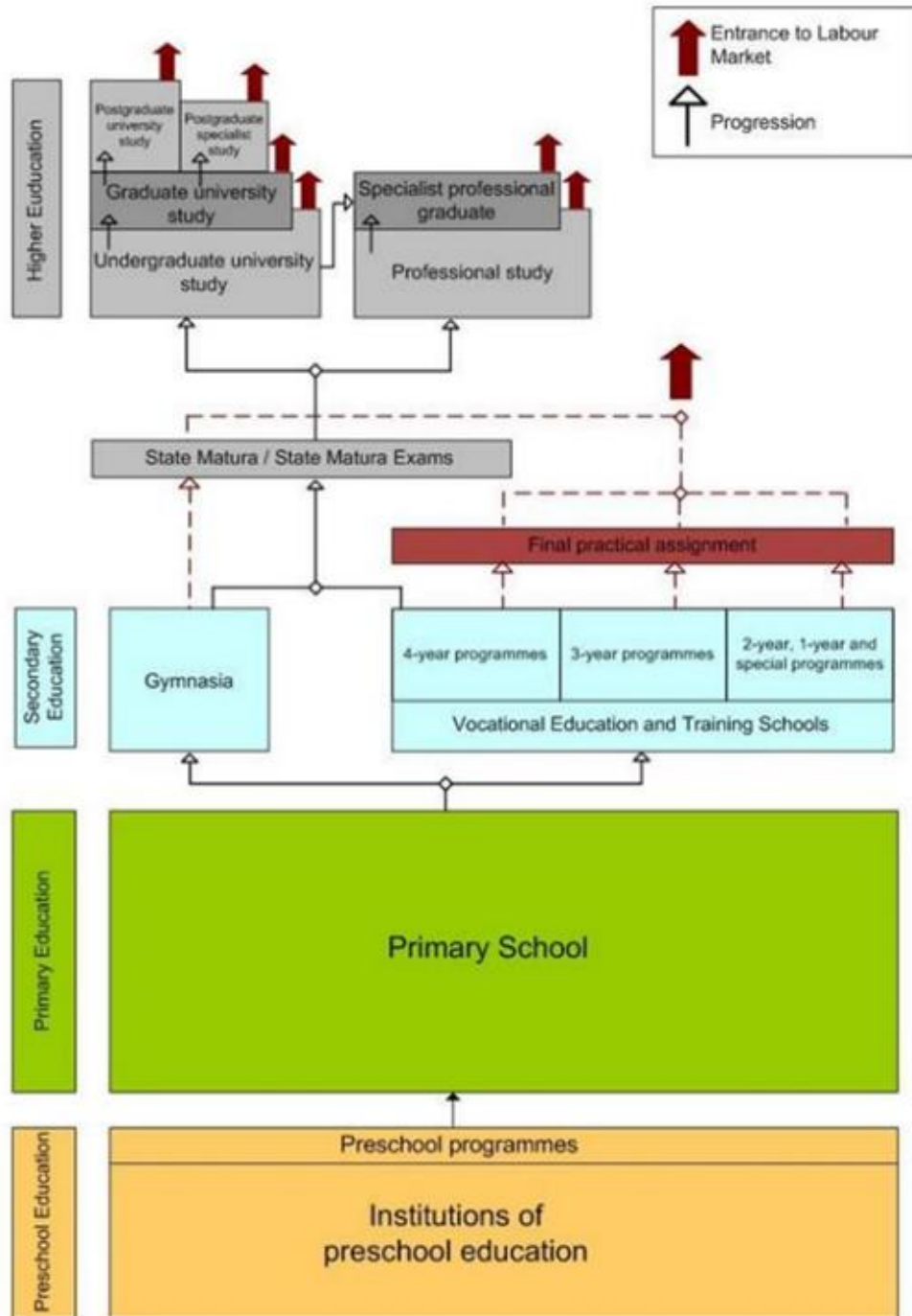
⁵ Although sometimes translated to as *grammar schools*, this report will use the term *gymnasiums*.

Vocational education and training (VET)

- **Technical and related vocational schools (*tehničke i srodne strukovne škole*):** These vocational schools offer mainly **four-year programmes** (there is only one five-year program: Medical Nurse/Technician) enabling students to acquire both specific vocational skills and a general competences. Students completing these programmes can either enter the labour market or to enrol in tertiary education.
- **Industrial and crafts schools (*industrijske i obrtničke škole*):** These vocational schools offer **programmes lasting from one to three years** enabling students to acquire specific vocational skills and to enter the labour market following their completion. There are two main types of programmes in these vocational schools:
 - Predominantly school-based programmes for industrial and trade occupations
 - “Unified model of education” programmes (*jedinstveni model obrazovanja*) delivering training for craft occupations through apprenticeship arrangements. Students completing these programmes can proceed to sit a “master’s” exam, enabling them to start their own businesses, employ workers and train apprentices.

Figure 1 below presents a schematic diagram of the Croatian education system. Further information on the possibilities for progression from VET schools to tertiary education is provided in Section 1.3.

Figure 1: The Croatian education system



Source: UNESCO IBE (2011)

1.2. Number of students in VET

Number of upper-secondary students, by school type

Over **two-thirds of all upper-secondary students** in Croatia have enrolled in vocational education at the beginning of the 2015/2016 schoolyear. According to the Croatian Bureau of Statistics (CBS, 2016) data, 67% or 111,911 students have enrolled at vocational schools, 46.54% have enrolled at technical and related schools and 19.67% at industrial and crafts schools.

Table 1: Upper-secondary schools students (regular schools only), beginning of the 2015/2016 school year

Type of school	Number of enrolled students	% of all upper-secondary students
Gymnasiums (grammar schools)	51927	30,70%
Technical and related schools	78717	46,54%
Industrial and crafts schools	33274	19,67%
Art schools	5218	3,09%
Sub-total: vocational schools	111911	67,21%
Total (all regular secondary schools)	169136	100,00%

Source: Author's calculations based on CBS (2016)

Data from the Ministry of Science and Education (MSE, 2016) on the number of enrolled students per type of VET *programme* in 2015/2016 confirm the pattern, although with slight differences in numbers. According to the data presented in Table 2, 114,341 students enrolled in VET, which is 68% of all upper-secondary students.⁶

⁶ The statistical differences are probably due to the classification of students from art schools, since some programmes of art schools are considered as vocational education programmes.

Table 2: Upper-secondary schools students (regular schools only), beginning of school year 2015/2016

Type of school	Number of enrolled students	% of all upper-secondary students	% of all VET students
Technical and related schools	80005	47,6%	70,0%
4-year vocational programmes	74189	44,1%	64,9%
5-year programme for nursing/medical technicians	5816	3,5%	5,1%
Industrial and crafts schools	34336	20,4%	30,0%
3-year programmes for industrial occupations	19683	11,7%	17,2%
3-year programmes for crafts occupations	14450	8,6%	12,6%
1-2 year vocational programmes	203	0,1%	0,2%
Sub-total: vocational schools	114341	68,0%	100,0%
Sub-total: other upper-secondary schools	53808	32,0%	47,1%
Total (regular secondary schools)	168149	100,0%	100,0%

Source: Author's calculations based on MSE (2016)

Table 2 provides other important insights into industrial and crafts schools: the data show that the majority of students in three-year programmes have enrolled in industrial programmes, and that a negligible number of students have enrolled in 1-2 year programmes.

Education in vocational schools lasts from one to five years and the duration depends on the type of educational program or vocational curriculum for a profession or vocational qualifications. Upon completion of vocational schools, students can enter the labour market or, under certain conditions, continue their education at the secondary level or in higher education.

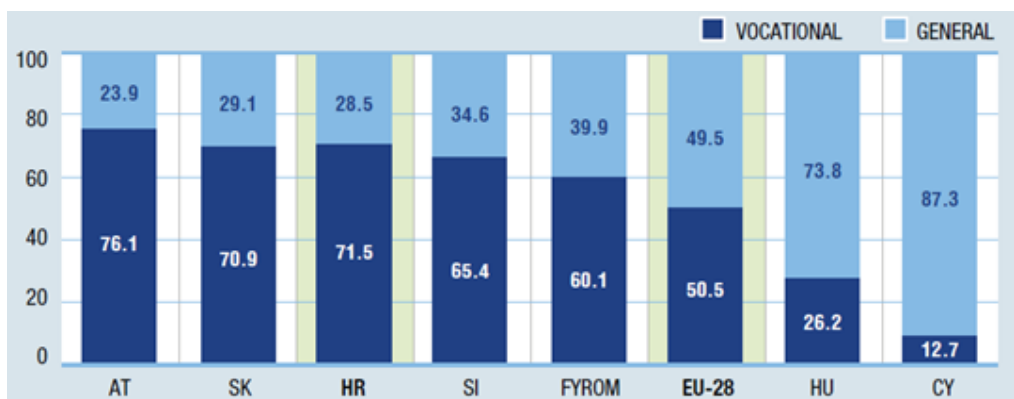
For occupations from a bound crafts list, students are educated via the three-year UME programs and classic/C school education programs. Since 2004, a new curriculum was made by the unique model of education-UME programs for all occupations from the list of bound crafts. Work-based learning (WBL) in three years educational programs for crafts and trades is carried out through practical training and exercises in licenced crafts and/or legal entities and school workshops. WBL in the three-year industrial and related education programs is performed through practical training and exercises in school workshops and through professional practice completed at the employer's.

However, a part of the schools for crafts still carry out education through the old, traditional educational programs and tend toward increasing the number of schools with the "classic" model of education, which certainly adversely affects the quality of education for craft occupations. The key

question is why schools have left the UME model and switched to the “classic” model? The possible reasons include a complicated economic situation, shutting down of businesses and legal entities, difficulties in finding vacancy for practice, lack of motivation of practical training providers, avoidance of payment of awards to students regulated by Article 31 of Vocational Education and Training Act (2009).

Within an international scope, Croatia is one of the countries with the highest proportion of students that have enrolled in VET schools in Europe, as can be seen in Figure 2 below (referring to data from 2013).

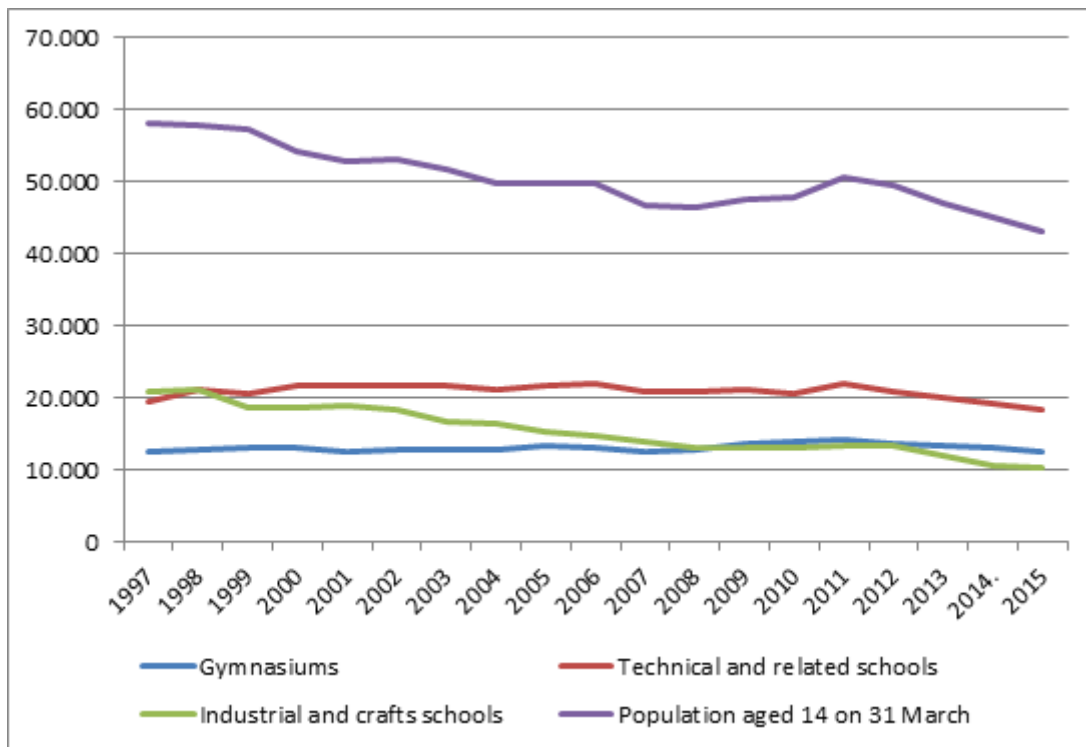
Figure 2: Upper-secondary education students enrolled in vocational and general programmes (% of all students in upper-secondary education, 2011)



Source: CEDEFOP (2013)

Regarding the above enrolment trends in VET schools, it is important to emphasise that demographic changes in Croatia over the past two decades have had a noticeable impact on patterns of enrolment at different types of upper-secondary schools, as illustrated in Figure 3 below.

Figure 3: Enrolment trends in upper-secondary education in Croatia in relation to demographic 1997-2015



Source: Matković (2016), based on CBS data

Note. The graph shows the number of newly enrolled students in the 1st year of upper-secondary education.

As can be seen from the graph, the significant drop in the age cohorts enrolling in upper-secondary education has primarily affected enrolments in industrial and crafts schools, which have plummeted sharply, while both gymnasium and 4-year VET schools have maintained relatively stable enrolment patterns (with a slight inclination to growth in gymnasium enrolments). Analyses have suggested that this indicates a deep problem regarding the lack of attractiveness of industrial and crafts schools/occupations (resulting in an increasingly ‘negative selection’ of students in such schools), and that if these trends continue they will threaten the sustainability of the 3-year VET track in Croatia (Matković et al, 2013).

Number of upper-secondary schools and programmes – by type of school

Regarding the number of schools, at the beginning of the school year 2015/2016, there were **443 active upper-secondary schools** in Croatia. However, according to the methodology of statistical data collection in Croatia, the official figure for the number of schools in Croatia is significantly larger (**750 schools in total**; see Table 3 below), of which **355 VET schools**.

Table 3: Upper-secondary schools students (all schools), beginning of school year 2015/2016

Type of school	Number of schools
Gymnasiums	198
Technical and related schools	259
Industrial and crafts schools	196
Art schools	54
Sub-total: vocational schools	355
Total: all upper-secondary schools	750

Source: CBS (2016)

The reason for this difference in the number of schools is that certain schools comprise several “school units” of different types (such as a gymnasium, a technical or an industrial and crafts school). Each unit is therefore considered as a separate school. Around one third of upper-secondary schools (244 schools in total) provide only one type of programme (the so-called "self-contained" schools), while the majority of schools in Croatia provide several types of programmes in parallel (CBS, 2016). The number of programmes provided by VET schools is presented in Table 4.

Table 4: Upper-secondary school programmes (all schools), beginning of school year 2015/2016

Type of school	Number of programmes
Technical and related schools	123
4-year vocational programmes	122
5-year programme for nursing/medical technicians	1
Industrial and crafts schools	163
3-year programmes for industrial occupations	109
3-year programmes for crafts occupations	46
1-2 year vocational programmes	7
Total (vocational education)	285

Source: MSE (2016)

It should be noted that although Table 4 shows that a large number of programmes are available, ‘only a few dozen are attended by more than a handful of students’ (Matković et al., 2013: 11).

Vocational Education in the Republic of Croatia is carried out by institutions of vocational education and partly by employers. WBL is present in three forms 3 in vocational programs/curricula:

Table 4: types of vocational education and WBL models

Types of vocational education in Croatia	WBL models		
	Combined programs	With the employer	In school
Three-year programs for bound crafts	x		x
Three-year industrial and related programmes		x	x
Four-year VET programs		x	x
Five-year VET program		x	x

Source: The VET System Development programme 2016-2020

The activities are carried out by teachers, teachers of general education subjects, teachers of professional - theoretical content, teachers of practical training and exercises and teaching assistants.⁷

1.3. VET graduates and their further education and employment prospects

Number of graduates and completion rates

The number of students graduating from upper-secondary education in Croatia is presented in Table 5 below.

Table 5: Number of students graduating from upper-secondary education in Croatia - by type of school

Type of school	Number	%
Gymnasiums	13.659	27,43%
Technical and related schools	20.549	41,26%
Industrial and crafts schools	11.838	23,77%

⁷ More information on teachers in VET in Croatia in AVETAE publication available at: <http://refernet.hr/media/1101/asso-za-web-a.pdf>

Art schools *(without music/ballet schools)	670	1,35%
Total	46.716	100%

Source: Compiled by author, based on Matković (2016)

Croatia is one of the countries with the lowest rate of early school leaving (i.e. drop-out) in Europe (2.8%), %) compared to other European countries (where the average rate is close to 11%). However, it is important to note that early school leaving rates are significantly higher at industrial and crafts schools, where the estimated drop-out rate is around 15% (Matković et al., 2013).

Educational and career paths of VET graduates after completion of school

Progression from upper-secondary to tertiary education in Croatia is contingent on successfully passing the centralised State Matura (*državna matura*). The State Matura is compulsory for students from gymnasiums, but it is also optional for students from four-year vocational schools. In fact, analyses have shown that the vast majority of students from 4-year vocational programmes (78%) choose to take the State Matura and the majority (61%) enrol in higher education (Jokić & Ristić Dedić, 2014, based on data from 2010/2011).

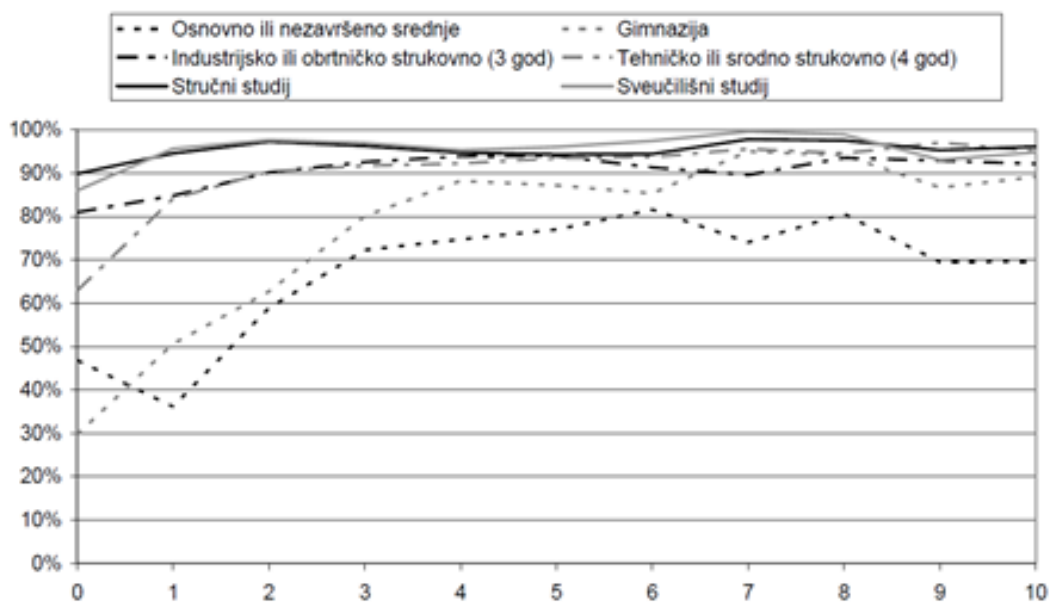
On the other hand, three-year vocational programmes do not enable direct access to the State Matura. In order to tackle the problem of three-year vocational schools being a “dead-end” track that does not allow for progression to tertiary education, legislative changes in 2012 have obliged all three-year schools to organise an additional (free-of-charge) fourth year for students aiming to complete the State Matura examination in order to be able to enrol in tertiary education. While the policy addresses an important obstacle to equity in education, a study on three-year vocational schools indicated that the policy has had little effect so far, as most schools fail to organise this additional year due to a lack of material and human resources and a lack of interest in the scheme (Matković et al., 2013).

Labour market outcomes of VET graduates

According to the European Commission’s (2015) country report for Croatia in the area of education, the employment rate for the recent upper secondary graduates is significantly below the EU average (47.3% in 2014, compared to the EU average of 70.8%) and this is the third lowest percentage in Europe after Italy and Greece. The employment gap between youth with upper secondary and tertiary education is more significant than in other EU countries, especially 1-3 years after gaining a qualification.

An in-depth study of education to work transitions in Croatia (Matković, 2011) has shown that Croatia shares the trend present in many European countries, which is better labour market outcomes both in terms of employment rates and income for the tertiary education graduates. Although the period covered is 2004-2008, the identified trends are still highly relevant today. Regarding the specific labour market outcomes of young people who have completed vocational education, it is interesting to note that students who complete industrial and craft programmes actually have a significantly lower risk of unemployment in the first few years on the labour market (especially in the first year). However, several years after graduating this comparative advantage disappears (Matković 2011). These trends are illustrated in the graph below.

Figure 4: Employment rates in the years following graduation - by type of completed education (2004-2008)⁸



Source: Matković (2011) Note: The x axis shows number of years since completing education; the y axis shows the level of employment in %

Observing similar trends, Crnkovic-Pozaic (2009) notes that students graduating from four-year vocational schools have had inadequate practical training, which limits their employability. Crnkovic-Pozaic also notes that three-year vocational schools provide a better preparation for the

⁸ Translation of the legend: *Osnovno ili nezavršeno obrazovanje* = primary or incomplete primary education; *gimnazija* = gymnasium; *tehničko i srodno strukovno* = technical and related schools; *industrijsko ili obrtničko strukovno* = industrial or craft schools; *stručni studij* = professional studies (higher education); *sveučilišni studij* = university studies (higher education).

labour market, but there is an overproduction of graduates in certain craft occupations and no development of the new qualifications required by the labour market.

Finally, fewer than half of VET graduates end up employed at a position that matches their field of study (Matkovic 2009b).

Current unemployment levels of upper-secondary graduates

The current data on registered unemployed persons with completed secondary education are presented in Table 6 below.

Table 6: Unemployed persons with secondary education by age, end of December 2015

Type of school completed	Total	Aged 15-24	Aged 15-29
VET school lasting 3 years or less	91.208	19.554	28.803
VET school lasting 4 years or more	73.261	20.189	28.942
Gymnasium	9.958	1.954	3.547
Total	174.427	41.697	61.292

Source: CES (2016)

According to the data from the Croatian Employment Service (CES, 2016), in late December 2015 a total of 285,468 unemployed persons were registered in Croatia, of which 174 427 with a completed upper-secondary school. There were 61,292 of young unemployed people (15-29 years) with an upper-secondary education, the smallest proportion of which have completed gymnasiums (3,547) whereas graduates from 4-year and 3-year schools were represented in almost equal proportions (just under 29,000).

1.3.1. Employers' survey

In order to examine the situation in the labour market and the needs of employers, CES conducts an annual Employers' Survey in cooperation with its partners: Croatian Chamber of Economy (CEE), Croatian Chamber of Trades and Crafts (CCTC) and Croatian Employers' Association (CEA). A cooperation with partners is agreed upon at the level of the Central Office and it is implemented

depending on the possibilities of the branch offices of the partners on the site at the local level, i.e. at the level of counties.⁹

Employers' Survey collects information from employers on employment in the previous year, on difficulties in recruiting, if any, and the plans and needs in terms of hiring new workers, potential surpluses and the need for additional training of employees in the current year.¹⁰

According to the educational structure of newly employed workers, most of them have finished a four-year secondary vocational school and grammar school (45.7%), with high school education lasting for up to three years (23.7%). The survey results show that the higher levels of education are generally associated with a higher employment rate. However, students who have completed a four-year vocational secondary school are relatively slow in finding employment than students who have finished a three-year school, and those with finished gymnasiums are even slower.

Almost one third of surveyed employers had difficulties in hiring workers, which is a significant increase compared to the previous year (19%), and this situation is more common among employers in the private sector.

If we observe them by the business field, the problems were mostly mentioned by employers in the business of providing accommodation and food service, transportation and warehousing, manufacturing, health care and social welfare and information and communication (32.4%), while the problems were rarely encountered by employers in the field of water management and waste management, public administration and defence, power generation, arts, entertainment and recreation.

Surveyed employers most frequently cite the following difficulties in recruitment:

- **49.5%** - people lack the required level of education (rarely a problem in the private sector, especially for micro employers)
- **43.5%** - insufficient work experience (especially with employers in the private sector)
- **29.6%** - lack of candidates with appropriate education (usually it as a problem identified by medium and large employers and public sector employers)

⁹ The survey is conducted on a sample and does not include all employers. Therefore, in order for the survey to be realistic, it is important that the questionnaires are filled out to the greatest possible extent and cover as many employers as possible. Complete Employers survey is available at: <http://www.hzz.hr/default.aspx?id=10054>

¹⁰ In order to ensure as great a scope as possible, the questionnaires are sent by post; and for employers that have not completed the questionnaires, focus groups are organized where they are filled out with the assistance of the HZZ employees. According to the guideline for the Employers' Survey, a visit to the employer and the filling-out of the questionnaire are organized.

- **26.8%** - lack of interest or motivation of candidates (more often this problem is recognized by craftsmen and micro employers of the private sector)
- **18.5%** - lack of candidates willing to work for the offered salary (slightly more in large companies)
- 12.2% - lack of candidates with the necessary "soft" skills such as communication, teamwork, and the like.
- **6.8%** - lack of workers with required knowledge of a foreign language
- **5.8%** - lack of workers with the necessary certificate or license
- **3.9%** - lack of workers with the required computer skills

Total of 1,552 surveyed employers in 2014 have identified a profession in which they had difficulties in hiring workers. The following table shows ten most frequently cited occupations for which they had the greatest difficulty in finding workers and which require completed secondary vocational education.

Table 7: Occupations with which employers had the greatest difficulty in finding workers

Occupations with which employers had the greatest difficulty in finding workers	The number of the employers	The share of employers in the total sample
waiter	84	5,4
chef	78	5,0
driver	37	2,4
mason	36	2,3
salesman	32	2,1
nurse	30	1,9
hairdresser	21	1,4
welder	20	1,3
locksmith	19	1,2
baker	17	1,1

Source: CES (2015)

Problems of finding workers in certain occupations may reflect seasonal changes in demand for certain occupations due to the fact that the Croatian labour market is characterized by the seasonal nature of employment. In addition, problems with finding workers in certain occupations may also reflect a deficit of workers with wanted occupations as well as be the characteristics of the working conditions that may represent a limiting factor in the workers response to specific jobs offers.

Based on the responses received through the survey of employers estimates were made of the total number of persons engaged in apprenticeship, student practice or *On-the-job training for work without employment* during the year 2014 out of the total population of employers. Projections of these needs are presented in the table below:

Table 8: projections of numbers of persons involved in different engagements

Type of engagement	Total
a) apprenticeship	5.332
b) other student practice (other than apprenticeship)	19.398
c) student practice	17.242
d) <i>On-the-job training for work without employment</i> (measures)	9.502

Source: CES (2015)

During 2015, a total of 9,908 users with finished high-school level of education were included in the measure of *On-the-job training for work without employment* via the Croatian Employment Service, of which 5,478 were new users.

In 2016 (as of 10.31.2016.), a total of 8,187 users with a high-school level of education were included in the measure *On-the-job training for work without employment* via the Croatian Employment Service, of which 2,298 were new users.

74% of employers consider that the previous work experience is necessary for the newly hired workers while 26% do not require work experience. In case of employing administrative officials, 61.4% of employers have expressed the need for one year of work experience. For the performance of the service and trade occupations more than a third of employers asked for one year of previous work experience (39.9%). At the level of individual occupation, it is evident that for occupations as caregivers of elderly and disabled persons (54.1%), waiters (50.5%) and sellers (48.4%), experience is required to a greater extent than in other related occupations such as the hairdressers (33.3%) or chefs (22.9%).

For occupation in crafts and individual production most frequently two to four years of work experience are required (40.3%) making them stand out as the most prominent in this category. This is most pronounced in welders (53.8%) and locksmiths (45.5%).

2. OVERVIEW OF LEGAL FRAMEWORK AND GOVERNANCE OF VET SYSTEM IN CROATIA

The main legal framework regulating VET in Croatia is the **Vocational Education and Training Act (2009)**, which defines the objectives and principles of VET, acquisition of qualifications, VET quality assurance, stakeholder cooperation through joint advisory and expert bodies, and conditions for organising student practice in companies. The Act also sets the time frame for introducing new standards of occupations and vocational qualifications, and for new vocational curricula. Other relevant legal documents that are directly relevant to the organisation and provision of VET are

- **Act on Primary and Secondary Education (2008),**
- **State Pedagogical Standards for Pre-school, Basic and Secondary Education (2008)**
- **National Framework Curriculum for Preschool Education and General Compulsory and Secondary Education (2011)**

The governance of the VET system is carried out by the following institutions and institutional frameworks:¹¹

Line ministry: The overall responsibility for VET in Croatia lies with the **Ministry of Science and Education** in cooperation with other ministries in charge of specific VET sectors, such as the Ministry of Entrepreneurship and Crafts and the Ministry of Labour and Pensions System.

National agency: the **Agency for Vocational Education and Training and Adult Education (AVETAЕ)** (initially established as the Agency for Vocational Education and Training in 2005) is an autonomous public agency whose activities include planning, developing, organizing, monitoring and evaluation of school-based and non-school based activities in vocational education. The **Education and Teacher Training Agency is a national agency** responsible for the general education content in VET schools. Regarding the funding of VET schools, staff wages are paid from the central state budget, while operational and investment expenses are financed from budgets of the school founders (the county). This accounts for the importance of the county education departments, which are also the primary source of financial support grants for students (Matković et al, 2013).

Stakeholders: In addition to the institutions listed so far, stakeholders in VET are local and regional authorities, employers' associations, professional and other associations, chambers, trade unions,

¹¹ Compiled based on the VET Act (2009), CEDEFOP (2013) and Matković et al. (2013).

higher education institutions, legal persons engaged in mediation in employment and vocational education institutions. Among the stakeholders, CCTC is the most directly involved in craft programmes with respect to their curricula, apprenticeships and practical exam evaluation.

2.1. Current policies relevant for VET

All VET programmes combine occupational and general education, to varying degrees; most include mandatory work experience. Students from lower-level programmes can progress to higher levels at the discretion of their schools. Formal VET is free of charge for the student, in contrast to adult education and training programmes. VET graduates have access to master craftsperson exams after a specified programme they graduated from. Social partners are mainly involved in the crafts sector and also provide advice on skill needs in cooperation with employment services.

Strategy of Education, Science and Technology

The Croatian Parliament adopted Strategy of Education, Science and Technology¹² (Strategy) in October 17, 2014 and appointed the Special Expert Committee for the Implementation of the Strategy.

Committee's task was to create an Action Plan of the Strategy's implementation, to coordinate responsible stakeholders and to define implementation indicators showing efficiency of the Strategy's objectives and measures implementation. Additionally, the Committee will organize projects for the creation of Action Plans addressing particular complex measures and setting-up of working groups that would thoroughly elaborate Strategy in its specific segments. Finally, the Committee will report to The Government of the Republic of Croatia about its work and results at least once in a year in the written form.

Principles of education defined in Education Strategy:

- Compulsory primary education.
- Horizontal and vertical mobility within the system.

¹² Full text of Strategy is available at: https://www.google.hr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwiywsf-p6jSAhULVhoKHYkSAKwQFggkMAE&url=http%3A%2F%2Fpublic.mzos.hr%2Ffgs.axd%3Fid%3D25512&usg=AFQjCNHNZrU1KpYctL9PJztbgv_z8Ma7Q&sig2=J3sgHNejCEPit1U76jR3BQ&cad=rja

- All persons, especially marginalized and underrepresented groups, will be incorporated in the education system based upon the scientific knowledge.
- Competent employees in the system that respects the professional ethics.
- Decisions will be made in a democratic way with the participation of all key stakeholders.
- Schools and teachers will be independent in defining methods of work.
- Interculturalism and the European dimension of the education will be respected.

Strategy is envisaged in the way that proposes measures aligned with the envisaged strategies of the European Union and goals whose realization is expected until year 2025. Realization of these strategic goals is possible only if the long-term strategic vision of development is followed, aiming to achieve a comprehensive, flexible and efficient education system that connects different levels and forms of education and research in the harmonious and transparent entity based upon common positive values, principles and goals.

VET in Strategy

The Strategy for Education, Science and Technology emphasizes the importance of linking education and training more closely to the labour market, along with improvement of learning outcomes and skills. Its guiding principles are:

- flexible VET through modularised programmes;
- delaying specialisation to the final grades to avoid students being directed too early to specific occupations and thus increasing the flexibility of the future workforce;
- providing general education and key competences as a basis for further education and lifelong learning;
- gradually introducing WBL;
- preparing and implementing a forecasting model based on needs, plans and trends in VET sectors at the county, regional and national levels,
- easing the transition from upper secondary VET to various forms of higher education through additional educational programmes and by removing barriers and dead ends.

The strategy also aims to set up regional VET competence centres and improved programme offers at VET schools, based on needs analyses that take into account regional development strategies.

The VET System Development programme 2016-2020

The VET System Development programme 2016-2020¹³ adopted in 2016 by the Government is a strategic document derived from the Strategy of Education, Science and Technology and in coordination with strategic documents of the EU and other strategic documents of the Republic of Croatia. The Programme suggests measures for development of the system of vocational education and training and for continued education and lifelong learning. Action Plan for implementation of VET system development program was adopted in 2016 by MSE.

The Programme identifies several priorities for the development of the system:

- improving the relevance of vocational education and training with regard to the labour market;
- improving the quality of vocational education and training;
- promoting vocational education and training excellence, attractiveness and inclusion;
- internationalization of vocational education and training;
- supporting international mobility of students and teachers.

These priorities include objectives and measures whose implementation will lead to new vocational curricula, promoting and improving the models of WBL, developing the system of quality assurance in vocational education and training, improving the system of professional development of teachers and increasing the mobility and employability of students in vocational education.

Croatian Qualification Framework

In 2013 The Croatian Qualifications Framework Act was adopted which established the Croatian Qualifications Framework (CROQF). The development of VET will be in accordance with the tools and procedures developed through CROQF.

CROQF is established to implement process of standardization of occupations and qualifications, focusing on the knowledge, level of competence and skills that individual will have at the end of an educational program. It is especially focused on reforming higher education and secondary VET curricula, with aim to reduce the skills mismatch by bringing study choices into line with occupations needed in the economy by mapping sectors and occupations and subsequently aligning qualification standards and education programmes with them. It aims to solve the problem of outdated VET curricula and limited opportunities for work-based learning, bringing system of

¹³ Full text available in Croatian at: <https://vlada.gov.hr/UserDocsImages//Sjednice/2016/41%20sjednica%20vlade//41%20-%202.pdf>

education into line with labour market needs. For that purpose so far 8 of 25 sector skills councils were formed. CROQF is in jurisdiction of MSE in cooperation with the Ministry of Labour and Pensions System and the Ministry of Regional Development and EU Funds.

CROQF has eight qualification levels. Placement of qualifications at a certain level allows the comparison of qualifications and connection with the levels of the European Qualifications Framework (EQF) and the Qualifications Framework of the European Higher Education Area (QF- EHEA) which should allow recognition of qualifications acquired in Croatia at the national, European and international labour market.

Because learning outcomes are at the centre of the CROQF rather than the process that leads to these outcomes occurred, CROQF provides a foundation for developing the evaluation of prior learning, and provides the basis for the identification and evaluation of outcomes of non-formal and informal learning, with mandatory introduction of quality assurance systems and clearly laid down procedures to verify quality.

AVETAE developed on-line database for VET qualifications "E_kvalifikacije " in scope of IPA project *Strengthening institutional framework for development of VET occupational standards, qualifications and curricula*.¹⁴ The purpose of this database is creating a single location for the materials developed up to that point and for downloading sections of VET occupational standards and qualifications from their own or other sectors if they fit their need.

Process of development was based on the needs of the labour market, economy, education, students and in line with development of Croatian qualification framework and other strategic documents from the vocational education area.

2.2. Active Labour Market Policy programmes

2.2.1. Training programmes for the unemployed

Education for the needs of the labour market represents a series of expert activities aimed to train unemployed people to enter and/or re-enter the labour market. This procedure involves the activities of professional informing, professional counselling and professional selection, or preparation, selecting and guiding candidates into education programs and funding and co-financing of education.

¹⁴ Available at: <http://e-kvalifikacije.asoo.hr/pages/search/index.xhtml>

Education for the needs of the labour market is part of the adult education system, and includes training programs and retraining. The measure affects the raising of qualification of the unemployed and eliminates the risk of long-term unemployment. These programs were selected on the basis of analysis of the needs of local labour markets and this affects the reduction of skills mismatches in the labour market. Training programs have primarily focused on deficit occupation in the labour market.

2.2.2. Training on the job - training for a known employer

The aim of these measures is to ensure the work force with specific competencies for the needs of employers especially in the field of construction, shipbuilding, transportation, manufacturing, service areas and catering. With combination of education and training in the workplace people acquire necessary knowledge and skills to perform their future profession and, with quality mentoring, students are prepared for work in specific work place.

All selected candidates participate in a training program that is used to recruit motivated candidates who have the qualities to master the program and education, in order to be offered a job. These programs last 3-4 months and after that students take the proficiency exam in CCTC and gain public document of qualification. Users of this measure are employers who can provide the conditions for the implementation of training and education / training in the workplace, and who cannot ensure the necessary workforce through regular activities of mediation.

2.2.3. Activities to improve the quality and compliance of the needs of the labour market with education conducted by the CES (and in collaboration with other institutions)

Croatian Employment Service from March 2015 carries out ESF project "Further development of occupational standards" which aims to develop occupational standards through the introduction and implementation of the Survey on the occupational standards. The survey, which is part of the methodology for development of occupational standards defined by the Ministry of Labour and Pension System, asks the employers and highly skilled occupation about the knowledge and skills necessary to perform key tasks in specific occupations which creates the analytical foundation for the development of standards occupation.

CES also continuously carries out the analysis and forecast of market needs for particular occupations, for the purpose of harmonizing education with labour market and develops recommendations concerning education enrolment policy and scholarship policy. The analysis is

carried out on the basis of relevant statistical data and indicators on employment of unemployed people according to the program of education, data from the survey of employers and takes into account the strategies and plans for economic development at regional and local level.

Below are listed deficit occupations for 2016 at the national level:

- Three-year programs: mason, carpenter, waiter, butcher, baker, locksmith, cook
- Four programs: nurse / general health care technician and pharmacy technician

Given the constant need for adjustment of the needs of the labour market with the system of education, or competencies required in the labour market and learning outcomes, CES systematically carries out activities of vocational guidance for students, and informing and counselling on career development.

Lifelong vocational guidance is an important tool of employment policy and represents early intervention and has a role in the prevention of (long-term) unemployment by providing support in making appropriate decisions about the choice of educational programs and employment. With activities of "early intervention" with students (holistic approach based on partnership) CES incorporates the career guidance as an integrated part of its jurisdiction to prevent early school leaving and have a preventive role in helping with making appropriate decisions about the choice of educational programs and employment.

Once a year the CES conducts the *Survey on career intentions of students* in primary and secondary school and publishes research results on vocational intentions of students in primary and secondary schools, which is a base on which expert teams of schools and the CES define the target groups that need special vocational guidance. Information from the survey is also forwarded to stakeholders in the field of education and employment at the county and state level.

In 2015 CES has developed a new interactive web portal E-usmjeravanje¹⁵ that offers a lot of information and tips that help its users in the development of career and business decisions and is intended for all target groups; pupils, students, unemployed and employed. The portal also offers information on more than 250 occupations with job descriptions, information on the required education and competencies for their satisfactory performance, employment opportunities and so on. One of the main quality of the website are self-assessment questionnaires that help customers

¹⁵ <http://e-usmjeravanje.hzz.hr/>

estimate their own interests and competencies in purpose of choosing the right career path, and in the assessment of qualities that are desirable in the labour market.

The Strategy for Lifelong Career Guidance in the Republic of Croatia was adopted in 2016, with the aim of establishing system of LCG and career management and the implementation of LCG in education systems, employment systems and social inclusion.¹⁶

3. DESCRIPTION OF THE APPRENTICESHIP SYSTEM¹⁷

The adoption of the *Act on Crafts* in 1994 introduced the dual system of education for crafts, model of the German education system for crafts. The name indicates that the education takes place in two places: in the trade school and in the craft workshop. Since the school year 1995/1996, 18 schools in the Republic of Croatia introduced the experimental application of a dual system of education.

Since then, until the school year 2003/2004 dual and the so-called "classical" education programs for crafts were implemented at schools in a parallel manner. The basic difference between a "classical" model of education in relation to the dual model is considerably larger fund of lectures in relation to practical training. In addition, practical training in the "classical" school model of education takes place mainly in school workshops (practicum), whereas in the dual system it takes place in licensed crafts workshops or legal entities.

In the year 2003, dual and traditional education systems for crafts were replaced by the unique model of education. Since 2004, a new curriculum was made for all occupations from the list of bound crafts by the unique model of education-UME programs.

In accordance with the *Rules on related and privileged crafts and way of granting privileges* (Official Gazette No 42/08) UME programs were published for the following professions:

¹⁶ Full text available at: https://ec.europa.eu/epale/sites/epale/files/strategija_cpu_eng_kon.pdf

¹⁷ The chapter Data and Analysis of Vocational Education was authored by the Zagreb Chamber of Trades and Crafts and has been translated and drafted by SEECEL and can under no circumstances can be regarded as language edited and revised text.

Table 9: UME programs

1. Toolmaker (Official Gazette No 136/03, 167/04)
2. Automobile electrician (Official Gazette No 112/04)
3. Automobile lacquer (Official Gazette No 136/03)
4. Automobile tinsmith (Official Gazette No 112/04)
5. Automobile mechanic (Official Gazette No 112/04)
6. Automobile mechatronic (Official Gazette No 96/11)
7. Locksmith (Official Gazette No 112/04)
8. Ship mechanic (Official Gazette No 112/04)
9. Chimney sweep (Official Gazette No 112/04)
10. Electrician (Official Gazette No 136/03)
11. Electro mechanic (Official Gazette No 136/03)
12. Electrician mechanic (Official Gazette No 136/03)
13. Plasterer (Official Gazette No 86/07)
14. Photographer (Official Gazette No 136/03)
15. Hairdresser (Official Gazette No 136/03)
16. Haberdasher (Official Gazette No 112/04)
17. Wire instruments maker (Official Gazette No 112/04)
18. Bow instruments maker (Official Gazette No 112/04)
19. Wooden boat builder (Official Gazette No 112/04)
20. Metal boat builder (Official Gazette No 112/04)
21. Pipe organs builder (Official Gazette No 112/04)
22. Plastic vessel builder (Official Gazette No 112/04)
23. Heating and air-conditioning installer (Official Gazette No 136/03, 167/04)
24. Domestic installations installer (Official Gazette No 96/11)
25. Chemical cleaner (Official Gazette No 112/04)
26. Carver/Stonecutter (Official Gazette No 112/04)
27. Hatter/Hat maker (Official Gazette No 112/04)
28. Waiter (Official Gazette No 112/04, 178/04)
29. Tinker (Official Gazette No 112/04)
30. Blacksmith (Official Gazette No 112/04)
31. Beautician (Official Gazette No 112/04)

32. Tailor (Official Gazette No 112/04)
33. Roofer (Official Gazette No 68/05)
34. Furrier (Official Gazette No 112/04)
35. Cook (Official Gazette No 112/04, 178/04)
36. Tinsmith (Official Gazette No 112/04)
37. Smelter (Official Gazette No 112/04)
38. Agricultural mechanic (Official Gazette No 112/04)
39. Butcher (Official Gazette No 112/04)
40. Milkman (Official Gazette No 112/04)
41. Shoemaker (Official Gazette No 112/04)
42. Furnace worker (Official Gazette No 112/04)
43. Pedicurist (Official Gazette No 136/03)
44. Baker (Official Gazette No 112/04)
45. Sign-painter (Official Gazette No 136/03)
46. Gas installer (Official Gazette No 136/03, 167/04)
47. Precise mechanic (Official Gazette No 112/04)
48. Salesperson (Official Gazette No 80/07)
49. Rifle maker (Official Gazette No 112/04)
50. Confectioner (Official Gazette No 112/04, 178/04)
51. House-painter (Official Gazette No 136/03)
52. Glazier (Official Gazette No 68/05)
53. Carpenter (Official Gazette 136/03)
54. Locksmith-mechanic (Official Gazette 136/03, 167/04)
55. Upholster (Official Gazette 112/04)
56. Carpenter (Official Gazette 68/05)
57. Turner (Official Gazette 136/03, 167/04)
58. Watchmaker (Official Gazette 112/04)
59. Plumber (Official Gazette 112/04)
60. Mason (Official Gazette 68/05)
61. Goldsmith (Official Gazette 112/04)

3. 1. Vocational education for bound crafts programs – UME programs - apprenticeship system

In accordance with the European guidelines that emphasize the importance of including education in the workplace in the regular system of vocational education, training for related trades takes place according to UME programs consisting of the general education and the apprenticeship.¹⁸

According to *The Crafts Act*, the apprenticeship program consists of professional-theoretical part, practical work and exercise curriculum.

Table 10: Number of hours in different programs.

	Hours			Total
	1 st Grade	2 nd Grade	3 rd Grade	
	Per year	Per year	Per year	
a) General education	315	315	224	854
b) Professional theory with optional teaching	281	280	288	849
c) Practical education with technological practicum	900	900	800	2600
Total (a+b+c)	1 496	1 495	1 312	4 303

The general part of the education (Croatian language, foreign language, History, Religious education/Ethics, Physical education, Politics and Economy) and professional theory with optional teaching part of the apprenticeship program (various for each occupation) is performed in crafts and legal entities or other secondary vocational school.

The apprenticeship program consists of professional theory with optional teaching part with practical training. Professional theory with optional teaching part of the apprenticeship is carried out in the crafts or secondary vocational schools with practical training in school workshops, craft workshops or legal entities workshops that have licence for apprenticeship. The practical part of the apprenticeship program consists of technological practicum at school, practical training in workshops and practical training in the work process (in craft workshop or the workshop of legal entities that have

¹⁸ Detailed information of Vocational education for bound crafts programs – UME programs - apprenticeship system in AVETAE publication: <http://refernet.hr/media/1087/apprenticeship-doc.pdf>

licence for apprenticeship). Craftsman or a legal entity must have a permit/license for the practical part of the apprenticeship. Regional chambers established by the Commission for licensing for certain occupations or occupational groups are responsible for licensing procedure. The permission for conducting practical work and practicum of apprenticeship is issued by the CCTC. The permit/license for apprenticeship programs can be given to a legal entity that meets certain material and human resources conditions (having a master-professional teacher as an employee for example).

Master-professional teacher (legal entity owner or an employee) is:

- a person who has passed the master exam;
- a person who has the same rights as persons who has passed the master exam (a person who has finished their secondary education and have at least 5 years of professional experience until 01.07.1994; secondary education must be acquired prior any professional experience) if they have passed the exam that proves basic knowledge of teaching the apprentices;
- a person with adequate secondary school education in the field for which they perform practicum of the apprenticeship, minimum 10 years of professional experience until 10.12.2013 and also if they have passed the exam that proves basic knowledge of teaching apprentices;
- a person who has completed their higher or high education and if they have passed the exam that proves basic knowledge of labour pedagogy;

Until 2014, the Regional Chambers of Crafts were conducting exams that indicate basic knowledge in the area of pedagogy of labour.

In the year 2016 MSE published the *Program of acquisition of pedagogical competences for vocational teachers, teaching assistants and mentors*. According to that program, person conducting practical teaching in the apprenticeship should complete the special program in duration of 225 hours and gain 60 ECTS points, which greatly hampered mentorship licensing process.

The practical part of apprenticeship and a large number of hours of practical training are one of the main attributes which distinguish training for crafts from education for industrial occupations. Number of hours of practical training in education for crafts is 900 hours in the first year of apprenticeship, 900 hours in the second year and 800 hours in the third year. Unique education programs determined the maximum number of hours of practical training in school and the minimum number of hours of practical training, mentored by craftsmen. Thus, the ratio of practical training at school and in the workplace (in craft workshop or workshop of the legal entity) are as follows: in the first year of apprenticeship students spend 360 hours in training in school and 540 hours of practical

training in the work process. In the second year they spend 270 hours of apprenticeship on practical teaching in school and 630 hours of practical training in the work process. Finally, in their third year of apprenticeship they spend 160 hours on practical teaching in school and 640 hours of practicum. Before enrolling, students conclude an Agreement with licensed legal entities (craft or legal entity) on apprenticeship governing the rights and obligations of apprentices and legal entities where they will conduct their practical classes. Craftsmen and legal persons, who make the apprenticeship program obligatory for the students, have to conclude a contract of apprenticeship in writing with the student, their parents or legal guardians.

Statistic data on the number of crafts in the Republic of Croatia decreased by the number of crafts that take on apprentices. In addition, the number of students involved with these craftsmen is important.¹⁹

Table 11: Number of crafts in Croatia

Number of crafts in the Republic of Croatia:	76.395 (data from 31.10.2016.)
Number of licensed legal entities (crafts and legal entities) for admission of apprentices	8.260
Number of students in the UME (unified model of education) system:	11.270

Records of apprenticeship contracts by 2014 were kept by the County Chambers of CCTC that were responsible for the registration of new apprenticeship contracts and the termination of the old ones. Students were submitting and registering their apprenticeship contracts in both licensed legal entities and schools. The regional chambers then made registrations of new contracts and the old ones, after apprentices stopped attending the program which gives us an accurate number of apprentices in licensed legal entities.

Since 2014, students registered their apprenticeship contracts with licensed legal entities through the web application e-apprenticeship program.²⁰ The current number of students registered in the application of e-apprenticeship program with an active contract is 15,286. Unfortunately, this does not give us the exact number because a lot of apprentices involved in the UME program tend to

¹⁹ Numbers are provided by Croatian Chamber of Trades and Crafts.

²⁰ <https://enaukovanje.portor.hr/>

enter into a new contract without cancelling the previous one. Therefore, we have no insight information into the actual number of apprentices in licensed legal entities.

3.1.1. The apprenticeship contract

The apprenticeship contract is usually concluded between craftsman or entrepreneur and students, their parents or legal guardians. The content of the Agreement is a result of the directives prescribed by the relevant Minister.

The contract regulates mutual rights, obligations and responsibilities between both sides throughout the duration of the apprenticeship program, especially for:

- Start and duration of the apprenticeship
- Students' working hours in the workshop or on site
- Duration and schedule of the students' break
- Financial remuneration for their effort
- Craftsmen's commitments regarding the students' curriculum

The contract is concluded in the four identical copies – for a student (parent or guardian), craftsmen (legal entities), school and the relevant Ministry. The contract is registered by the relevant Ministry.

According to the directives of the apprenticeship contract, student has the right to:

- Instructions given by the master-professional teacher to enable him to work independently in the field, all in accordance with the prescribed curriculum;
- Regular school attendance;
- Forty five vacation days during each school year, with holidays and days off also provided;
- Daily and weekly rest;
- Financial monthly compensation for their work, paid regularly each month in accordance with the directives of the apprenticeship contract, an integral part of the Regulation on the minimum requirements for the apprenticeship contract (Official Gazette No 63/14);
- Apprenticeships held only during the day (8-20 h), for no longer than eight hours;
- Exceptionally, apprenticeship for the regular first graders may not take more than 4 hours a day;
- Instruction and work with proper work assets;

- Usage of personal protective equipment;
- Health insurance and insurance from accident during their practical apprenticeship;
- taking an apprenticeship exam in the enrolled occupation;

Paragraph No 5 in the apprenticeship contract prescribes the obligation for craftsmen or legal entities to give apprentice financial compensation for their effort.

Financial compensation is paid as follows:

- 10% in their first year of apprenticeship
- 20% in their second year of apprenticeship
- 25% in their third year of apprenticeship – the percentage is taken from an average net salary in economy for the previous year in the Republic of Croatia.

The financial compensation is paid for their working hours planned by curriculum and apprenticeship program in the current year.

FINANCIAL COMPENSATION FOR APPRENTICES IN THE 2016/2017 SCHOOL YEAR

- Average net salary in Croatia for the year 2015 was 5,711.00 kn (approx. 760 eur)
- Financial compensation per hour is:
 - 3.30 kn in their first year of apprenticeship
 - 6.59 kn in their second year of apprenticeship
 - 8.24 kn in their third year of apprenticeship

The craftsman records apprentice's attendance through portfolio for practical training and pays financial compensation according to those records. According to the curriculum of apprenticeship and the practical part in the first year, the apprentice must implement at least 560 hours of practical training in the craft workshop. ²¹ In their third year, the apprentice must implement at least 640 hours of practical training in the craft workshop. In that case, financial compensation would be 5.273,60 kn (640 hours x 8,24 kn) which is approx. 700 euro.

In case that an apprentice implements only half of practical training per month (86,6 hours), the compensation for their first year would be 285,78 kn (approx. 40 euro). In their second year the

²¹ Overall financial compensation for their first year is 1.848,00 kn (560 hours x 3,30 kn) which is approx. 245 eur. In their second year, the apprentice must implement at least 630 hours of practical training in the craft workshop. In that case, financial compensation would be 4.151,70 kn (630 hours x 6,59 kn) which is approx. 550 eur.

compensation would be 570,69 kn (approx. 75 euro) and in their third year the compensation would be 713,58 kn (approx. 95 euro).

In case that an apprentice implements whole practical training in a current month (173,2 hours), the compensation for their first year would be 571,56 kn (approx. 75 euro). In their second year, the compensation would be 1.141,39 kn (approx. 150 euro) and in their third year the compensation would be 1.427,17 kn (approx. 190 euro).

Before they start practical training in workshop or legal entities, first grade students must attend a minimum of 35-70 hours of practical training at school, firstly to get familiar with the basics of the profession and also to pass the safety-at-work examination. After passing the safety-at-work exam, they can start attending practical training in the working process.

During the attendance of practical vocational education every student has an apprenticeship portfolio. That portfolio is mandatory document for every teacher of practical trainings and master-professional teacher during the students' apprenticeship. The working portfolio consists of all relevant information on the implementation of practical vocational education of each and every student.

An apprenticeship portfolio is a mandatory document of every master-professional teacher or mentor which they use until the end of the students' apprenticeship. Also, that portfolio is a precondition for apprentice taking apprenticeship examination at the end of their schooling and it consists from:

1. Annex for **student - portfolio** of practical vocational education consists from:
 - general information about the school (name, address and phone number, name and surname of master-professional teacher);
 - general information about the apprentice (name and surname of student, address, phone number, name and surname of a parent/legal guardian, address and phone number of a parent/legal guardian),
 - occupation;
 - the apprenticeship contract number;
 - class and a school year of practical work;
 - general information about the crafts/ legal entities in which the practical part of apprenticeship will be performed (craft/ legal entities name, address and phone number, name and surname of the owner and the name of the master-professional teacher (the data estimated for the 5 crafts/ legal entities);

- school certificate of having passed the safety-at-work exam, with date and signature of the school teacher;
- pedagogical documentation (records regarding the attendance of the practical part of the apprenticeship in the craft/ legal entity for each year, records regarding the attendance of the practical part of the apprenticeship at school for each year, data regarding the students' final score and conduct in the practical part of the apprenticeship at school and legal entities for each year of apprenticeship, the records of three different control examinations);
- diary of practical vocational education (instructions for keeping a work diary and a general example of the operational preparations for students' training);
- 30 sheets practical vocational education program;
- Safety-at-work Certificate.

2. Annex for the **master-professional teacher**:

- general instructions;
- practical vocational education program (Framework Programme of practical vocational education, general example of operational preparation for training of the apprentices, lesson notes, evaluation exercises or assignments examples, apprentices attendance records in crafts/ legal entities for all years of apprenticeship);
- the apprenticeship contract.

During the second half of the second year of apprenticeship control exams are conducted. Those exams are designed to establish whether the objectives and tasks of the apprenticeship are fulfilled. The control exam is usually administered by the Commission for the implementation of the control exam and it consists of a professional theory teacher, a practical vocational education teacher and a craftsman. The control exam consists of practical work and written assessment of professional theoretical content. Commission for implementation of control exam consists of three members: professional theory teacher from school, practical vocational education teacher and craftsman. The evaluation of students' knowledge and abilities include all those implementing an apprenticeship program. The success of the control exam is presented with a descriptive grade. If the Commission for the implementation of the control examination determines that the objectives and tasks of apprenticeship are not fulfilled, they are obliged to discover the reasons for their poor realization and also construct ways for their reparation.

After successfully completing secondary education in vocational programs for bound crafts, students have to take an apprenticeship exam that is organised by AVETAE in accordance with the

Regulation of Procedures and manners of taking apprenticeship examination (Official Gazette No 63/14, 78/14). AVETAE and The National Centre for External Evaluation of Education are responsible for external evaluation of apprenticeship exam, in accordance with the Vocational Education and Training Act.

The exam includes verification of practical and professional competencies needed for performing crafts duties in accordance with the standard qualifications. The exam is taken in front of the committee gathered by the AVETAE, which consists of people who have the proper vocation title, master-professional teachers from vocational schools and the craftsmen, who make the majority. After passing the exam, student will be issued a Certificate for passing an apprenticeship exam. Having the Certificate and with two years of experience in the profession, it is possible for student to approach the Master's exam.

INCENTIVES FOR EMPLOYERS WHO CONDUCT APPRENTICESHIP

Ministry of Economy, Entrepreneurship and Crafts offers incentives for contractors of practical training. State aid in accordance with Paragraph No 6 of the State Aid for Education and Training Act (Official Gazette No 14/14) and the Regulation on the content of the state aid records for Education and Training (Official Gazette No 12/08, 13/09):

The State Aid for Education and Training Act (Official Gazette No 14/14)

- Paragraph No 6 Practical teaching and practice of apprenticeship for occupations in the system bound crafts

SCHOLARSHIPS FOR APPRENTICES

Ministry of Economy, Entrepreneurship and Crafts– scholarships for students from vocational schools

SCHOLARSHIPS AT THE LEVEL OF CITIES AND COUNTIES (example: City of Zagreb scholarship for students being educated for deficiency occupations.

3. 2. Laws and regulations, challenges

Brief historical review clearly shows that vocational education is specific from its beginnings because it is carried out in two different places: in the craft school or secondary vocational school and in craft workshop or legal entity. Therefore, for the right regulation of education for crafts,

stakeholders participating come from the fields of education, science and economy. Inherent laws regulating education for trades and crafts are Primary and Secondary School Education Act (Official Gazette No 87/08, 86/2009, 92/2010, 105/2010, 90/2011, 16/2012, 86/2012, 94/2013 and 152/2014). By the year 2008 that was the Secondary School Education Act by the MSE Also, we have to mention Act on Trade (Official Gazette No 77/93, 90/96, 102/98, 64/01, 71/01, 49/03, 68/07, 79/07, 40/2010, 143/2013) by the Ministry of Economy, Entrepreneurship and Crafts.

Education for craft professions is regulated by following laws and regulations:

1. Vocational Education Act (Official Gazette No 30/2009)

- Regulation on Licensed and Privileged Crafts and Manner of Issuing Privileges (Official Gazette No 42/08)
- Regulation on the Procedures and Methods of Issuing Permits/Licenses for Carrying Out Practical Training and Apprenticeship (Official Gazette No 37/15)
- Regulation on the Manner of Organizing and Teaching in Vocational Schools and Practical Training in Other Vocational Schools (Official Gazette No 84/94)
- Rules on Related And Privileged Crafts and ay of Granting Privileges (Official Gazette No 31/95, 87/01, 47/05, 42/08)
- Regulation on the Method of Realization of Apprenticeship Programs and Vocational Training for Related Trades and the Rights, Obligations, Monitoring, Evaluation and Assessment of Apprentices (Official Gazette No 69/04)
- Regulation on Minimum Requirements for Apprenticeship Contracts (Official Gazette No 18/08, 19/10, 63/2014)
- Regulation on the Procedures and Manners of Taking an Apprenticeship Exam (Official Gazette No 116/02, 63/2014)

Education for craft professions is also regulated by the unique curricula for crafts programs and apprenticeship exams for trades and crafts of the list of bound trades according to the Rules on bound and privileged crafts and way of granting privileges.

4. OVERALL CHALLENGES FACED BY THE VET SYSTEM

This section summarises some of the main challenges facing the VET system based on existing research, policy documents and international reviews of the VET system.

Overall challenges for VET system

- **Curriculum – weak links between VET and the world of work:** According to European Training Foundation (2012), VET in Croatia is not closely linked to the world of work. According to the European Council (2014) recommendations, the VET curriculum is “outdated” and is undergoing a reform in the form of piloting new school curricula. The report emphasised that work-based learning and career guidance across secondary and tertiary education are lacking. Furthermore, the SEECCEL report made for the EU SME Envoys Network (2015) emphasize that link to the entrepreneurship key competence within curriculum and qualifications frameworks are lacking as well.
- **Needs analysis:** a systematic comprehensive analysis that would investigate the connection between education and labor market needs through multi-year period has not been implemented. Area of vocational education and training is the most directly and closely connected system with labour market. It is in its nature to enable acquisition of professional competencies that are relevant, modern and most importantly, supporting economy and developing it in modern and competitive way. Significant progress has been made by creating sector profile and with the establishment of CROQF.
- **Expensive VET programs:** Due to the staff requirements and demands for certain standards of equipment, professional programs are expensive, and VET institutions need considerable support in adjusting and changing supply of the programs.
- **Skills mismatch –structure of VET graduates is not matched with labour market demand:** Apart from the insufficient supply of highly skilled people compared with demand, there also appear to be serious discrepancies between supply and demand for specific educational and skills profiles in many sectors (ETF, 2012, World Bank, 2009), with some VET programmes with the highest enrolment rates preparing students for occupations with the highest number of unemployed persons.

- **Employment challenges for VET graduates:** As described in the previous sections, the high levels of youth unemployment in Croatia, including among VET graduates, confirm the relevance of the two previously identified challenges: graduates produced by the VET system in Croatia do not satisfy the needs of the labour market.
- **Stakeholder engagement:** According to the European Council (2014) report, employers' engagement with VET, and secondary and tertiary education is low. CEDEFOP (2014) also notes that although an institutional framework has been established, it remains a challenge to engage trade unions, business communities and local authorities more actively in developing VET qualifications and learning programmes including the definition of competences.

Specific challenges for industrial and craft schools

- **Dropping enrolment patterns place industrial and craft schools at potential risk:** As noted in the previous sections, enrolment in three-year vocational programmes has seen a continual drop since the mid-1990s, with numbers of newly-enrolled students falling from 21 000 in 1998 to around 10 000 today in 2015 – more than halving in just 17 years. The decline in cohort size translated into a reduction in the number of entrants only in the three-year vocational programmes, while the number of places in more popular technical and gymnasiums remained steady over the years due to the existing system of setting entry quotas. Effectively, the entire demographic decline exclusively impacted three-year vocational programmes, in particular the least popular sectors within it (Matković et al, 2013).
- **Lack of prospects for progression from three-year vocational schools to tertiary education:** As noted in previous sections, the lack of real prospects for progressing to tertiary education remains a serious challenge for ensuring equal educational opportunities and for promoting lifelong learning.
- **Governance challenges at national level for industrial and craft schools:** According to ETF (2012), views seem to differ as to who should have jurisdiction over the three-year VET curriculum. At ministerial level, an ambiguity has existed between the MSE and the MEC, as well as between the AVETA and the CCTC. According to ETF (2012), the institutional design does seem to foster

effective cooperation between these stakeholders and certain stakeholders see the development of the VET system in different ways.

- **Social stratification and risk of social exclusion:** Finally, another important challenge that was not touched upon so far in the report: social stratification and risk of social exclusion in VET. Studies have shown that the tracking that takes place after the completion of basic education (whereby students can enrol in three possible tracks of VET or general schools) results in social stratification, whereby enrolment trends in different school types are correlated to parental income (World Bank, 2008) and parental occupation and education levels (Matković, 2009.a). Overall, gymnasiums enrol a larger proportion of students from higher socioeconomic backgrounds, while three-year VET schools have the most socially disadvantaged students: they have a higher proportion of lower-socioeconomic students, Roma and students with disabilities. Three-year VET schools also have higher drop-out rates (Matković et al., 2013) and graduates of three-year schools cannot enrol directly in tertiary education. According to Matković et al., (2013), the continuation of the existing enrolment patterns in 3-year VET schools mentioned above will result in 10% of the cohort with the poorest grades enrolling in 3-year VET schools, 'leading to a perfect storm of social exclusion, hard-to-teach students and a small pool of vocationally-trained workers ready to enter the labour market' (p. 10).
- **Training of mentors in companies, crafts, in schools:** Since the adoption of the Crafts Act 2013, there is no adequate program for the training of mentors within the companies. Furthermore, the *Program of acquisition of pedagogical competences for vocational teachers, teaching assistants and mentors* is not in accordance with the possibilities of employers, which further discourages them for inclusion in WBL.

5. PROPOSALS OF NECESSARY ACTIONS FOR REDUCING/ELIMINATING OBSTACLES

In Croatia there are two chambers: CCTC which covers crafts, and CCE which covers companies. Currently only the CCTC is authorized institution that can give authorization to any legal entity to participate in vocational training programs. Since the adoption of *The Crafts Act* the introduction of dual/unified education system for trades and crafts, system was implemented through a partnership between schools and craftsmen/craft chambers. While the availability of information and

responsiveness of trades and crafts is satisfactory, situation is somewhat different in case of companies that are members of the CCE. WBL is just as important for occupations acquired four-year schools, industrial and crafts schools, because these are professions that are closely related to the application of professional knowledge and skills in work place.

Law changes and new regulations partially subtracted authority of CCTC in the participation and implementation of education for trades and crafts that greatly hindered the process of licensing legal entities for having apprentices. Law changes created a collapse of the system based on a partnership between trades and crafts and vocational schools, regional chambers and master-professional teachers in licensed legal entities. So it is necessary to involve CCE in development of WBL, so it could also cover their members (enterprises).

The current program of acquisition²² of pedagogical competences is based on paid one-year training programs for mentors performed by institutions of higher education and which are almost equal to the programs for professors in vocational schools. This represents a sometimes insurmountable obstacle for employers because most companies cannot afford to send their workers for education for one year. It is not suitable for mentors in licensed legal entities and greatly complicates the issuing of licenses for the reception of apprentices.

Therefore, it is necessary to establish a system of training for mentors in enterprises that would include the implementation of the necessary pedagogical competencies required for teaching students in the company. Its duration and mode of implementation would be adapted to the capabilities of employers.

Furthermore, it is necessary to change the whole system and adapt it to current financial, technical and HR possibilities of the companies in Croatia and strive to remove all administrative and other obstacles that discourage them to participate in the education system.

The CCE has not been actively involved in the area of vocational education and therefore did not offer any services in that area to its members, nor had any authority. Active involvement of CCE in the segment of vocational education and establishing a system to authorize and provide mentors would result in growing number of companies that wish to engage in vocational education.

²² The decision of adopting a program of acquisition of pedagogical competences for vocational teachers, associates in teaching and mentors (Official Gazette No 8/16)

Both CCE and CCTC have a direct and daily contact with the companies, trades and crafts, and that both economic associations have regional offices, they could work to improve the quality of the education system in real work environment.

In addition of better regulation of the VET system, due to the decline of interest in vocational occupations and qualifications, it is necessary to systematically work on their promotion towards the parents and children, in partnership with stakeholders - businesses, crafts, schools and their owners.

It is necessary to define the priority sectors in which the shortage of skilled labor is the most pronounced, and companies in these sectors (align enrollment quotas to the needs of the labor market) and to secure the system that would provide financial and other support to the companies to ensure their skilled workforce for the future

One of the aims of VET is to acquire practical knowledge, skills and training for students (apprentices) to work independently and successfully on the labour market. Therefore, it is necessary to connect the education for crafts with the labour market through the process of apprenticeship. In the same time it is important to have in mind that VET students should have a possibility to vertical mobility in education system. WBL is a model that could be adopted on the tertiary level of VET education.

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Chapter II Study Research Results

7. INTRODUCTION

Terminological remark: Deep terms differentiation in Croatian language for and within the apprenticeships scheme causes that the terms: "work learning", "workforce learning", "work-based learning" encompasses all forms of learning in the workplace – both traineeships and apprenticeships, for the purposes of this study/research and this report.

This research report is prepared and drafted by SEECCEL as a part of the project „Strengthening the capacities of the chambers and partners to help SMEs to engage in apprenticeship" (Cap4App), co-financed from the Erasmus + Programme of the European Union. The Croatian Chamber of Economy was the project implementation body. The report consists of the data collected through three separate questionnaires "Apprenticeship Scheme for Vocational Schools: (1): School Questionnaire; (2) Questionnaire for SMEs; and (3) Questionnaire for local stakeholders. All three questionnaires was developed and distributed on line by using Google Docs tool, and can be found as annexes to this report.

8. SCHOOL QUESTIONNAIRE

The goal of this research was to analyse possible methods of implementing work-based learning for vocational school students and to identify possible problems from the perspective of schools. This survey instrument was designed for the project "Strengthening the capacities of the chambers and partners to help SMEs to engage in apprenticeship" (Cap4App). Total of 119 schools from each Croatian county participated in the research.

8.1 Data on the examinees

Table 7 shows number of schools by county, and table 8 shows study areas covered by schools that participated in this research. The largest number of schools that filled the questionnaire are from the *Splitsko-Dalmatinska County* (11.76%) and *Town of Zagreb* (10.08%). The least questionnaires were filled by the schools from *Požeško-Slavonska County* (0,84%) and *Varaždinska County* (0.84%).

Table 7. Schools that participated in research by county

	f	%
01. Bjelovarsko-Bilogorska County	9	7.56
02. Brodsko-Posavska County	4	3.36
03. Dubrovačko-Neretvanska County	7	5.88
04. Istarska County	8	6.72
05. Karlovačka County	6	5.04
06. Koprivničko-Križevačka County	2	1.68
07. Krapinsko-Zagorska County	4	3.36
08. Ličko-Senjska County	2	1.68
09. Međimurska County	4	3.36
10. Osječko-Baranjska County	10	8.40
11. Požeško-Slavonska County	1	0.84
12. Primorsko-Goranska County	7	5.88
13. Sisačko-Moslavačka County	5	4.20
14. Splitsko-Dalmatinska County	14	11.76
15. Šibensko-Kninska County	3	2.52
16. Varaždinska County	1	0.84
17. Virovitičko-Podravska County	4	3.36
18. Vukovarsko-Srijemska County	5	4.20
19. Zadarska County	6	5.04
20. Zagrebačka County	5	4.20
21. Town of Zagreb	12	10.08

As visible from table 8, the largest number of questionnaires were completed by the participants from schools offering programmes in *Mechanical engineering, shipbuilding and metallurgy* (18.27 %), followed by the schools offering programmes in *Economy and trade* (16.94%). The least participants were from schools which are offering programs in *Mining, geology and chemical technology* (0.66%).

Table 8. Study areas covered by schools

	f	%
I. Agriculture, food and veterinary	30	9.97
II. Forestry and wood technology	14	4.65
III. Mining, geology and chemical technology	2	0.66
IV. Textiles and leather	6	1.99
V. Graphic technology	5	1.66
VI. Mechanical engineering, shipbuilding and metallurgy	55	18.27
VII. Electrical engineering and computing	42	13.95
VIII. Construction and geodesy	12	3.99
IX. Economy and trade	51	16.94

X. Tourism and hospitality	38	12.62
XI. Transport and logistics	17	5.65
XII. Health	8	2.66
XIII. Personal and other services	21	6.98

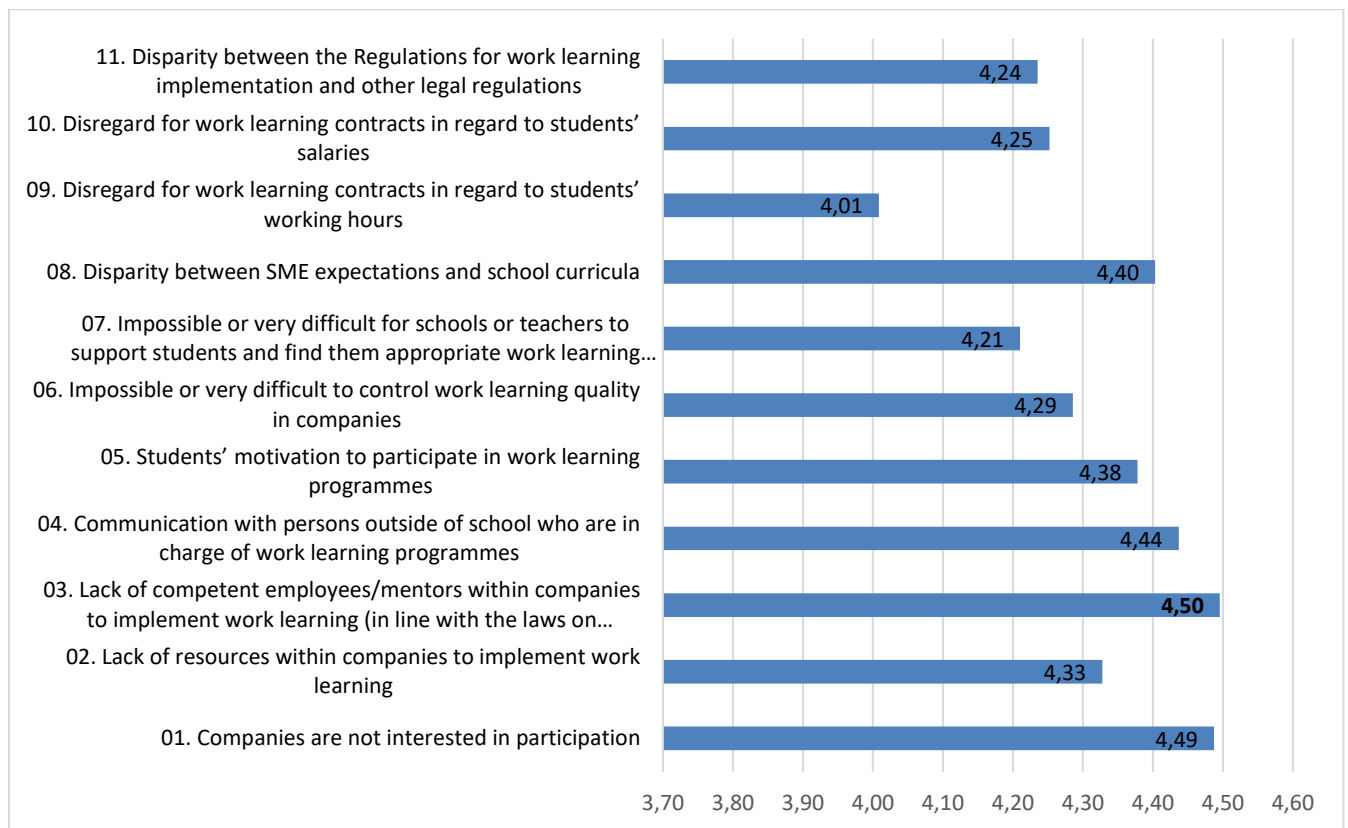
8.2 Study findings

As visible from table 9 and figure 5, the study participants evaluated the significance of barriers to implementing work-based learning outside schools on the five levels Likert scale (1- not important at all, 2 - mostly not important, 3 - neutral, 4 - somewhat important, 5 - extremely important). According to the gathered data, the most significant barrier is: *Lack of competent employees/mentors within companies to implement work-based learning* (M=4.50; SD=0.735) and *Communication with persons outside of school who are in charge of work-based learning programmes* (M=4.40; SD=0.816), while the least significant barrier is *Disregard for work-based learning contracts in regard to students' working hours* (M=4.01; SD=1.021).

Table 9. Barriers to implementing work-based learning outside schools

	N	M	SD
01. Companies are not interested in participation	119	4,49	,769
02. Lack of resources within companies to implement work-based learning	119	4.33	.782
03. Lack of competent employees/mentors within companies to implement work-based learning (in line with the laws on vocational education and crafts)	119	4.50	.735
04. Communication with persons outside of school who are in charge of work-based learning programmes	119	4.44	.744
05. Students' motivation to participate in work-based learning programmes	119	4.38	.883
06. Impossible or very difficult to control work-based learning quality in companies	119	4.29	.804
07. Impossible or very difficult for schools or teachers to support students and find them appropriate work-based learning placements	119	4.21	.910
08. Disparity between SME expectations and school curricula	119	4.40	.816
09. Disregard for work-based learning contracts in regard to students' working hours	119	4.01	1.021
10. Disregard for work-based learning contracts in regard to students' salaries	119	4.25	1.002
11. Disparity between the Regulations for work-based learning implementation and other legal regulations	119	4.24	.954

Figure 5. Barriers to implementing work-based learning outside schools



Some of the study participants made additional comments on the work-based learning programmes. These comments are:

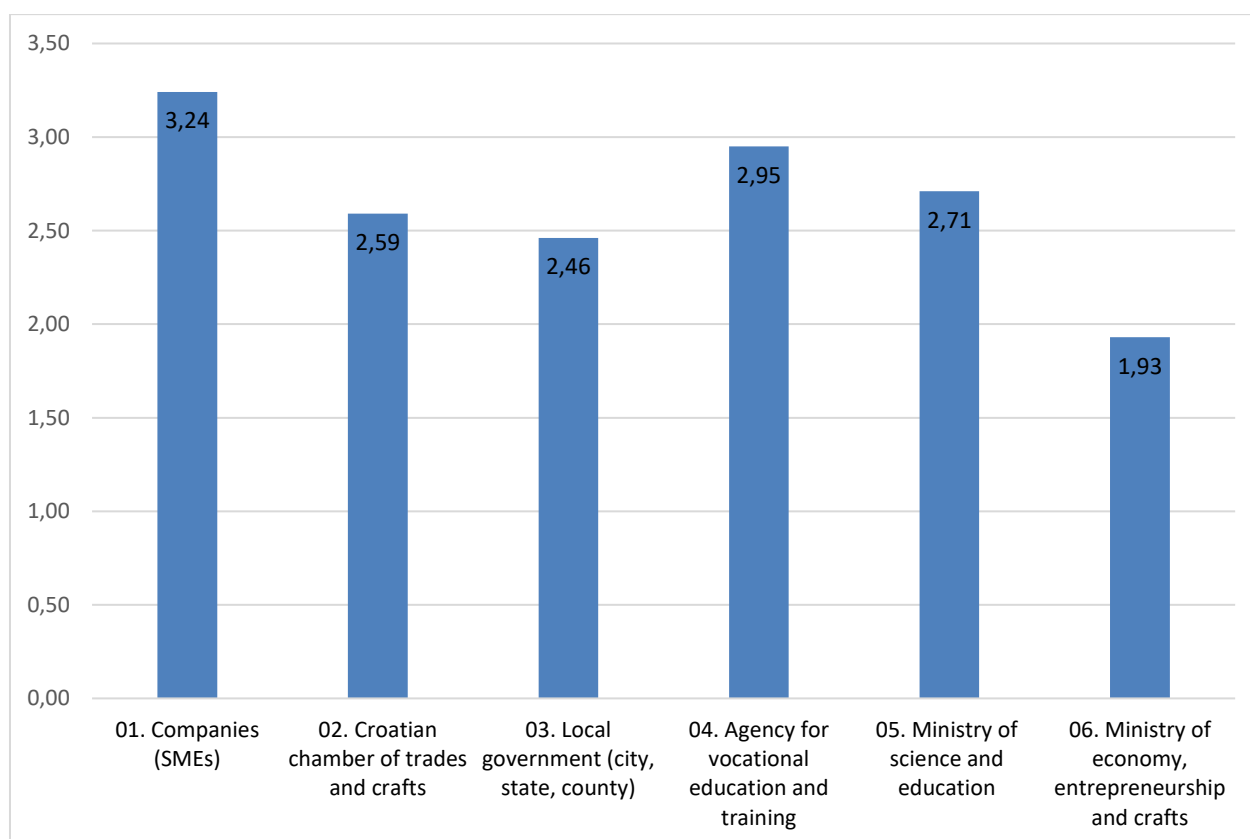
- It is necessary to expand the legal framework that would regulate obligations and benefits for SMEs related to work-based learning programmes.
- There are an insufficient number of licenced workshops that could be used for work-based learning programmes. In particular, mentors from companies do not know how to grade students' knowledge and skills.
- There is no communication between companies that are working with same students.
- When work-based learning programmes and workshops are delivered at schools and practical section of the work-based learning programme at the school boat, the issues related to the finances and property are not similar to other work-based learning programmes which are delivered in companies.
- Cooperation with parents is necessary.

As visible from table 10 and figure 6, the study participants evaluated the level of cooperation and communication between their schools and stakeholders related to the implantation of work-based learning on the six level Likert scale (0- no cooperation, 1 - very bad cooperation, 2 - bad cooperation, 3 - neutral, 4 - good cooperation, 5 - very good cooperation). The results indicate that best cooperation is present between schools and companies (SMEs) (M=3.24; SD=1.025), while the worst cooperation is established with the *Ministry of economy, entrepreneurship and crafts* (M=1.93; SD=1.376).

Table 10. Level of cooperation and communication between schools and stakeholders

	N	M	SD
01. Companies (SMEs)	119	3.24	1.025
02. Croatian chamber of trades and crafts	118	2.59	1.586
03. Local government (city, state, county)	119	2.46	1.517
04. Agency for vocational education and training	119	2.95	1.301
05. Ministry of science and education	118	2.71	1.366
06. Ministry of economy, entrepreneurship and crafts	118	1.93	1.376

Figure 6. Level of cooperation and communication between schools and stakeholders

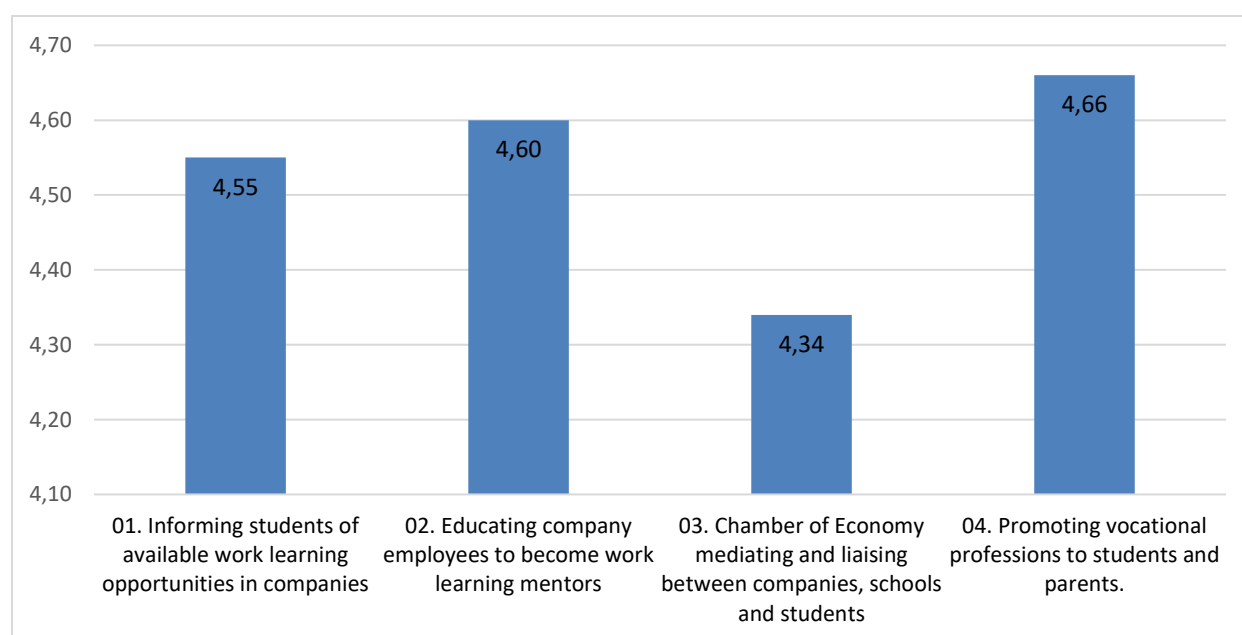


The table 11 and figure 7 show data on non-financial incentives, which chambers of economy or crafts might offer in order to improve work-based learning programmes. The respondents evaluated the importance of certain types of non-financial incentives on the on the five level Likert scale (1 - not important at all, 2 - mostly not important, 3 - neutral, 4 - somewhat important, 5 - very important). According to the gathered answers, the most important incentive would be *Promotion of vocational professions to students and parents* (M=4.66; SD=0.728) and *Educating company employees to become work-based learning mentors* (M=4.60; SD=0.693), while the least important would be the *Chamber of Economy mediating and liaising between companies, schools and students* (M=4.34; SD=0.915).

Table 11. Non-financial incentives for improvement of work-based learning programmes

	N	M	SD
01. Informing students of available work-based learning opportunities in companies	119	4.55	.745
02. Educating company employees to become work-based learning mentors	119	4.60	.693
03. Chamber of Economy mediating and liaising between companies, schools and students	119	4.34	.915
04. Promoting vocational professions to students and parents.	119	4.66	.728

Figure 7. Non-financial incentives for improvement of work-based learning programmes



The survey participants listed some of incentives that work-based learning programmes would benefit from. The listed incentives are:

- Training for work with students with disabilities for company employees.
- The incentives should be real, not declarative.
- The important role of the Chamber in organizing additional training both for students and mentors from companies. The chambers should organize a work-based learning programme centres (similarly to Germany) and conduct external knowledge and skill tests.
- Chambers should take additional responsibility towards vocational education, they should provide both financial and non-financial supports (similarly to their role in Germany)
- Tax reliefs for companies that participate in work-based learning programmes.
- Guidance and evaluation of mentors from companies.
- Provision of additional scholarships for the professions in demand.

As visible from Figure 8, the questionnaire participants indicated the frequency of the feedback on the quality of the work-based learning programme that they receive from SMEs. As visible from their answers, the majority of the schools (68.9%) do receive feedback on the programme quality.

Figure 8. Feedback on the quality of the work-based learning programme

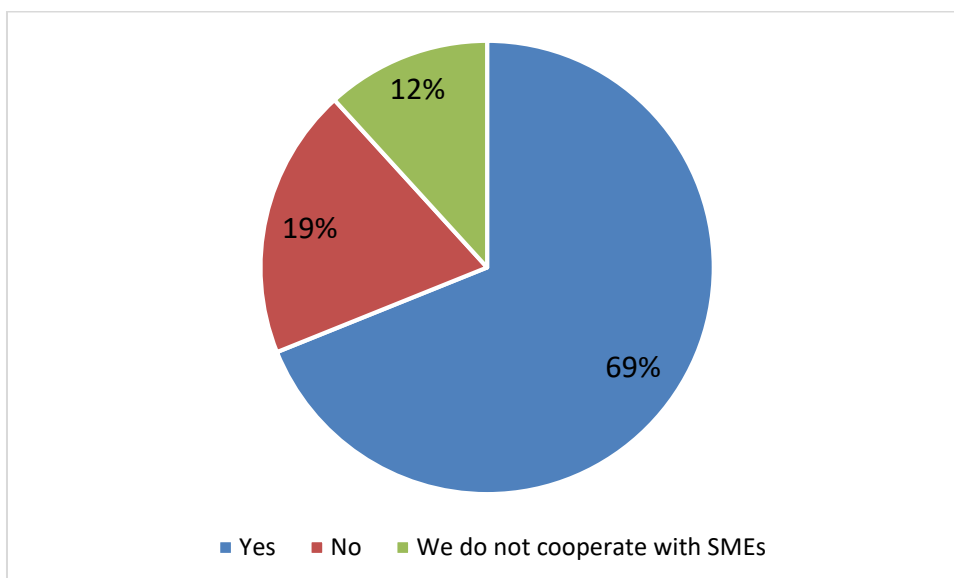


Figure 9 shows the number of schools (72.3%) which are prepared to participate in vocational education where students would spend 50% or more of their time in companies.

Figure 9. Number of schools prepared for vocational education implementing work-based learning

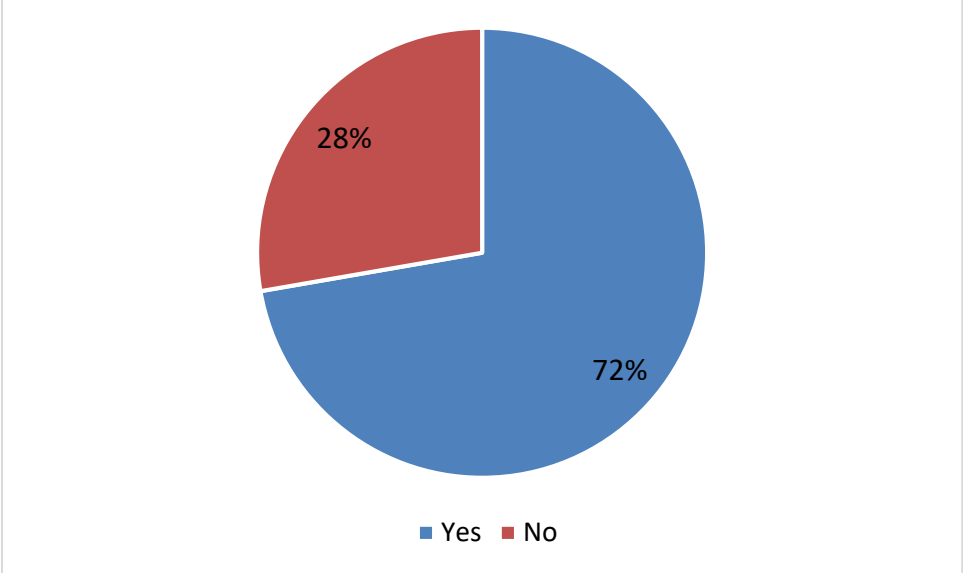


Table 12 and Figure 10 show the study participants ratings of the factors that are recognized as important for successful implementation of work-based learning in companies in case that student spends more than 50% of their time in companies. The participants evaluated 9 factors on the five levels Likert scale (1 - not important at all, 2 - mostly not important, 3 - neutral, 4 - somewhat important, 5 - very important). As visible from the received responses, *Company motivation/interest* is recognized as the most important criteria (M=4.71; SD=0.785), together with *Competent employees/mentors within companies to implement work-based learning* (M=4.66; SD=0.741). The list important would be *Methods for schools or teachers to support students and find them appropriate work-based learning placements* (M=4.33; SD=0.855).

Table 12. Criteria for successful implementation of work-based learning in companies

	N	M	SD
01. Company motivation/interest	119	4.71	.785
02. Adequate resources within companies for implementing work-based learning	119	4.61	.749
03. Competent employees/mentors within companies to implement work-based learning (in line with the laws on vocational education and crafts)	119	4.66	.741

04. Coordination between school schedules and company schedules	119	4.65	.787
05. Communication with persons outside of school who are in charge of work-based learning programmes	119	4.66	.716
06. Students' motivation to participate in work-based learning programmes	119	4.59	.730
07. Methods for controlling and managing work-based learning quality in companies	119	4.61	.739
08. Methods for schools or teachers to support students and find them appropriate work-based learning placements	119	4.33	.855
09. Aligned SME expectations and school curricula	119	4.48	.842

Figure 10. Criteria for successful implementation of work-based learning in companies

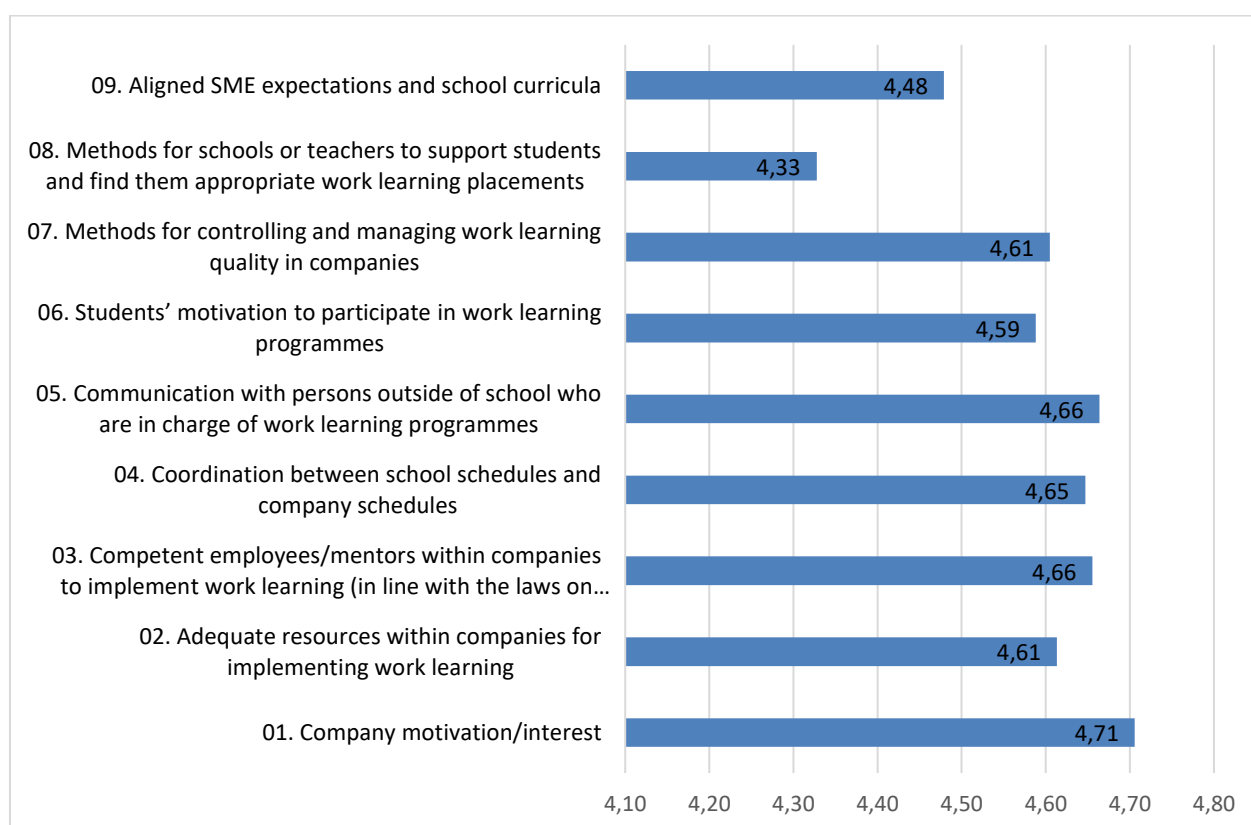


Table 13 presents the relation between time students spend in work-based learning programmes and school requirements for resources, employees and equipment. According to the research participants' answers, the school would need less employees if students' spend more time in work-based learning programmes.

Table 13. School requirements for resources, employees and equipment.

		Less	Equal	More
Resources	f	34	65	20
	%	28.6	54.6	16.8
Employees	f	48	59	12
	%	40.3	49.6	10.1
Equipment	f	30	62	27
	%	25.2	52.1	22.7

9. QUESTIONNAIRE FOR SMES

The goal of this questionnaire was to collect information on the secondary vocational education from the perspective of small and medium enterprises, particularly for those vocational programs in which there is a need for organizing work-based learning in the company. The study goal was to identify key challenges faced by companies that previously implemented some form of learning at work and companies which will participate in these forms of learning in the future. The survey instrument was designed for the project „Strengthening the Capacities of the Chamber and Partners to Help SMEs to Engage in Apprenticeship” and was completed by 691 representatives from SMEs from each Croatian county.

9.1 Data on the examinees

Table 14 shows number of SMEs by county, and table 15 shows the company’s primary activity area. The largest number of SMEs that filled the questionnaire are from the *Splitsko-Dalmatinska County* (14.2%) and *Town of Zagreb* (9.4%). The least questionnaires were filled by the SMEs from *Krapinsko-Zagorska County* (0.1%).

Table 14. SMEs that participated in research by county

	f	%
01. Bjelovarsko-Bilogorska County	26	3,8
02. Brodsko-Posavska County	16	2,3
03. Dubrovačko-Neretvanska County	38	5,5
04. Istarska County	22	3,2
05. Karlovačka County	34	4,9
06. Koprivničko-Križevačka County	15	2,2
07. Krapinsko-Zagorska County	1	0.1
08. Ličko-Senjska County	27	3,9
09. Međimurska County	14	2,0
10. Osječko-Baranjska County	37	5,3
11. Požeško-Slavonska County	23	3,3
12. Primorsko-Goranska County	64	9,2
13. Sisačko-Moslavačka County	21	3,0
14. Splitsko-Dalmatinska County	98	14,2
15. Šibensko-Kninska County	31	4,5
16. Varaždinska County	44	6,4
17. Virovitičko-Podravska County	14	2,0
18. Vukovarsko-Srijemska County	43	6,2
19. Zadarska County	28	4,0
20. Zagrebačka County	30	4,3
21. Town of Zagreb	65	9,4

As visible from table 15, the largest number of questionnaires were completed by the participants from SMEs working in the area of *Tourism and hospitality* (15.9%), followed by the SMEs working in the area of *Personal and other services* (13.0%) and *Construction and geodesy* (12.4%). The least participants were from the SMEs working in the area of *Health* (0.3%).

Table 15. SMEs primary activity area

	f	%
I. Agriculture. food and veterinary	47	6.8
II. Forestry and wood technology	19	2.7
III. Mining. geology and chemical technology	50	7.2
IV. Textiles and leather	12	1.7
V. Graphic technology	8	1.2
VI. Mechanical engineering. shipbuilding and metallurgy	78	11.3
VII. Electrical engineering and computing	63	9.1
VIII. Construction and geodesy	86	12.4
IX. Economy and trade	60	8.7
X. Tourism and hospitality	110	15.9
XI. Transport and logistics	51	7.4
XII. Health	2	0.3
XIII. Personal and other services	90	13.0

9.2 Research findings

According to the data presented in Figure 11, approximately half (49.4%) of the SME's participating in this research had experience in organizing work-based learning for vocational education students. Figure 12 presents the types of implemented work-based learning, and it is visible that the majority of companies that replied "yes" in previous question, implemented traineeships for three year and four year programmes (284 or 83%).

Figure 11. Companies with experience in organizing work-based learning for vocational education students

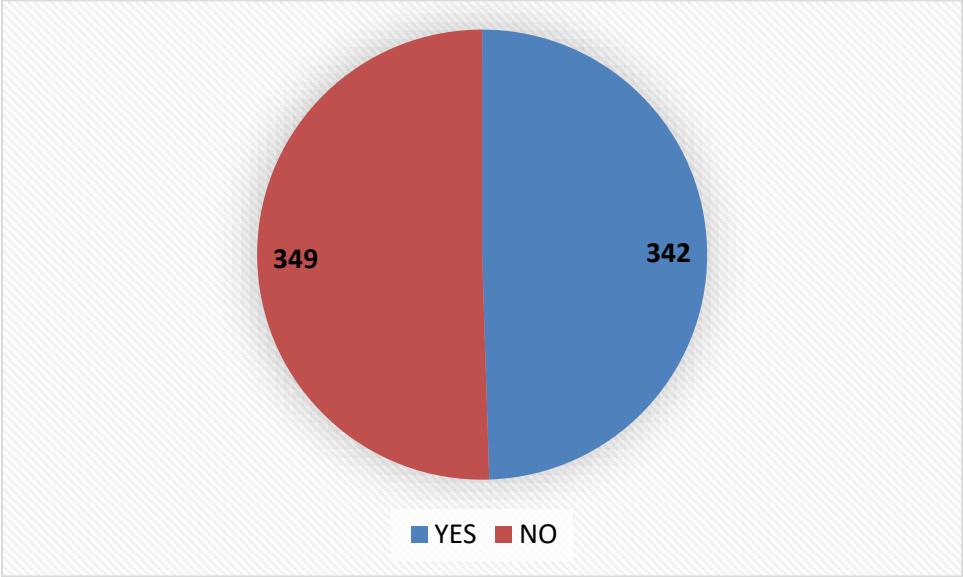
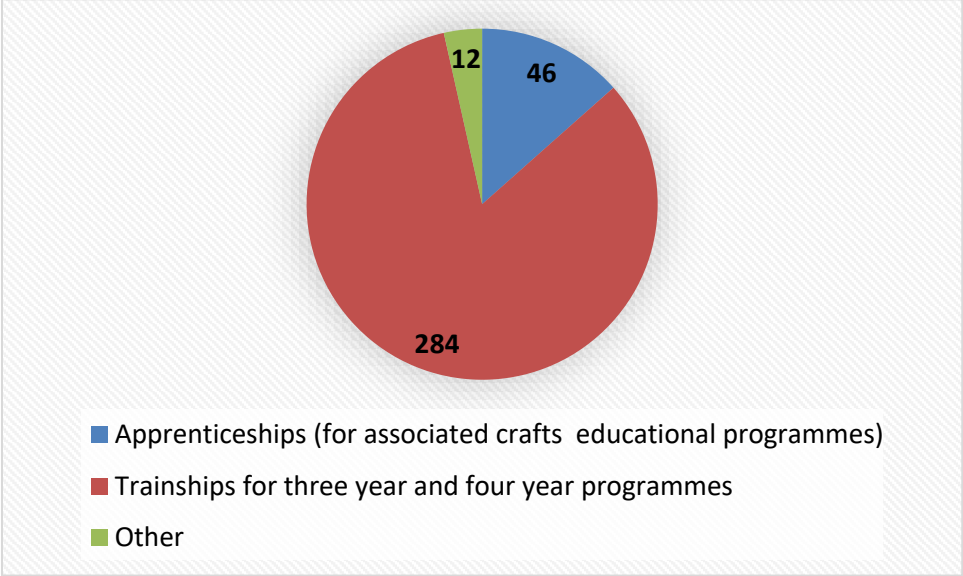


Figure 12. The form of work-based learning implemented in companies

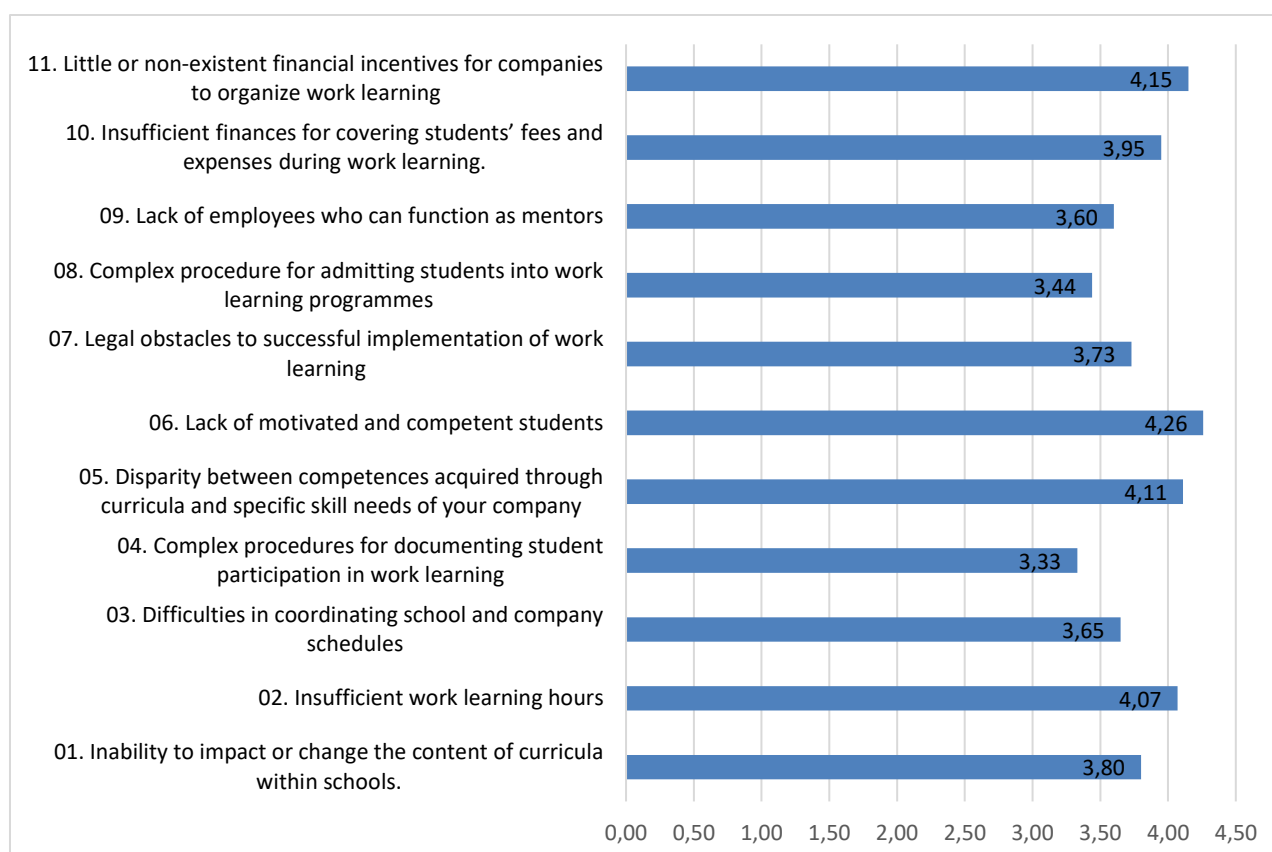


As shown in Table 16 and Figure 13, the study participants rated the importance of different barriers in organizing work-based learning programmes. The barriers were evaluated on the five level Likert scale (1- not important at all, 2 - mostly not important, 3 - neutral, 4 - somewhat important, 5 - extremely important). As visible from the received responses, *Lack of motivated and competent students* are recognized as the most important barrier (M=4.26; SD=0.95), together with *Little or non-existent financial incentives for companies to organize work-based learning* (M=4.15; SD=1.066). According to the received answers, the least significant barrier would be *Complex procedures for documenting student participation in work-based learning* (M=3.33; SD=1.198).

Table 16. The barriers in organizing work-based learning programmes

	N	M	SD
01. Inability to impact or change the content of curricula within schools.	691	3.80	1.125
02. Insufficient work-based learning hours	691	4.07	1.018
03. Difficulties in coordinating school and company schedules	691	3.65	1.207
04. Complex procedures for documenting student participation in work-based learning	691	3.33	1.198
05. Disparity between competences acquired through curricula and specific skill needs of your company	691	4.11	1.031
06. Lack of motivated and competent students	691	4.26	.950
07. Legal obstacles to successful implementation of work-based learning	691	3.73	1.133
08. Complex procedure for admitting students into work-based learning programmes	691	3.44	1.215
09. Lack of employees who can function as mentors	691	3.60	1.223
10. Insufficient finances for covering students' fees and expenses during work-based learning.	691	3.95	1.136
11. Little or non-existent financial incentives for companies to organize work-based learning	691	4.15	1.066

Figure 13. The barriers in organizing work-based learning programmes



The survey participants from companies listed large number comments regarding benefits that could be gained from participation in work-based learning programmes and system drawbacks. The

listed comments could be grouped in five areas related to: administrative and strategic issues, benefits for companies, mentorship quality, work-based learning program quality, and student knowledge and motivation.

Administrative and strategic issues:

- Administrative difficulties; the system is too complicated.
- Real involvement of students and his work on real job tasks could be hazardous for the company. In addition, work with students requires constant involvement of mentors and this is causing additional costs for the company.
- Complicated and time-consuming paperwork required by inspections services.
- Irresponsible attitude towards company tools and materials exhibited by some students.
- There is no general strategy on the industry development in Croatia that could serve as a framework for educational planning.
- There are positive examples of the work-based learning program implementation in several countries (e.g., Switzerland), these can serve as a guideline for the program development in Croatia.
- Some companies work just during the high tourist season and this limits the possibilities for work-based learning program implementation.
- Some jobs are highly complex and it would not be possible to conduct work training during the regular work.
- In small companies with just a few employees, it is not possible to conduct mentorships due to the amount of work.
- It is necessary to provide students' insurance for students involved in work-based learning programs.

Benefits for companies:

- Companies should receive financing for work-based learning.
- Companies have responsibilities for the protection at the workplace, work injuries etc.
- The ration between work-based learning and theory that students are learning at schools should be changed in favour of the work-based learning.

Mentorship quality:

- Mentor should be well educated and know how to work with students.

- According to the new rules, mentor involved in work-based learning programme should have expert exam.

Work-based learning program quality:

- In order to assure good quality of the program. The companies involved in the work-based learning programmes should be included in external evaluation.
- The types of vocational schools that exist in Croatian school system are not aligned with the development of certain professions.
- Insufficient capacities of companies for work with students.
- Low interest of entrepreneurs for participation in the work-based learning programmes.
- Low interest of school principals for cooperation and necessary changes.

Student knowledge and motivation:

- Poor basic knowledge of students; poor computer literacy of students.
- Low student motivation.
- Insufficient number of students enrolled in some vocational programs (e.g., tourism).

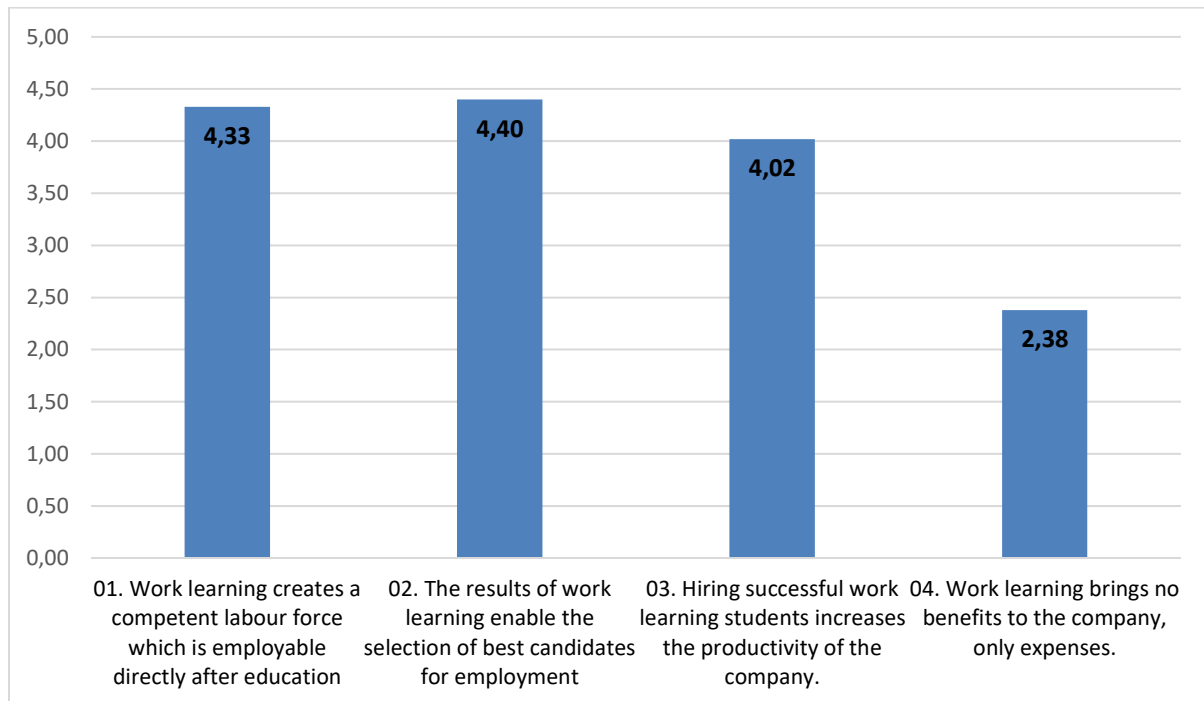
As visible from table 17 and figure 14, the study participants rated the agreement with the different statements related to work-based learning on the five level Likert scale (1 - completely disagree, 2 - disagree, 3 - neutral, 4 - agree, 5 - completely agree). The results indicate that the most positive attitudes were related to the statement that *The results of work-based learning enable the selection of best candidates for employment* (M=4.33; SD=0.989), while the least positive attitudes were related to the statement *Work-based learning brings no benefits to the company, only expenses* (M=2.38; SD=1.232).

Table 17. Attitudes towards work-based learning

	N	M	SD
01. Work-based learning creates a competent labour force which is employable directly after education	691	4.33	.989
02. The results of work-based learning enable the selection of best candidates for employment	691	4.40	.916
03. Hiring successful work-based learning students increases the productivity of the company.	691	4.02	1.042

04. Work-based learning brings no benefits to the company, only expenses.	691	2.38	1.232
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Figure 14. Attitudes towards work-based learning

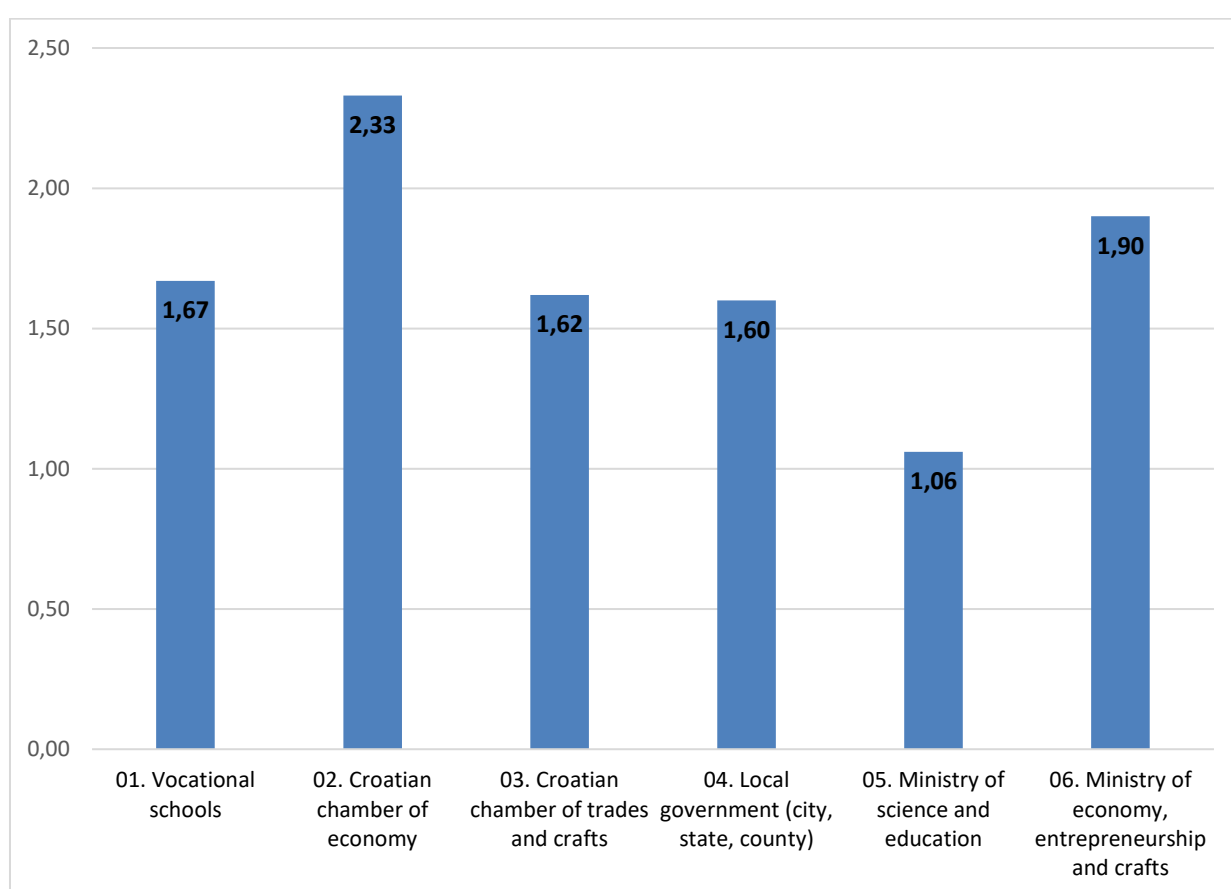


As visible from Table 18 and Figure 15, the study participants rated the level of cooperation and communication between your company and the following stakeholders on the six level Likert scale (0 - no cooperation, 1 - very bad cooperation, 2 - bad cooperation, 3 - neutral, 4 - good cooperation, 5 - very good cooperation). According to the received, *the overall satisfaction of company cooperation with other stakeholders is low*. According to the answers the best cooperation companies established with the *Croatian Chamber of Economy* ($M=2.33$; $SD=1.629$).

Table 18. The cooperation and communication between a company and stakeholders

	N	M	SD
01. Vocational schools	691	1.67	1.565
02. Croatian chamber of economy	691	2.33	1.629
03. Croatian chamber of trades and crafts	691	1.62	1.522
04. Local government (city, state, county)	691	1.60	1.559
05. Ministry of science and education	691	1.06	1.345
06. Ministry of economy, entrepreneurship and crafts	691	1.90	1.071

Figure 15. The cooperation and communication between a company and stakeholders



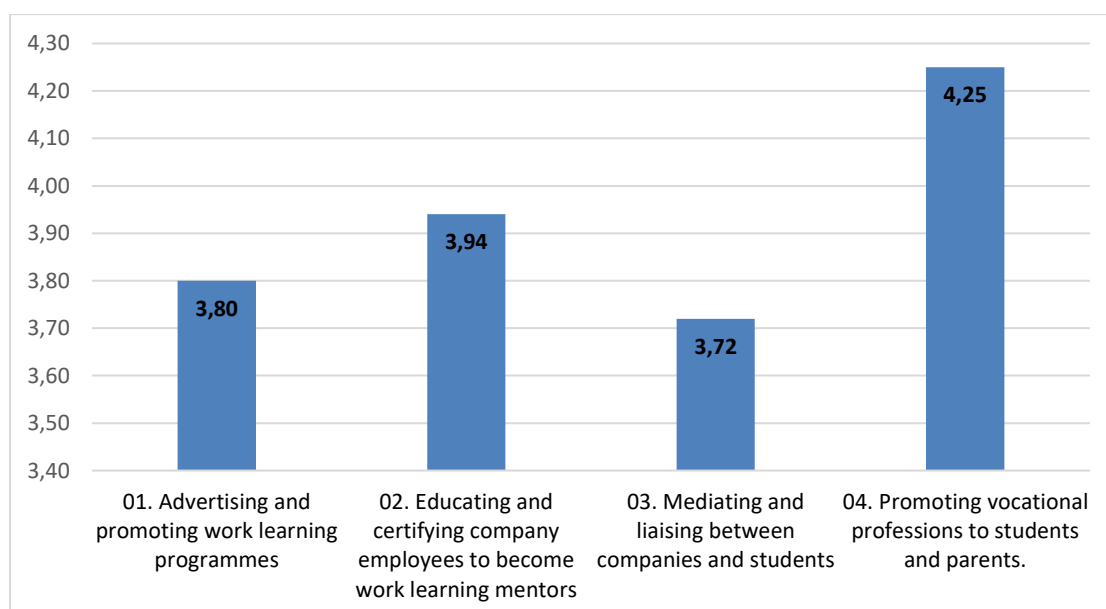
As visible from Table 19 and Figure 16, the non-financial incentives which chambers of economy might offer in order to improve the work of learning programmes were evaluated on the five level Likert scale (1 - not important at all, 2 - mostly not important, 3 - neutral, 4 - somewhat important, 5 - very important). According to the received responses, the most important non-financial incentive would be *Promoting vocational professions to students and parents* (M=4.25; SD=0.971) and *Educating and certifying company employees to become work-based learning mentors* (M=3.94;

SD=1.065), while the least important non-financial incentive would be *Mediating and liaising between companies and students* (M=3.72; SD=1.149).

Table 19. Non-financial incentives for improvement of work on learning programmes

	N	M	SD
01. Advertising and promoting work-based learning programmes	691	3.80	1.125
02. Educating and certifying company employees to become work-based learning mentors	691	3.94	1.065
03. Mediating and liaising between companies and students	691	3.72	1.149
04. Promoting vocational professions to students and parents.	691	4.25	.971

Figure 16. Non-financial incentives for improvement of work on learning programmes



The survey participants listed additional non-financial incentives which they consider important. The listed incentives are related to: students' quality, benefits for the company, necessary changes in the school system, role of the Chamber, and financial and administrative incentives for companies.

Students' quality:

- It is necessary to increase students' language skills.
- Medical exams for students prior to the selection of the particular profession.
- Student guidance on the characteristics of particular profession, prior to enrolment in a particular vocational school.
- Popularization of vocational professions among elementary school students.
- Popularization of traditionally male professions among girls.

Benefits for the company:

- Cooperation with European vocational schools, chambers and other companies.
- Companies should receive support for implementation of work-based learning programmes, in opposite work-based learning programmes are used as a way to gain free or cheap work force.
- Companies and schools should communicate and cooperate more thoroughly.

Necessary changes in the school system:

- It is important to fundamentally change the educational system. Today's school system is not up to date, nor is it aligned with the most recent know-how on productive ways of learning and with the realities of life.
- Ministry of Education on the selection, training and retraining of teachers in order to offer courses that are aligned with the needs of economy and not adjusted to the needs of currently employed teachers.
- It is necessary to decrease enrolment quotes for the professions that are not in a demand and increase the quotes for the vocational professions.
- There is a need for change in attitudes towards entrepreneurship in whole country.

Role of the Chamber:

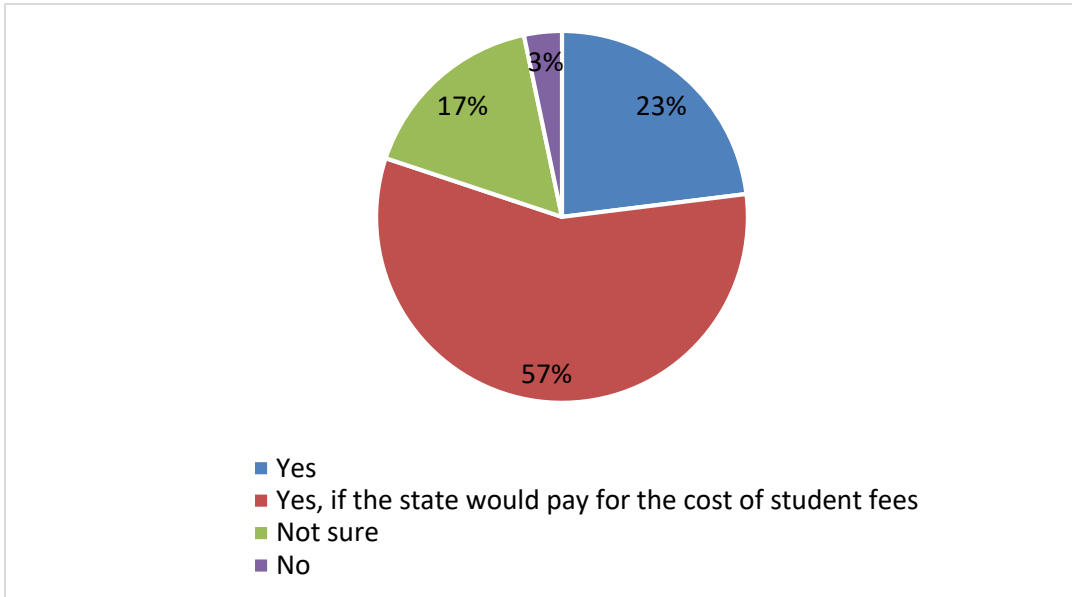
- This survey is an advance in communication between the Chamber and its members.
- The Chamber should serve as a mediator in communication between schools, students and companies.

Financial and administrative incentives for companies:

- Tax relief.
- Additional financing for the mentors from companies.
- Help with the paperwork.

Figure 17 shows the ways in which SMEs are willing to participate in work-based learning model where students would spend 50% or more of their time (both theoretical and practical) in their enterprises.

Figure 17. Number of SMEs willingness to participate in work-based learning model with more than 50% of student work in enterprises



According to the survey findings, the 79.7% of SMEs are willing to participate in work-based learning model where students would spend 50% or more of their time in enterprises. More specifically, 22.5% of the SMEs are willing to participate without any conditions, while 57.2% of the SMEs are willing to participate only if the state would finance students' fee expenses.

10. QUESTIONNAIRE FOR LOCAL STAKEHOLDERS

The goal of this questionnaire was to analyse possible methods of implementing work-based learning for vocational school students and to identify possible problems from the perspective of local stakeholders. Survey instrument was sent to each county office responsible for education and for economy (42 addresses). Unfortunately, a total of 5 stakeholders participated in the research. The survey instrument was designed for the project „ Strengthening the capacities of the chambers and partners to help SMEs to engage in apprenticeship" (Cap4App).

10.1 Data on the examinees

Figure 18 shows the distribution of the received answers among different counties of Republic of Croatia, while Figure 19 shows data on willingness of institutions to invest time and resources in work-based learning networks. It is noticeable that the stakeholders from large number of counties did not reply to the questionnaire. Hence, the received answers cannot be generalized, but they provide us the data aligned to the findings of the other two questionnaires.

Figure 18. Responses by county

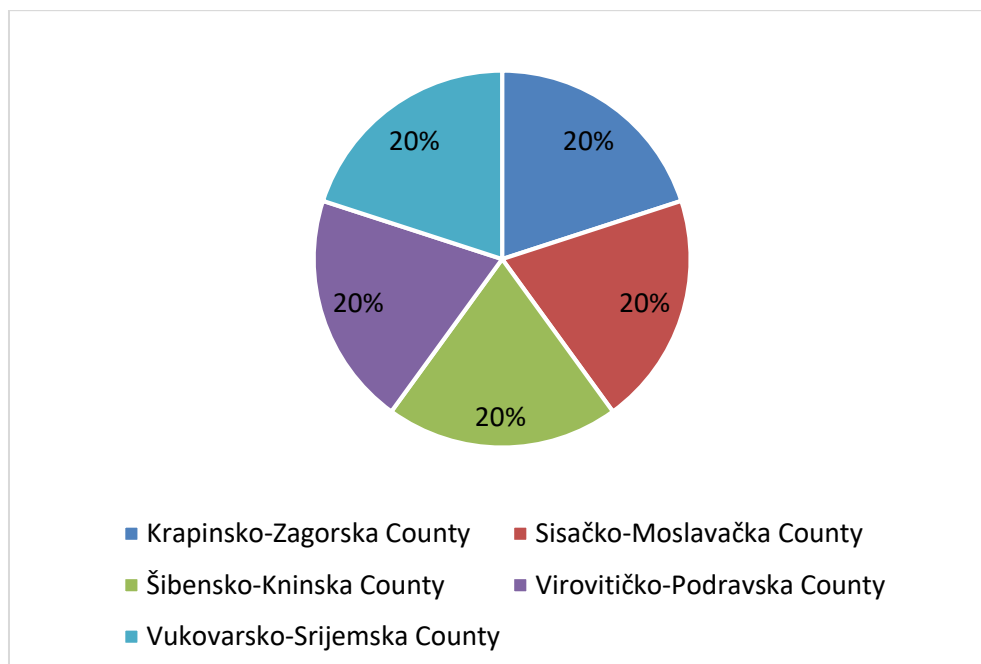
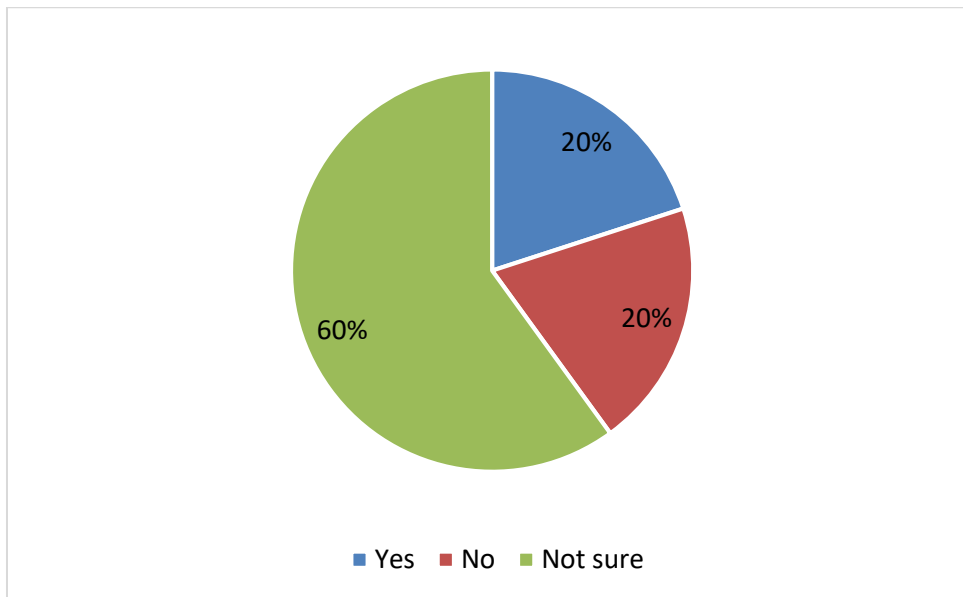


Figure 19. Willingness to invest time and resources in work-based learning networks



10.2 Survey findings

According to the received answers the respondents recognize following roles of their institution in organizing apprenticeships in Croatia:

- Students who complete vocational school are our potential clients in the process of self-employment.
- The state administration office is not dealing with the work-based learning placements.
- County Office is in charge of registration of the *Craftsmen*. When registering a bound craft, craftsman or professional person working in the craft must have requested qualifications. In order to receive the official qualification in the area of vocational education, the candidate should pass the official examination and attend the professional practice.
- We are founders of secondary schools, but do not have a direct role in organizing apprenticeships.

The survey respondents list the main challenges that schools who are leading apprenticeship are facing, and these are:

- Insufficient number of companies qualified for the work-based learning implementation in an appropriate manner.
- Insufficient finances for work-based learning implementation; outdated technology in schools; lack of experts in the schools; insufficient number of companies who are willing to implement work-based learning.
- Lack of licensed workshops; inconsistency of the legislation (dealing with the issues of students work load).
- Outdated equipment in schools

The respondents listed the main challenges that SMS's who are leading apprenticeship are facing, these challenges are:

- There is a fear that you are educating your future competition.
- The apprenticeship leaders have neither pedagogical nor professional knowledge.
- The apprenticeship leaders are not paid for the mentorship and are lacking motivation.
- SMEs are often limited with personnel. The work-based learning requires commitment of individuals to young practitioners.
- The procedures for obtaining licenses are excessive; the mentors at companies should have a license to work with the students; there are no incentives for mentors provided by employer; students do not receive the compensation for their work.
- The current regulation of student payment according to the Law on Vocational Education.

Also, the respondents indicated the type of non-financial help could solve some of the challenges that they are facing (e.g. information, education, leadership, useful contacts). The listed incentives are:

- Provision of additional and regular training for entrepreneurs in order to enable monitoring of business trends, technology application and adaptation of legislative amendments.
- Work guidance; education and counselling; the appointment of a permanent work-based learning advisor; the appointment of the work-based learning supervisor.
- Non-financial support is not stimulating.
- Simplifying regulations at the state level and its harmonization and before the adoption - their simulation in a real environment.

The study participants recognize following institutions as the ones which should have a leading role in organizing apprenticeship on county level:

- County Offices of Education
- County Offices
- Croatian Chamber of Economy
- Croatian Chamber of Trades and Crafts
- Vocational Schools

According to the received answers, the institutions which are recognized as the ones which should have a leading role in organizing apprenticeship on national level are:

- Croatian Chamber of Economy (3 answers)
- Croatian Chamber of Trades and Crafts (2 answers)
- Ministry of Economy, Entrepreneurship and Crafts (2 answers)
- Ministry of Science and Education (2 answers).

11. COMPARISONS

Both schools (M=4.38, SD=0.883) and SMEs (M=4.26, SD=0.950) believe that students who attend vocational schools and are participating in work-based learning programmes are not motivated/competent. This finding is supported with the participants' statements on ***a need for additional student guidance on the characteristics of particular profession***, prior to enrolment in a particular vocational school.

Furthermore, both schools (M=4.50, SD=0.735) and SMEs (M=3.60, SD=1.223) are highly aware that *there is a shortage of competent employees/mentors within companies to implement work-based learning programmes*. This finding is additionally supported with the survey participants' answers on open ended questions. ***Both schools and SMEs believe that additional training for employees/mentors is necessary***. In addition, local stakeholders recognize that ***SMEs are often limited with personnel and that the mentors at companies should have a license to work with the students***.

Furthermore, when comparing the answers on each of the four questions related to the survey participants' perception on the ***importance of non-financial incentives for improvement of work-based learning programmes*** (informing students of available work-based learning opportunities in companies; educating company employees to become work-based learning mentors; mediating and liaising between companies, schools and students; promoting vocational professions to students and parents), ***the survey participants from schools have had more favourable opinion than the participants from SMEs***. Still, the survey participants from SMEs also recognized the importance of listed incentives.

The comparison of the answers of survey participants from SMEs and participants from schools on disparity between actual curricula and company needs/expectations indicates that both companies and schools recognize the existing disparities: schools (M=4.40, SD=0.816) and SMEs (M=4.11, SD=1.031). In addition, the participants from SMEs notice that ***school system is not aligned with new knowledge about productive ways of learning and real life***.

In general, *schools have higher opinion on cooperation with different stakeholders involved in organization, delivery or support work-based learning programmes than SMEs*. In particular, schools see the cooperation with the Croatian chambers in more favourable way (M=2.59, SD=1.586) than SMEs (M=1.62, SD=1.522). Also, the participating SMEs have a lower opinion on cooperation with vocational schools (M=1.67, SD=1.565) than the participating schools about cooperation with SMEs (M=3.24, SD=1.025). Nevertheless, according to the answers on open ended questions, all three parties (***schools, SMEs and local stakeholders***) ***recognize importance of the chamber in provision of support and coordination of work-based learning programmes***.

When comparing school and SMEs answers on the survey question on their willingness to participate in work-based learning model where students would spend 50% or more of their time in enterprises, it is visible **that SMEs (79.7%) are slightly more likely to accept the work-based learning conditionally - if the state would pay for the cost of student fees (57.2%) than schools (72.3%).**

12. CONCLUSIONS

On the level of schools, it is apparent that they recognize that the guidance and help outside of schools would benefit the work-based learning practice. At the same time, **the schools value present cooperation with SMEs but recognize need for additional support from chambers and other relevant stakeholders. It is possible to conclude that the schools would benefit in many ways from the stronger role of chambers.** The type of support which they expect from chambers is primarily dealing with issues of promotion of vocational professions and additional training for company employees in order to become more competent work-based learning mentors. These findings are additionally emphasized in survey questions related to the communication between schools and SMEs, according to which the majority of schools do receive feedback from the SMEs on the work-based learning program implementation. Also, the majority of schools believe that they are well prepared for work-based learning implementation in companies. In addition, **schools recognize that work-based learning significantly influences school dynamics and that it may impact their school needs in regards to resources, employees and equipment.** Additional issues related to work-based learning implementation which are recognized by schools deal with the issues of company motivation and competent mentors.

The majority of the SMEs which participated in this research had already had a chance to implement the work-based learning and was able to recognize the main barriers to organizing work-based learning programmes. The main barriers recognized by SMEs are lack of motivated students and non-existent financial incentives for implementation of work-based learning, while the main benefit of the work-based learning is a possibility for the selection of best candidates for employment. **Although the SMEs which were participating in this research have a low overall satisfaction with cooperation with other stakeholders, they do value the cooperation which they have established with Croatian Chamber of Economy.** The existing positive relation between SMEs and the Chamber should be utilized in the future activities and in order to raise the awareness about the importance of apprenticeship among SMEs. With regard to the non-financial incentives offered to the SMEs by the chamber, **the companies recognize that the promotion of vocational professions to students and education of company employees to become work-based learning mentors is of utmost importance.**

The importance of the chamber in providing support and coordinating the work-based learning programmes along with the need for education of company employees to become work-based learning mentors has been recognized by the schools, SMEs and the local stakeholders that participated in this research.

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Annex I – Questionnaires

Stručna praksa* za učenike strukovnih škola: upitnik za škole

Cilj je istraživanja detaljnije razmotriti i analizirati mogućnost provedbe različitih oblika učenja na radnome mjestu za učenike srednjega strukovnog obrazovanja te identificirati probleme učenja na radnome mjestu s gledišta škole i poslodavaca.

Rezultati dobiveni analizom istraživanja predstaviti će se javnosti kao prilog raspravi o učinkovitosti dualnog obrazovanja u određenim programima strukovnog obrazovanja.

Upitnik je osmišljen za potrebe projekta „Jačanje kapaciteta komora i partnera za uključivanjem malih i srednjih poduzeća u naukovanje“, (Cap4App), koji je sufinanciran iz programa Erasmus+ Europske unije, a nositelj projekta je Hrvatska gospodarska komora.

Približno trajanje popunjavanja upitnika je pet minuta, a upitnik je anoniman.

Hvala na suradnji!

* Za potrebe ovog istraživanja, termin "stručna praksa" podrazumijeva sve oblike učenja na radu kod poslodavca, stručnu praksu i naukovanje.

*Obvezno

Cap4App



I. IZAZOVI PRI ORGANIZACIJI STRUČNE PRAKSE

1. Ocijenite važnost sljedećih prepreka za provedbu stručne prakse izvan škole / u poduzeću ili obrtu?

(1 – uopće nije važno, 2 – uglavnom nije važno, 3 – niti je važno, niti je nevažno, 4 – uglavnom je važno, 5 – vrlo je važno)

Nezainteresiranost poduzeća *

1 2 3 4 5

Nepostojanje materijalnih uvjeta poduzeća za provedbu stručne prakse *

1 2 3 4 5

Nepostojanje kadrovskih uvjeta u poduzeću za provedbu stručne prakse (prema zahtjevima Zakona o strukovnom obrazovanju i Zakona o obrtu)*

1 2 3 4 5

Komunikacija s osobama izvan škole, zaduženima za stručnu praksu*

1 2 3 4 5

Motivacija učenika za sudjelovanje u stručnoj praksi u poduzeću*

1 2 3 4 5

Nemogućnost kontrole kvalitete stručne prakse u poduzeću*

1 2 3 4 5

Nemogućnost škola i / ili učitelja da pomognu učenicima pronaći prikladna mjesta za stručnu praksu te da ih podupru u tome*

1 2 3 4 5

Neusklađenosti kurikula s očekivanjima MSP-ova u kojima se provodi stručna praksa (neodgovarajuća praksa – praksa ne prati kurikulum)*

1 2 3 4 5

Nepoštovanje ugovora o stručnoj praksi u smislu radnog vremena učenika*

1 2 3 4 5

Nepoštovanje ugovora o stručnoj praksi u smislu plaćanja naknade učenicima*

1 2 3 4 5

Neusklađenost Pravilnika o provedbi stručne prakse s ostalim pravnim propisima

1 2 3 4 5

Nešto drugo; što?

2. Molimo procijenite kvalitetu suradnje i komunikacije između škole i sljedećih dionika povezanih s provedbom stručne prakse.

(0 – nema suradnje, 1 – vrlo loša, 2 – prilično loša, 3 – niti je dobra, niti je loša, 4 – prilično dobra, 5 – izvrsna)*

Poduzeća	1	2	3	4	5
Hrvatska obrtnička komora	1	2	3	4	5
Lokalna samouprava	1	2	3	4	5
Agencija za strukovno obrazovanje i obrazovanje odraslih	1	2	3	4	5
Ministarstvo znanosti i obrazovanja	1	2	3	4	5
Ministarstvo gospodarstva, poduzetništva i obrta	1	2	3	4	5

3. Molimo procijenite važnost sljedećih oblika nefinancijske potpore koju bi komore mogle ponuditi školama kako bi unaprijedile stručnu praksu u poduzeću.

(1 – uopće nije važno, 2 – uglavnom nije važno, 3 – niti je važno, niti je nevažno, 4 – uglavnom je važno, 5 – vrlo je važno)*

Informiranje o slobodnim mjestima za provođenje stručne prakse	1	2	3	4	5
Edukacije mentora kod poslodavaca	1	2	3	4	5
Jača uloga komora u posredovanju između učenika, škole i poduzeća	1	2	3	4	5
Promocija strukovnih zanimanja usmjerena na učenike i roditelje	1	2	3	4	5

Nešto drugo; što?

prikladna mjesta za stručnu praksu*

1 2 3 4 5

Postojanje usklađenosti kurikula s očekivanjima MSP-ova u kojima se provodi stručna praksa (je li neodgovarajuća praksa, odnosno praksa ne prati kurikulum)*

1 2 3 4 5

7. Kada bi učenik više od 50% stručne prakse u pojedinim programima pohađao u poduzeću, škola bi trebala:*

	manje	jednako	više
sredstva,	-	-	-
zaposlenike,	-	-	-
opremu.	-	-	-

II. OSNOVNE INFORMACIJE O ŠKOLI

1. U kojim područjima vaša škola nudi obrazovne programe?

(mogućnost višestrukog odgovora)

Odaberite sve točne odgovore.

- I. Poljoprivreda, prehrana i veterina
 - II. Šumarstvo i drvna tehnologija
 - III. Rudarstvo, geologija i kemijska tehnologija
 - IV. Tekstil i koža
 - V. Grafička tehnologija
 - VI. Strojarsvo, brodogradnja i metalurgija
 - VII. Elektrotehnika i računarstvo
 - VIII. Graditeljstvo i geodezija
 - IX. Ekonomija i trgovina
 - X. Turizam i ugostiteljstvo
 - XI. Promet i logistika
 - XII. Zdravstvo
 - XIII. Osobne i druge usluge
- Drugo (molimo navedite):**

2. Odaberite županiju u kojoj se nalazi vaša škola

- Bjelovarsko-bilogorska županija
- Brodsko-posavska županija
- Dubrovačko-neretvanska županija
- Istarska županija
- Karlovačka županija
- Koprivničko-križevačka županija
- Krapinsko-zagorska županija
- Ličko-senjska županija
- Međimurska županija
- Osječko-baranjska županija
- Požeško-slavonska županija
- Primorsko-goranska županija
- Sisačko-moslavačka županija
- Splitsko-dalmatinska županija

Šibensko-kninska županija
Varaždinska županija
Virovitičko-podravska županija
Vukovarsko-srijemska
Zadarska županija
Zagrebačka županija
Grad Zagreb

Elektronička adresa (nije obvezna)

Želite li primati daljnje informacije o ovom projektu i budućim aktivnostima / događanjima o stručnoj praksi, molimo navedite svoju e-adresu: _____

**ZAHVALJUJEMO VAM ŠTO STE IZDVOJILI VRIJEME ZA
ISPUNJAVANJE OVOG UPITNIKA!**

Upitnik za mala i srednja poduzeća

Cilj je ovog istraživanja prikupiti informacije o stanju u sustavu srednjega strukovnog obrazovanja iz perspektive poduzeća, posebice za one strukovne programe u kojima postoji potreba za organiziranjem učenja temeljenoga na radu u poduzeću. Istraživanjem će se identificirati ključni izazovi s kojima se susreću poduzeća koja već provode neke oblike učenja na radu i poduzeća koja su u budućnosti spremna sudjelovati u tim oblicima učenja.

Rezultati dobiveni ovim istraživanjem bit će prezentirani javnosti kao argumenti u raspravi je li potrebno u određenim programima strukovnog obrazovanja uvesti dualno obrazovanje kao dio redovitog obrazovanja u kojem bi poslodavci u većoj mjeri sudjelovali u osmišljavanju strukovnih programa te obrazovanju učenika prema tim programima. Dualno obrazovanje predstavlja sustav obrazovanja u kojem se učenje temeljeno na radu događa u poslovnom okruženju tijekom cijele školske godine, s ciljem stjecanja kompetencija nužnih za uspješno obavljanje poslova u određenoj struci. U klasičnom modelu strukovnog obrazovanja stručna se praksa održava u manjem obujmu i ne nužno kod poslodavca.

Za potrebe ovog istraživanja, termin "stručna praksa" podrazumijeva sve oblike učenja na radu kod poslodavca, stručnu praksu i naukovanje.

Upitnik je osmišljen za potrebe projekta „Jačanje kapaciteta komora i partnera za uključivanjem malih i srednjih poduzeća u naukovanje“ (Cap4App), sufinanciranog iz programa Erasmus+ Europske unije. Nositelj projekta je Hrvatska gospodarska komora.

Približno trajanje popunjavanja upitnika jest pet minuta, a upitnik je anonimn.

Hvala na suradnji!

*Obvezno

Cap4App



1. Ima li vaše poduzeće iskustva u organizaciji stručne prakse za učenike srednjih strukovnih škola?*

1. Da
2. Ne

2. Ako ste odgovorili "da": koji je oblik učenja na radnom mjestu bio zastupljen?*

1. Naukovanje (za programe obrazovanja za vezane obrte)
2. Stručna praksa za učenike trogodišnjih i četverogodišnjih strukovnih škola
3. Ostalo: _____

3. Procijenite važnost mogućih prepreka pri organizaciji stručne prakse

(1 – uopće nije važno, 2 – uglavnom nije važno, 3 – niti je važno, niti je nevažno, 4 – uglavnom je važno, 5 – vrlo je važno)

Nemogućnost utjecaja na sadržaj stručne nastave koja se provodi u školi*

1 2 3 4 5

Premali broj sati stručne prakse*

1 2 3 4 5

Nemogućnost usklađivanja školskog rasporeda s rasporedom prakse u poduzeću *

1 2 3 4 5

Zahtjevne procedure vođenja dokumentacije o učeniku*

1 2 3 4 5

Neusklađenost kurikula / programa s potrebom vašeg poduzeća za znanjima i vještinama*

1 2 3 4 5

Nedostupnost kvalitetnih kandidata / učenika (npr. motiviranost, interes, sposobnosti...)*

1 2 3 4 5

Zakonske prepreke za kvalitetno izvođenje prakse*

1 2 3 4 5

Komplicirana procedura za primanje učenika na praksu*

1 2 3 4 5

Nedostatak zaposlenika osposobljenih za mentore*

1 2 3 4 5

Nedostatak financiranja učeničkih naknada i ostalih troškova njihove prakse u poduzeću *

1 2 3 4 5

Nepostojanje financijskih poticaja za poduzeće u svrhu osiguravanja mjesta za stručnu praksu*

1 2 3 4 5

Nešto drugo? Molimo navedite: _____

4. Molimo ocijenite u kojoj mjeri se slažete sa sljedećim tvrdnjama

(1 – uopće se ne slažem, 2 – ne slažem se, 3 – niti se ne slažem, niti se slažem, 4 – slažem se, 5 – potpuno se slažem)

Praksom učenika u poduzeću stvara se kvalificirana radna snaga koja se odmah nakon školovanja može uključiti u radne procese poduzeća *

1 2 3 4 5

Postoji mogućnost odabira najboljih kadrova u skladu s postignućima tijekom provedene prakse u poduzeću *

1 2 3 4 5

Zapošljavanjem učenika koji su stručnu praksu obavljali u poduzeću povećava se produktivnost tog poduzeća*

1 2 3 4 5

Organizacijom prakse poduzeće nema nikakvu korist, samo trošak*

1 2 3 4 5

5. Molimo procijenite kvalitetu suradnje i komunikacije između poduzeća i sljedećih dionika povezanih s organizacijom stručne prakse

(0 – nema suradnje, 1 – vrlo loša, 2 – prilično loša, 3 – niti je dobra, niti je loša, 4 – prilično dobra, 5 – odlična suradnja)

Kvaliteta suradnje i komunikacije sa školama*

0 1 2 3 4 5

Kvaliteta suradnje i komunikacije s Hrvatskom gospodarskom komorom*

0 1 2 3 4 5

Kvaliteta suradnje i komunikacije s Hrvatskom obrtničkom komorom*

0 1 2 3 4 5

Kvaliteta suradnje i komunikacije s lokalnom samoupravom (županija, grad, općina...)*

0 1 2 3 4 5

Kvaliteta suradnje i komunikacije s Agencijom za strukovnom obrazovanje i Ministarstvom znanosti i obrazovanja*

0 1 2 3 4 5

Kvaliteta suradnje i komunikacije s Ministarstvom gospodarstva, poduzetništva i obrta*

0 1 2 3 4 5

6. Molimo procijenite važnost sljedećih oblika nefinancijske potpore koje bi komore mogle ponuditi poduzećima radi unapređivanja prakse

(1 – uopće nije važno, 2 – uglavnom nije važno, 3 – niti je važno, niti je nevažno, 4 – uglavnom je važno, 5 – vrlo je važno)

Oglašavanje i promicanje slobodnih radnih mjesta za praksu*

1 2 3 4 5

Edukacija i certificiranje mentora u poduzećima *

1 2 3 4 5

Posredovanje komora između učenika i poduzeća *

1 2 3 4 5

Promocija strukovnih zanimanja usmjerena na učenike i roditelje*

1 2 3 4 5

Ako smatrate da postoji još koji oblik nefinancijske potpore koji nije obuhvaćen prethodnim odgovorima, molimo navedite ga: _____

7. Jeste li spremni sudjelovati u programima strukovnog obrazovanja u kojima bi učenik više od 50% nastave (stručnoga teoretskog i praktičnog dijela) pohađao u poduzeću?*

1. Da
2. Da, ako bi država snosila troškove učeničke naknade na koju imaju pravo
3. Nisam siguran
4. Ne

Navedite osnovnu djelatnost vašeg poduzeća*

- I. Poljoprivreda, prehrana i veterina
- II. Šumarstvo i drvna tehnologija
- III. Rudarstvo, geologija i kemijska tehnologija
- IV. Tekstil i koža
- V. Grafička tehnologija
- VI. Strojarstvo, brodogradnja i metalurgija
- VII. Elektrotehnika i računarstvo
- VIII. Graditeljstvo i geodezija
- IX. Ekonomija i trgovina
- X. Turizam i ugostiteljstvo
- XI. Promet i logistika
- XII. Zdravstvo
- XIII. Osobne i druge usluge

Odaberite županiju djelovanja svoje tvrtke*

- Bjelovarsko-bilogorska županija
- Brodsko-posavska županija
- Dubrovačko-neretvanska županija
- Istarska županija
- Karlovačka županija
- Koprivničko-križevačka županija
- Krapinsko-zagorska županija
- Ličko-senjska županija
- Međimurska županija
- Osječko-baranjska županija
- Požeško-slavonska županija
- Primorsko-goranska županija
- Sisačko-moslavačka županija
- Splitsko-dalmatinska županija
- Šibensko-kninska županija
- Varaždinska županija
- Virovitičko-podravska županija
- Vukovarsko-srijemska
- Zadarska županija
- Zagrebačka županija
- Grad Zagreb

Navedite naziv vašeg poduzeća (nije obvezno)

Unesite svoju e-adresu ako želite dobiti rezultate ovog istraživanja (nije obvezno)

Navedite osnovnu djelatnost vašeg poduzeća *

Odaberite županiju djelovanja vašeg poduzeća

Navedite naziv vašeg poduzeća (nije obvezno)

Unesite svoju e-adresu ako želite dobiti rezultate ovog istraživanja

Stručna praksa* za učenike strukovnih škola: upitnik za županije

Cilj je ovog istraživanja identificirati interes, mogućnosti aktivne potpore u organizaciji učenja temeljenog na radu u poduzeću i izazove županijske i lokalne uprave te osnivača srednjih strukovnih škola u organizaciji tog oblika učenja.

Rezultati dobiveni ovim istraživanjem predstaviti će se javnosti kao prilog raspravi o učinkovitosti dualnog obrazovanja u određenom dijelu redovitog obrazovanja, a koji ovisi o partnerstvu škola, gospodarskih subjekata i potpore lokalne zajednice. Dualno obrazovanje predstavlja sustav obrazovanja u kojem se učenje temeljeno na radu događa u poslovnom okruženju tijekom cijele školske godine, s ciljem stjecanja kompetencija nužnih za uspješno obavljanje poslova u određenoj struci, a poslodavci u većoj mjeri sudjeluju u osmišljavanju strukovnih programa.

Za potrebe ovog istraživanja, termin "stručna praksa" podrazumijeva sve oblike učenja na radu kod poslodavca – stručnu praksu i naukovanje.

Upitnik je osmišljen za potrebe projekta „Jačanje kapaciteta komora i partnera za uključivanjem malih i srednjih poduzeća u naukovanje“ (Cap4App), sufinanciranog iz programa Erasmus+ Europske unije. Nositelj projekta je Hrvatska gospodarska komora.

Hvala na suradnji!

*Za potrebe ovog upitnika termin „stručna praksa“ ne uključuje samo stručnu praksu, već i praktičnu nastavu i vježbe kod poslodavca / poduzeća te naukovanje.

*Obvezno

Cap4App



I. Izazovi s organiziranjem stručne prakse na razini županije

1. Koju konkretnu ulogu vaša institucija ima u podupiranju organiziranja stručne prakse u županiji?*

2. Koji su, prema vašemu mišljenju, ključni izazovi s kojima se suočavaju škole koje organiziraju stručnu praksu u vašoj županiji?*

3. Prema vašemu mišljenju, koji su ključni izazovi s kojima se suočavaju mala i srednja poduzeća koja provode stručnu praksu u vašoj županiji?*

4. Koja vrsta nefinancijske potpore bi mogla riješiti neke od prethodno navedenih izazova u vašoj županiji (npr. informacije, edukacije, vodiči, korisni kontakti)?*

5. Prema vašemu mišljenju, koja bi institucija trebala imati vodeću ulogu u podupiranju organiziranja stručne prakse na županijskoj razini?*

6. Prema vašemu mišljenju, koja bi institucija trebala imati vodeću ulogu u podupiranju organiziranja stručne prakse na nacionalnoj razini?*

7. Je li vaša institucija spremna izdvojiti vrijeme i resurse kako bi bila uključena u mrežu za podupiranje razvoja stručne prakse? *

- Da
- Ne
- Nismo sigurni

Ako ste odgovorili "nismo sigurni", molimo obrazložite:

U kojoj se županiji nalazi vaša institucija?*

Bjelovarsko-bilogorska županija
Brodsko-posavska županija
Dubrovačko-neretvanska županija
Istarska županija

Karlovačka županija
Koprivničko-križevačka županija
Krapinsko-zagorska županija
Ličko-senjska županija
Međimurska županija
Osječko-baranjska županija
Požeško-slavonska županija
Primorsko-goranska županija
Sisačko-moslavačka županija
Splitsko-dalmatinska županija
Šibensko-kninska županija
Varaždinska županija
Virovitičko-podravska županija
Vukovarsko-srijemska
Zadarska županija
Zagrebačka županija
Grad Zagreb

II. Kontakt-podatci:

Naziv institucije: _____

Ime i prezime: _____

Funkcija: _____

E-adresa: _____