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AND TRAINING IN EUROPE

CROATIA





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This VET in Europe report is part of a series prepared by Cedefop's ReferNet network. VET in Europe reports provide an overview of national vocational education and training (VET) systems of the EU Member States, Iceland and Norway. The reports help to understand VET's main features and role within countries' overall education and training systems from a lifelong learning perspective, and VET's relevance to and interaction with the labour market.

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Chapter 1. External factors influencing VET

1.1. Demographics

Since 1991, Croatia has been a parliamentary constitutional republic. On July 1st 2013, it joined the European Union (EU) as its 28th Member State. The country consists of 20 counties and the metropolitan area of Zagreb and statistically, since 2013, of two regions (according to NUTS - Adriatic and Continental). In Croatia, there are 127 towns/cities and 429 municipalities.

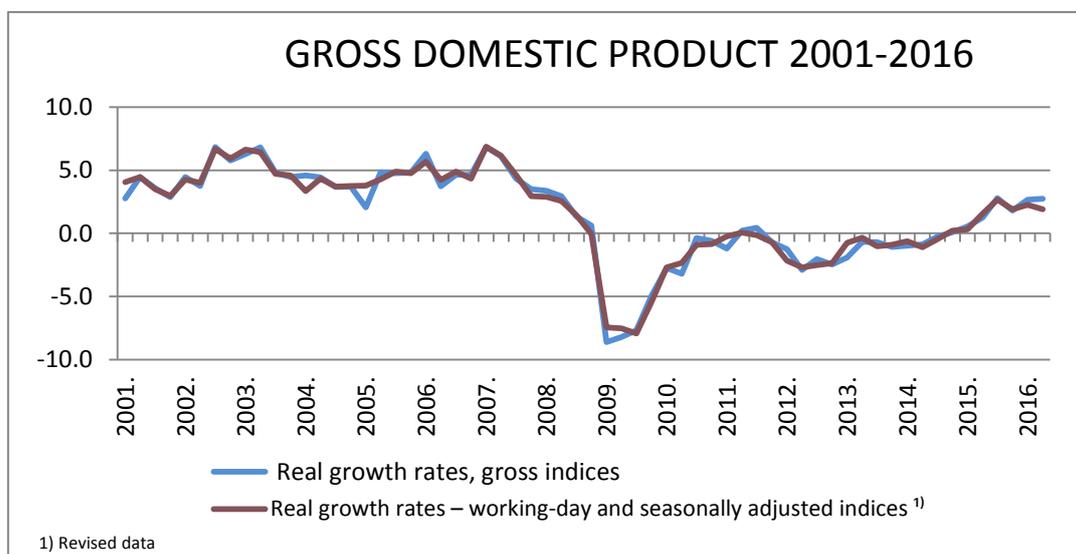
Croatia has a population of 4 290 612 inhabitants (2011 Census, Popis stanovništva, kućanstava i stanova 2011. godine) and a territory of 56 594 km². In the estimation for 2015, the population was projected to be 4 203 604 inhabitants (Državni zavod za statistiku, DZS). Like many other European countries, Croatia is facing a changing and particularly challenging demographic profile. In 2015, approximately 4.7% of the population was 80 years or older, with the population ageing more rapidly than in many European countries, due to a decreasing birth-rate and growing economic emigration. By 2050, the Bureau of Statistics (Državni zavod za statistiku, DZS) forecasts a 16% decline of the population. This decline is also expected to be accompanied by a growth in the proportion of older people in the population (64 years or more) from 17% (in 2005) to 27%. At the same time, the proportion of young people (15-24 years) will decrease from 13% to 10%. The working age population (15-64 years) is also projected to decrease. For the education sector, and VET in particular, the proportion of children (0-14 years) in the population will dramatically fall from 15% in 2010 to 11% in 2050. In order to sustain the social security and healthcare systems, significant employment growth will be required, as well as a comprehensive and coherent immigration policy.

In the 2014/15 academic year, the total number of students enrolled in basic and upper secondary education (excluding tertiary and pre-primary education) was 501 856; approximately 11.6% of total population. In primary education (ISCED 1 & 2 level), there was a total of 323 195 students enrolled (7.63% of population of Croatia), a significantly lower figure when compared to 387 956 (approx. 9% of national population) at the beginning of the 2005/06 academic year. The sharp decline in the number of students is best evident when comparing the most recent data with that from the 1986/1987 academic year, when there were 522 413 students enrolled in primary education. In upper secondary education (ISCED 3), there were 178 661 students enrolled in the 2014/15 academic year, as compared to 189 661 at the beginning of the 2005/06 academic year.

1.2. Economic background

The Croatian economy has a GDP of approximately EUR 44.5 billion (World Bank 2016). Figure 1 depicts the change in GDP in the period between 2001 and 2016 in both gross and adjusted indices.

Figure 1. **Gross domestic product 2001-16: Real growth indices (gross indices and working-day and seasonally adjusted indices)**



Source: DZS – Statistics in series: accessed on 30.10.2016.

In 2001-08, there was an average annual growth of 4.2% accompanied by low inflation. In 2008, the country was strongly affected by the economic crisis/recession, with a cumulative GDP decline of more than 12% between 2008 and 2014. In this period, unemployment surged from below 9% to more than 17%. In 2015, Croatia came out of its six-year recession. The situation started to improve at the end of 2014 and, in 2015, real GDP growth surpassed expectations by a 1.6% increase. In this period, there were positive indicators in industrial production, commerce, tourism, and foreign trade as well as improvements in construction. Price indexes continued to fall and average net salaries increased in both nominal and real terms. These positive indicators continued in 2016 and the outlook for further growth is positive. In the second quarter of 2016, the GDP increased in real terms by 2.8%, while the seasonally adjusted quarterly GDP increased by 1.9% over the same quarter of 2015.

The privatisation of large state-owned enterprises and the availability of the EU funds (in net terms, approximately 2% of the GDP per year) are supposed to help ensure growth in the medium term. The structural reforms launched by two previous governments in labour, taxation, pension, and social benefits as well as an improvement of the investment climate is expected to stimulate job creation, productivity, and social cohesion. Significant reforms are planned and initiated both in education in general and specifically in VET (see Chapters 2 and 3).

According to total revenues, the leading industrial branches are the production of food, drinks and tobacco, followed by the chemical and oil industries. Tourism is an important driver of the economy and generates strong multiplying effects spilling over to other economic fields. In 2015, the share of tourism in the overall GDP was estimated at 18.1% or EUR 7.96 billion.

Small and medium enterprises (SME) are the core drivers of the economy, playing an important role in industrial restructuring, competitiveness and innovation, as well as in generating new employment. The total number of SMEs increases slowly, and in 2014, they reached 99.7% of all registered enterprises. In 2014 there was an increase in the number of small enterprises (3.3%) and large enterprises (1.1%) and a decline in the number of medium enterprises (3.7%). SMEs employ 68.4% of all job-holders, which is more than in the EU-28, and accounts for 48.5% of national exports and 53% of total revenues (European Commission, 2015)⁽¹⁾. The most active sectors are wholesale and retail trade and real estate and manufacturing. SMEs are concentrated in major urban centres (Zagreb, Split, Rijeka, Osijek and the surrounding areas). Despite the progress that has been demonstrated in the SME sector over the last years, there are a number of challenges in terms of performance in the global market.

1.3. Labour market

The economic crisis which lasted six years aggravated the already existing problems in the labour market, such as the low and declining labour force participation rate, the high rate of unemployment, labour shedding and a large informal sector, a lack of qualified human capital and skill mismatch (Republic of Croatia, 2014a; Republic of Croatia 2014b). There have been several attempts to tackle the issue of undeclared work and the underground economy. A comprehensive and systematic approach of strategies, measures and policies based on the in-depth analysis of the situation and gathering of relevant data to measure undeclared work more precisely has not yet been developed and implemented.

In the period 2010-14, the employment rate in the 15-64 year age group decreased by 5.4%, a substantially higher figure than in the EU-28 (0.8%). This decline has been most evident in construction, wholesale and retail, manufacturing, publishing and media, while it was less severe in transport, hospitality and business services. Some employment growth was evident in knowledge-intensive services, and IT, health and education in particular. In 2015, these trends have changed with a mild growth in employability, a significant decline in unemployment and an overall reduction of the unemployment rate. In comparison to 2014, the number of persons who were registered as employed in 2015 increased by 1.1%. In addition, the number of registered unemployed persons decreased by 12.9% in comparison to the previous year. The annual rate of registered unemployment decreased by 2.2%, from 19.6% in 2014 to 17.4% in 2015.

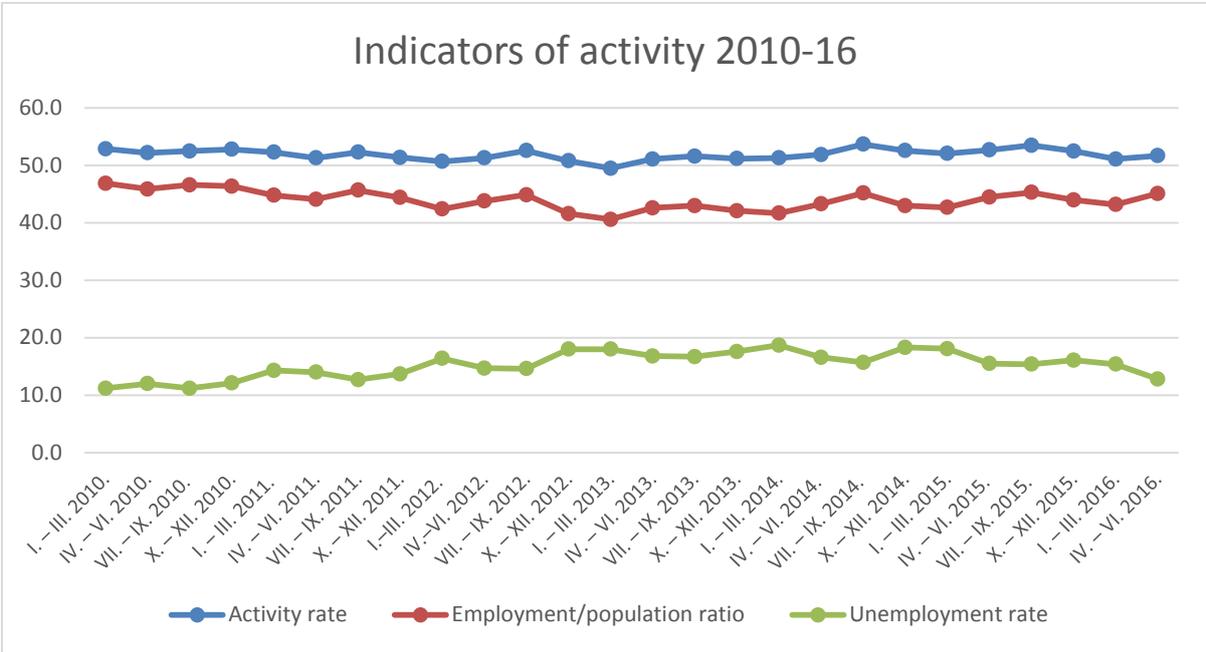
The employment rate differs for different age groups. It is lower than the EU average for youth below 25 years and for people over 50 years of age. The employment rate for 30-39 year-olds is similar to the EU average. The rate of women in employment in 2014 was 49.7%. This is well below the EU average (59.6%) and considerably lower than the employment rate of men. In 2014, the employment rate for people without upper secondary education was only 38.8% (52.6% in EU). Upper secondary education (62.6%; 73.4% in EU),

⁽¹⁾ European Commission (2015). *Annual Report on European SMEs 2014/2015 – SMEs start hiring again*. <http://ec.europa.eu/DocsRoom/documents/13942/attachments/1/translations/en/renditions/native>

including VET, graduates and tertiary education (80.5%; 83.7% in EU) graduates have better employment chances.

The unemployment rate increased from 8.4% in 2008 to 19.6% in 2014, and then started decreasing in 2015. The average number of registered unemployed persons was 285 906 in 2015, in comparison to 328 187 in 2014 (12.9% year to year decrease). Unemployment decreased for both men and women. The largest decrease was evident among younger persons (18.0% for those aged 20-24 and 19.0% for those aged 25-29). The only age group with a year to year increase in registered employment was the 60-and-older age group. The decrease in unemployment was characteristic for all sectors and in some it was significant; such as in construction (18.9% in comparison to 2014). The activity indicators are presented in Figure 2.

Figure 2. Indicators of activity 2010-16: Activity rate, Employment/population ratio, unemployment rate (LFS)



Source: DZS – Statistics in series: accessed on 30.10.2016.

In the second quarter of 2016, 48.3% of the total working age population (15+) was economically inactive ⁽²⁾. Conversely, labour force (15+) participation rate was 51.7%. In 2015, 46.1% of unemployed people were long term unemployed. Eurostat data show that the long-term unemployment rate was 10.2% (in EU-28: 4.5%) ⁽³⁾. Apart from its financial and social effects on personal life, long-term unemployment very negatively affects social cohesion and may endanger economic growth. Most of the long terms unemployed were without upper secondary education or prior employment experience and older people. Youth unemployment is highly influenced by the lack of working experience, a challenge which reforms in the education and labour tried to address (see Chapters 2 and 3). Eurostat data

⁽²⁾ Neither employed nor unemployed, including students, retired, engaged in family duties and other economically inactive persons.

⁽³⁾ Eurostat (2015). *Unemployment rates by duration 2015 (%)*. [une_ttu_a](#) and [tesem130](#)

show that the youth unemployment rate in 2015 was 43.8% in Croatia; more than double the EU-28 average (20.3) ⁽⁴⁾. What is even more troubling is that in the youth employment ratio indicator, which calculates the share of the unemployed in the whole population, Croatia ranks second to last among EU-28 countries.

Table 1. **Unemployment by educational attainment, 2011-15**

Level of education	2011	2012	2013	2014	2015
Without completed primary education	5.7	5.6	5.3	5.4	5.5
Primary education	22.5	21.2	20.7	20.6	20.7
1 to 3-year secondary VET school	34.4	34.2	34.0	32.9	32.2
4-year (or more) secondary VET school and gymnasium	27.6	27.9	28.5	28.8	28.8
Post-secondary non-university education	4.1	4.7	5.1	5.4	5.6
Undergraduate degree, postgraduate degree (MA, PhD)	5.7	6.3	6.4	6.9	7.2

Source: Croatian Employment Service, Yearbooks 2011-15

As indicated in Table 1, in terms of the employment, the value of VET has not risen against the background of the economic recession and unemployment. In 2011-15, the highest registered unemployment was among the people who completed one to three-year VET secondary education. However, the share of unemployment of people with lower levels of education is slowly decreasing. For the higher levels of education, the situation is reversed.

In general, persons with a three-year VET qualification are faced with the most profound problems on the labour market (European Training Foundation, 2013). The share of workers with three-year VET education remained relatively high and stable during the periods of growth (32.8% in 2004; 32.7% in 2008). This group was struck particularly hard during the recession as its share in total employment fell to 27.9% by 2011. On the flip side, the average number of people with this level of education registered with CES decreased steadily during the period of economic growth from 124 000 in 2004 to 81 000 in 2008. Research carried out while developing VET sectoral profiles (see Chapter 3 for more general details on the VET sector profiles and the Croatian Qualifications Framework) indicates that the decrease in labour market entry dynamics during the crisis period was greater for graduates from three-year vocational courses than from other levels of education.

Enrolment in three-year VET programmes has seen a steady decline over the past 15 years. Thus, the number of students completing the final year of such programmes declined from 21 000 in 1998 to 16 000 in 2004, less than 13 000 in 2008 and about 11 000 in 2015 – effectively halving in just 13 years and declining as a share of upper secondary education graduates from 40% to 26%. The number of placements in the more popular four-year VET programmes and the general education programmes (gymnasiums) remained steady over the years, due to an unchanging bottom-up planning of quotas and the lack of coherent anticipation of labour market needs (see Section 3.1 and 3.2).

⁽⁴⁾ Eurostat (2015). *Youth unemployment figures, 2012-2015 Q4 (%)*. [une_rt_q](#) and [lfsi_act_a](#)

Unfavourable demographic trends combined with obsolete enrolment principles and the deterioration of crafts and industry has led to a slow pace of recovery from the economic crisis.

There is no comprehensive analysis that would systematically examine the responsiveness of the education system to the labour market needs; although considerable effort was made to strengthen VET through the development of strategic documents, the curricular reform and especially the instruments of Croatian Qualifications Framework (see Chapter 3). It is acknowledged that a mismatch between the supply and demand of skills exists. Very low levels of provision of adult education and training aggravate the situation.

The *Tourism development strategy of the Republic of Croatia until 2020* (Strategija razvoja turizma Republike Hrvatske do 2020. godine, 2013) and the *Industrial strategy of the Republic of Croatia 2014-20* (Industrijska strategija Republike Hrvatske 2014–20, 2014) have been adopted, among others, to contribute to the increase of the employment rate by five percentage points by 2020, by focusing on medium-high tech manufacturing, communication, and IT, in line with the smart specialisation framework and the demands of the growing 'green economy'. This requires substantial investment in the development of curricula, attractiveness and quality of vocational education and apprenticeships, while retaining the human capital of older workers already in employment, as well as a system of coordination and cooperation between the businesses, the education system and the scientific research sector.

1.4. Employment policies relevant to VET

The main welfare/employment policy relevant to VET is the Active Labour Market Policy (Mjere aktivne politike zapošljavanja, ALMP). The priorities and objectives of the active labour market policy are laid down in the *Guidelines for the development and implementation of active labour market policy in the Republic of Croatia for 2015-17*. This document was drafted on the basis of the analysis of the current situation in the national labour market and the relevant strategic documents in the field of employment. The action priorities and targets have been defined, and accordingly, active labour market policy interventions have been identified, the aim of which is to increase employment rates of disadvantaged groups in the labour market, improve the competitiveness of employers, increase the professional, geographical, and educational mobility of labour force and ensure a good match between demand and supply in the labour market.

The Ministry of Labour and Pension System (Ministarstvo rada i mirovniskog sustava) and the Croatian Employment Centre (Hrvatski zavod za zapošljavanje, CES) are responsible for implementing the ALMP in line with the European employment incentive strategies. The measures of ALMP include:

- (a) promotion of employment and self-employment;
- (b) support for career advancement of new employees;
- (c) job retention subsidies;
- (d) VET/labour market training for unemployed working without a contract;
- (e) employment in public works and job retention programmes.

In 2015, ALMP specifically targeted:

- (a) persons up to 29 years of age;
- (b) long-term unemployed persons;
- (c) persons aged 50+ years;
- (d) persons with disabilities;
- (e) unemployed persons at risk of social exclusion, for example, single parents, orphans, family abuse victims, war veterans, parents of four or more underage children, parents of children with special needs, asylum seekers;
- (f) the Roma people; and
- (g) employers facing difficulties in efforts to preserve jobs.

During 2015, 64 773 persons used the active measures, out of which 35.8% were existing users. Croatia currently faces a significant rise in the proportion of youth not in employment, education or training (NEET). In 2015, 23.8% of those aged 20-34 (18.9% in the EU) were NEETs (Eurostat online data code_ edat_ifse_20; accessed on 30.10.2016.). This negative data was characteristic of all age groups. Among those who are especially at risk are males aged 20-24 (28.2% in comparison to 16.5 in EU28) and women aged 30-34, with 28.1% characterised as NEETs. If not successfully integrated, these individuals may lose competences. As such, strong emphasis has been put on youth employment measures since 2012.

In 2012, the adoption of the Employment Promotion Act (Zakon o poticanju zapošljavanja) allowed employers in the private sector to train youth in occupational training programmes without commencing employment (Stručno osposobljavanje za rad bez zasnivanja radnog odnosa). Although this initiative previously existed in a more limited scope, currently any person with less than 12 months of work experience in an occupation can enrol in the programme. For up to 36 months (most often 12 months), employers participating in this scheme are reimbursed all taxes paid for trainees receiving a state scholarship. An accompanying 'work after occupational training' measure (Rad nakon stručnog osposobljavanja) supports employers who hire their trainees (15-30 years of age). While this initiative was criticized at first, the overall results look promising: over 50% of trainees found employment within a year after completion of their occupational training.

Taking into account the issues discussed here and the EU initiatives targeting youth, the Croatian government (under the Ministry of Labour and Pension System) and 17 stakeholders have elaborated the Youth guarantee implementation plan 2014-20 (Plan implementacije garancije za mlade), which includes reforms, initiatives and measures focused on:

- (a) early intervention and activation – reforms and measures that prevent early leaving from education and support the activation of inactive young people;
- (b) labour market integration – reforms and measures aimed at youth activation in the labour market through job creation, strengthening employers' capacity to offer high quality work-based learning, encouraging youth entrepreneurship, etc.

As such, the plan constitutes a comprehensive scheme of youth-directed activities financed from national, EU and other sources. It focuses on the implementation of swift

support measures for youth under 30 years of age and relies strongly on the education system, apprenticeships, links between education and employment, and VET curricula in particular.

In 2013, with cooperation between government agencies and various social partners, including youth representatives, the ALMP measures were aligned to focus on the beneficiaries. The result of this effort was a well-accepted 'young and creative' package of 11 new measures (extended to 23 in 2014) aimed to provide employment, self-employment, training and specialisation subsidies, occupational training, public works opportunities and job preservation support.

Substantial funding has been planned and used within the *ESF operational programme effective human resources 2014-20* (Učinkoviti ljudski potencijali 2014-20.) on the Youth guarantee (⁵).

1.5. Regulation of access to occupations/professions

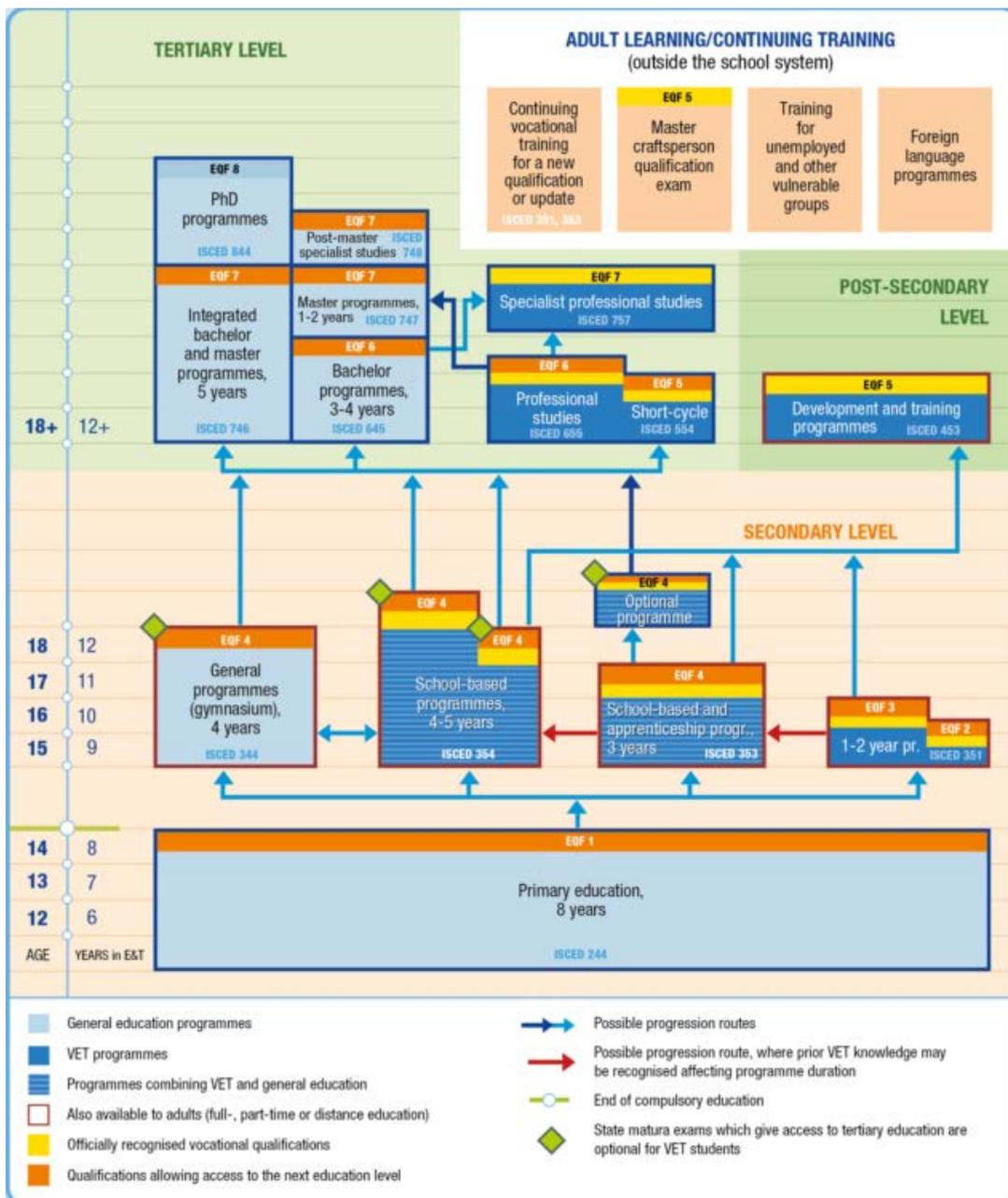
Croatia's accession to the EU in 2013 enforced the application of the Act on regulated professions and recognition of foreign professional qualifications (Zakon o reguliranim profesijama i priznavanju inozemnih stručnih kvalifikacija). It stipulates that foreign qualifications need to be recognised by a chamber/ministry in order to exercise the regulated profession. The act guarantees that persons who have acquired their professional qualifications in any EU Member State have access to the same profession with the same rights as Croatian nationals. Regulated professions are listed in the national register of regulated professions. Majority of jobs at the labour market, especially those requiring qualifications at higher levels, require formal qualifications. The national ENIC/NARIC office provides information about the recognition of such qualifications.

⁵ All information on the programmes is available at (www.gzm.hr)

Chapter 2. Providing VET from a lifelong learning perspective

2.1. VET in Croatia's education system

Figure 3. VET in Croatia's education system



NB:ISCED-P 2011.

Source: Cedefop and ReferNet Croatia.

As shown in Figure 3, the main elements of the Croatian education and training system are:

- pre-school education (*predškolski odgoj i obrazovanje*);

- primary education integrating primary and lower secondary education (*osnovno obrazovanje*);
- upper secondary education (*srednje obrazovanje*), including:
 - general and specialised (focusing on languages, mathematics, Latin/Greek languages and science) gymnasia programmes (*opće ili specijalizirano gimnazijsko obrazovanje*);
 - art programmes (*umjetničko obrazovanje*);
 - initial VET (IVET) programmes (*strukovno obrazovanje*);
 - 1-year and 2-year training programmes (EQF 3, ISCED 351);
 - 3-year programmes for professions in craft and industry (EQF 4, ISCED 353);
 - 4-year technician programmes (EQF 4, ISCED 354);
 - 5-year general care nurse programme (EQF 4, ISCED 354).
- post-secondary education (*programi stručnog obrazovanja i osposobljavanja nakon srednjeg obrazovanja*);
- higher education (*visoko obrazovanje*), including:
 - academic (university) study programmes:
 - undergraduate (bachelor, *preddiplomski sveučilišni studij*, EQF 6, ISCED 645, in general a 3- or 4-year study),
 - graduate (master, *diplomski sveučilišni studij*, EQF 7, ISCED 747, in general 1- or 2-year study);
 - postgraduate (post-master/*poslijediplomski sveučilišni studij*, EQF 7, ISCED 748 and PhD, EQF 8, ISCED 844, at least 3-years);
 - professional study programmes:
 - short cycle professional undergraduate (*kratki stručni studij*, EQF 5, 2-2.5 year programmes),
 - professional undergraduate (*preddiplomski stručni studij*, EQF 6, ISCED 655, 3-4 year programmes);
 - graduate professional specialists (*specijalistički diplomski stručni studij*, EQF 7, ISCED 757, 1- or 2-years).

2.2. Government-regulated VET provision

VET develops vocational and key competences for employment and further education. VET is regulated by the Act on Primary and Secondary School Education (*Zakon o odgoju i obrazovanju u osnovnoj i srednjoj školi*) and the Vocational Education and Training Act (*Zakon o strukovnom obrazovanju*). The VET Act defines the acquisition of VET qualifications, quality assurance, stakeholder cooperation, and in-service teacher training. The Crafts Act (*Zakon o obrtu*) regulates trade and craft qualifications/professions and defines the normative framework and the responsibilities of the stakeholders for apprenticeships in VET.

VET can also be provided as adult education/training or as continuing VET (CVET) in line with the provisions of the Adult Education Act (*Zakon o obrazovanju odraslih*). This act

establishes a normative framework and creates the legal prerequisites for further development of adult education as an integral part of the education and training system. Formal adult education standards are defined by one of the four by-laws complementing the act.

Since 2013, main strategic frameworks and reforms in education and training system have been conceptualised. They were further supported with legal framework and majority of them are being implemented. Becoming a member state of the European Union has been perceived as an opportunity to substantially reform the system and focus on the development of human potential. All these policy developments highlight the importance of substantially reforming VET. These developments include:

- (a) adoption of the Croatian Qualifications Framework Act (*Zakon o hrvatskom kvalifikacijskom okviru*) and consequent work on its implementation;
- (b) development and adoption of the *Strategy of Education, Science and Technology (Strategija obrazovanja, znanosti i tehnologije)* by Croatian Parliament in October, 2014;
- (c) initiation and completion of the first phase of the *Comprehensive Curricular Reform for Early and Pre-School, Basic and Upper Secondary Education (Cjelovita kurikularna reforma za rani i predškolski, osnovnoškolski i srednjoškolski odgoj i obrazovanje)* whose documents are currently in the public consultation process. Process envisages development of the framework document 'National Curriculum for Vocational Education and Training' (Nacionalni kurikulum za strukovno obrazovanje);
- (d) development and adoption of the *VET System Development Programme 2016–20 (Program razvoja sustava strukovnog obrazovanja i osposobljavanja)* in September, 2016.

Within VET, these changes build on the results of the *VET System Development Strategy 2008-13 (Strategija razvoja sustava strukovnog obrazovanja u RH 2008.- 2013.)*. The strategy included a series of measures directed at the modernisation and strengthening of VET quality in Croatia. Mechanisms for linking VET with labour market needs were strengthened (sector councils), new tools were developed and introduced (sector profiles, occupational standards, qualifications standards) and, based on these tools, modular and learning-outcome-based vocational curricula were introduced. The quality assurance system was improved, in which self-evaluation for the VET institutions was introduced. There was a strong incentive to develop partnerships between the VET institutions and the local stakeholders.

The Croatian Qualifications Framework Act established the Croatian Qualifications Framework (CROQF) and set an outline for its implementation. In addition, it linked this framework to the EQF, QF-EHEA and, indirectly, to the national qualifications frameworks of other countries. The CROQF is an instrument that structures the system of qualifications in the Republic of Croatia, as well as ensuring clarity, reliability, mobility, quality, and opportunities for gaining qualifications. From 2013 onwards, all strategic and reform documents clearly state that the development of VET will take place in accordance with the tools and procedures developed through the CROQF. Within the CROQF, 15 sectoral councils have been established (another 10 to be established) to replace those in position in the period up to 2013. Substantial effort has been devoted to the implementation of tools and

mechanisms in order to develop the occupation and qualification standards (see Section 3.2).

The *Strategy of Education, Science and Technology* explicates the priorities and measures to improve pre-school, elementary and upper secondary education, higher education, lifelong learning and adult education, as well as the systems of science and technology. The strategy includes specific measures for redefining VET curricula as a part of comprehensive curricular reform, with special emphasis on the incorporation of work-based learning (WBL) into all VET programmes in order to ease the transition of students from the education system to the labour market. The strategy affirms that all curricula should be based on learning outcomes. Measures were also developed to address the ineffective and expensive VET school network, the continuing professional development of VET teachers, the need for comprehensive quality assurance systems and the resolution of legal overlap in some parts of the education system.

The development and adoption of the *VET System Development Programme 2016-20* was envisioned within the *Strategy of Education, Science and Technology* in order to provide focus and precise elaboration of the realisation of the goals set by the strategy. Both the strategy and the *VET System Development Programme 2016-20* strongly direct VET towards quality and efficiency, attractiveness, innovativeness and relevance and a strong connection with the labour market. These documents state that all planning and implementation of VET will be guided by the following principles:

- (a) quality assurance, which will increase the transparency of vocational education and training and strengthen confidence in the system and lifelong learning;
- (b) partnerships, which will ensure and promote the inclusion of all stakeholders in all phases of planning, implementation, and monitoring of VET;
- (c) inclusion, which will strengthen the importance of VET in decreasing the risk of social exclusion of vulnerable and underrepresented groups;
- (d) relevance, which will ensure that VET is based on analyses of labour market needs, the continuation of education and personal development;
- (e) focus on learning outcomes and developing competences for a successful inclusion in the labour market and lifelong learning;
- (f) coherence, relating to different levels and types of education and training.

Within the *VET System Development Programme 2016-20*, measures to develop new sector curricula and curricula for gaining vocational qualifications, to strengthen the work-based learning (WBL) model, to improve the quality assurance in VET and to promote the continuing professional development system of teachers all serve to raise the relevance and attractiveness of VET and increase the mobility and employability of VET students.

The *Comprehensive curricular reform* was the first measure to initiate the realization of the *Strategy of Education, Science and Technology*. Within this curricular reform, a proposal of *National Curriculum for Vocational Education and Training* will set out the purpose, aims and principles of VET in Croatia as well as the principles and processes for teaching and learning. Special emphasis is placed on the importance of WBL. The document will also propose the structure of each qualification level in terms of the proposed teaching time devoted to general content, theoretical vocational content, qualification-specific content,

and WBL. Elements of permeability as well as assessment and reporting practices in VET will also be defined. Following its development, the national curriculum underwent several rounds of expert and professional discussions. At present, the document is in the process of public discussion.

The *National Reform Programme for 2016 (Nacionalni program reformi 2016)*, adopted by the government in April 2016, directly references all the aforementioned strategic documents and initiatives.

2.2.1. Initial vocational education and training (IVET)

Croatia is one of the EU member states with the largest participation in VET. In the 2015/16 academic year, there were approximately 115 000 secondary VET students in 304 schools, a figure representing 68% of the total secondary school population ⁽⁶⁾. In the last several years, there has been a slight decrease in the VET population, mainly due to the lower number of students in 3-year VET programmes. Most IVET programmes are three (e.g. car mechanic, waiter, hairdresser, etc.) and four years (e.g. technician for electrotechnics, hotel and tourist technician, etc.) in duration. A five-year programme (general care nurse) is offered for regulated occupations in the health sector. In addition, there are a few one- and two-year VET programmes (e.g. welder, animal caretaker, road worker, etc.). Learners with disabilities may enrol in special or adapted programmes (*posebni ili prilagođeni programi strukovnog obrazovanja*). Special and adapted programmes last three to four years. The main features of IVET programmes are presented in Table 2.

Table 2. Main features of IVET programmes IVET programmes

VET programme	ISCED level / sub-categories (2011-P)	CROQF / EQF level	Primary progression routes
1-year VET programmes	3 / 351	2 / 2	continuation of education
2-year VET programmes	3 / 351	3 / 3	continuation of education
3-year VET programmes for professions in industry	3 / 353	4.1 / 4	labour market
3-year VET programmes for professions in crafts	3 / 353	4.1 / 4	labour market / master craftsmen exam
4- and 5-year VET programmes	3 / 354	4.2 / 4	labour market / higher education (after completion of State Matura)

NB: CROQF - Croatian Qualifications Framework, <http://www.kvalifikacije.hr/about-croqf>

Sources: Ministry of Science and Education, Agency for Science and Higher Education, Agency for VET and Adult Education, 2016.

In Croatia, IVET is offered at secondary level. It is provided by VET institutions and partially companies. Professional higher (tertiary) education studies are not seen as higher VET. In vocational programmes/curricula, WBL is present in three forms:

(a) apprenticeships;

⁽⁶⁾ Information extracted from the ministry of science and education on October 23rd, 2016. <http://public.mzos.hr/Default.aspx?sec=2253>

- (b) at school, with on-the-job training periods in companies;
- (c) at school.

Further details of the work-based models in Croatian IVET are provided in Table 3.

Table 3. **Work-based models in IVET** Work-based models in IVET

Types of VET in Croatia	WBL models		
	Apprenticeship programmes	Periods of training in the workplace	School-based VET
Three-year VET programmes for crafts (WBL performed through practical training in licenced crafts and/or legal entities and school workshops)	X		X
Three-year VET programmes for industry and related education programmes (WBL is performed through practical training in school workshops, in the workplace and in school laboratories, and through professional practice performed in the workplace (included in most programmes))		X	X
Four-year VET programmes (WBL is performed through practical training in school workshops and laboratories and through professional practice performed in the workplace (included in most programmes))		X	X
Five-year VET programme – general care nurse (WBL is performed through training in school facilities, laboratories and clinical training)		X	X

NB: Table relates to IVET, which is performed in Croatia only up to CROQF level 4.2

2.2.1.1. *One-year and two-year programmes*

One and two-year VET programmes lead (i.e. to lower qualifications at Level 2 and Level 3, respectively, in the Croatian Qualification Framework (*Hrvatski kvalifikacijski okvir*, CROQF) and the European Qualification Framework (EQF). There are 23 of such programmes in Croatia, currently active only seven and attended by 0.2% of the total number of secondary VET students (MoSE, 2016). Entry requirements include a certificate of completion of primary education and good physical and mental health, as required by the curricula. After completing two-year VET programmes, the learners have the possibility of vertical mobility and continuing their education at a higher level in the status of regular students. They can enrol the three-year VET programme and pass additional and supplementary examinations.

2.2.1.2. *Three-year programmes*

Three-year VET programmes allow the acquisition of competences in industry, trades and crafts and lead to qualifications at CROQF level 4.1/EQF level 4. There are two types of three-year programmes:

- (a) industrial and industry-related education programmes (which are predominantly school-based programmes);

- (b) apprenticeships programmes for crafts, called Unified Model of Education (UME/JMO) ⁽⁷⁾.

Since the 1990s, these programmes have undergone significant reforms. Previously, in the VET system there were programmes in the dual system of education that were introduced in the school year of 1995/96. The main characteristic of the dual system of education was the separation of the general education from the vocational theoretical and practical education. These programmes had a high proportion of practical training and less demanding general education and the students were issued two certificates (for general education - the ministry responsible for education and for the VET part - the ministry responsible for crafts and trade). Due to their complexity, dual system programmes were replaced by VET programmes for crafts and trade known as the Unified Model of Education, UME (*Jedinstveni model obrazovanja*, JMO). Education for attainment of VET qualifications in crafts is implemented according to a vocational curriculum that consists of two parts - general education part and apprenticeship. Apprenticeship consists of a professional-theoretical part and practical training and exercises.

Within the *Strategy of Education, Science and Technology* and the *VET System Development Programme*, a significant move towards greater teaching and learning time devoted to WBL for all VET programmes has been proposed.

The participation rate in three-year programmes in the 2015/16 academic year was 20.05% of the total secondary education student population and 29.85% of the total secondary VET population. Over the last 15 years, student participation in these programmes has been steadily declining. Specifically, the number of students finishing three-year programmes has fallen from 21 000 in 1998 to 11 422 in 2015. This has been recognised as a problem and various incentives and motivational measures have been put in place or are planned in the near future (see Chapter 4).

The entry requirements for three-year programmes include a certificate of completion of primary education and adequate physical and mental health, as required by the VET teaching plans and programs. For crafts occupations, an apprenticeship contract is also required. Currently, there are 109 programmes for industrial occupations and 46 for trades and crafts (MoSE, 2016). These programmes prepare graduates for entry into the labour market and do not provide direct access to the state matura exams (*Ispiti državne mature*). Since 2012, graduates of three-year programmes have had the possibility of vertical mobility and of continuing their education at a higher level in the status of regular students. In order to enrol in higher (tertiary) education, graduates need to complete a 'bridge' programme that qualifies them to take the state matura exams. This is carried out under *Regulation on conditions and ways of continuing education for higher level of qualification* (Pravilnik o uvjetima i načinima nastavka obrazovanja za višu razinu kvalifikacije). They can enrol in a four-year VET programme or a gymnasium programme and pass additional and supplementary examinations.

⁽⁷⁾ Letica, J.; Ištvančić, I.; Buić, N. (2014). (2014). *Apprenticeship-type schemes and structured WBL programmes - Croatia*. (Cedefop-ReferNet Thematic perspectives). <http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/apprenticeship-type-schemes-and-structured-work-based-23>

Graduates can also apply for the master craftsperson exam after two to three years of working experience in the field.

In both the *Strategy of Education, Science and Technology* and in the *VET System Development Programme 2016-20*, there are measures planned that are aimed at improving permeability and enhancing vertical mobility from three-year programmes to four-year programmes and to professional studies at the tertiary level.

2.2.1.3. Four- and five-year programmes

Four- and one five-year VET programmes ⁽⁸⁾ lead to qualifications at CROQF level 4.2 / EQF level 4. In the 2015/16 academic year, the participation rate in four-year VET programmes was 48.56% of the total secondary student population and 64.58% of the total secondary VET population. This rate has been relatively stable over the recent years. The participation rate in the five-year VET programmes is around 5% of the total secondary VET population. The entry requirements include a certificate of completion of primary education and adequate physical and mental health, as required by the occupational standards. There are currently 123 programmes that offer relevant qualifications. In order to enrol into higher education, graduates can opt to take the *state matura* exams following the completion of four- and five-year programmes.

National data from 2011 suggest that 91.94% of four- and five-year VET programme students expressed a wish to study at the tertiary level by enrolling in the national information system and taking the three obligatory *state matura* exams (Croatian language, Mathematics, Foreign language) (Jokić & Ristić Dedić, 2014). The proportion of students from different sectors varies significantly in their wish to continue education at the tertiary level, with the proportion of students in all sectors reaching over a half. The national data indicate that 77.71% of four- and five-year VET students are successful in passing the *state matura* exams, which qualifies them for further study programmes. Students in the sectors of economy and trade, electrical engineering, tourism and construction are particularly successful, with over 80% of students in these programmes passing all three obligatory *state matura* exams. The national data further indicates that 60.70% of the four- and five- year cohort successfully enrol in tertiary study programmes. A positive feature of the system is that most of them continue their studies in higher education in fields consistent with their secondary education.

At CROQF/EQF level 5 short cycle professional undergraduate studies last 2-2.5 years. Graduates acquire the title of *stručni pristupnik* (120-150 ECTS).

Undergraduate professional studies (CROQF/EQF 6, 180-240 ECTS) last for 3 or 4 years. Graduates acquire the title of professional bachelor (baccalaureus, *prvostupnik*) and the occupation. Exceptionally, undergraduate professional studies' graduates in the area of technical sciences acquire the title of professional bachelor engineer (*prvostupnik inženjer*) and the occupation.

Specialist professional graduate studies, CROQF/EQF 7, last 1-2 years with 60-120 ECTS credits. Graduates acquire the title of professional specialist (*stručni specijalist*) and

⁽⁸⁾ Five-year health sector education programmes for regulated occupations (e.g. nursing) are aligned with the EU Directive 36/2005/EU.

the occupation. Similar to undergraduate professional studies, graduates from technical sciences acquire the title of professional specialist engineer (*stručni specijalist inženjer*) with the addition of the name of the occupation.

A vertical progression from short cycle professional undergraduate studies to undergraduate professional studies and from undergraduate professional studies to specialist professional graduate studies is available to the learners.

2.2.1.4. Continuing vocational education and training (CVET)

Formal CVET in Croatia covers the programmes with various educational attainment levels (formal education achieved through CVET, short training programs, re-qualification, etc.) for learners who are older than 16. They may be required to have a certain vocational qualification or work experience. Duration of programmes is shorter than one year but depends on the target group and complexity of the qualifications.

These programmes' objectives are to acquire:

- (a) a vocational qualification;
- (b) an additional vocational qualification;
- (c) a competence to perform jobs or functions regulated by law.

CVET enables adult learners with previous education/work experience to acquire a professional qualification. Programmes are always concluded for a specific state-recognised qualification/profession. Professional improvement enables people regardless of their age and previous education or professional qualifications to master systematised professional knowledge and skills corresponding to the requirements of the labour market. CVET programmes that are approved by the Ministry of Science and Education (Ministarstvo znanosti i obrazovanja) include:

- (a) acquiring a secondary school degree or qualification,
- (b) low-skill professional qualification,
- (c) professional re-training, training, and supplemental training.

Graduation from these programmes leads to CROQF levels 2 - 4.1/4.2 qualifications.

2.2.2. Main features of apprenticeships and similar schemes

The formal three-year VET (crafts and trades) programmes provide work-based professional competences.

The education for attainment of VET qualifications in crafts is implemented according to a VET curriculum that consists of two parts, the general education part and the apprenticeship. The apprenticeship consists of a professional-theoretical part and practical training and exercises. VET curricula for qualification in crafts are approved by the minister in charge of education with prior consent of minister in charge of crafts. Curricula lists teaching subjects of the general education part, teaching areas of apprenticeship and profession, contents of teaching areas, human and spatial resources, duration, and yearly and weekly number of teaching hours. The general education and the professional-theoretical parts are implemented in VET schools. The practical training and exercises are implemented mainly in

the work process, in craft business workshops or in a trade association, institution or cooperative and to a lesser extent in VET school workshops in a certain number of hours, according to the curriculum for each qualification. For the practical training and exercises, craft business workshops or legal entities must have a license for work with students in the apprenticeship scheme programme. The Croatian Chamber of Crafts issues licenses to craft workshops or legal entities. Craft business workshops or legal entities must provide the conditions for the learners to acquire the knowledge, skills and competences in the real work process and allow learner the quality of the practical training and exercises, in accordance with the curriculum. This means that learners must have a mentor appointed to them with adequate qualifications and pedagogical competences. This is in accordance with the European guidelines, which emphasize the importance of including education in the workplace in the initial system of vocational education.

In 2015/16, the total number of licensed craft workshops or legal entities involved in the implementation of the apprenticeship-type scheme was 10 230.

After a successful completion of a VET programme for crafts, the student takes an journeyman exam organised by the Agency for VET and Adult Education (*Agencija za strukovno obrazovanje i obrazovanje odraslih*).

The master craftsmen (*potvrda o položenom majstorskom ispitu*) certificate/qualification can be obtained through the three-year vocational education and training program for crafts (UME). It is implemented in close cooperation with the Croatian Chamber of Crafts. The Croatian Chamber of Crafts conducts licensing craft workshops or legal entities for the practical training and exercises ⁽⁹⁾. The chamber also organises exams for retrained crafts-persons; usually young persons who could not find employment in the profession for which they have originally been trained or who wish to advance to a master crafts-person status. Agency for VET and Adult Education organises journeyman (*potvrda o položenom pomoćničkom ispitu*) exams.

Alongside the mainstream apprenticeship scheme, students in other three- and four-year VET programmes have some form of WBL (training/practice) in businesses/workplaces. However, this is on a much smaller scale than in the apprenticeship scheme and these students are not perceived as apprentices.

In the *Strategy of Education, Science and Technology*, the proposal of the National Curriculum for Vocational Education, the *National Programme of Reforms* and the *VET Development Program 2016-20*, the importance of WBL in real work environments and the promotion of apprenticeships has been particularly emphasised. Furthermore, recent incentives for both learners and enterprises specify a strong wish to foster the apprenticeship schemes in Croatian education (see Chapter 4).

⁽⁹⁾ Letica, J.; Ištvančić, I.; Buić, N. (2014). (2014). *Apprenticeship-type schemes and structured WBL programmes - Croatia*. (Cedefop-ReferNet Thematic perspectives). <http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/apprenticeship-type-schemes-and-structured-work-based-23>

2.2.3. Permeability

In 2012, legislative changes obliged all schools providing two-year programmes to organise an additional third year, and the schools providing three-year programmes to organise an additional fourth year for students aiming to continue their education (for example, the student has completed a three-year programme for the qualification of an electrician and he/she can enrol the fourth-year for the qualification of an electronics technician and take additional and supplementary examinations). The student has the status of regular student (founded by the state). This is carried out under 2016 Regulation on conditions and ways of continuing education for higher level of qualification (Pravilnik o uvjetima i načinima nastavka obrazovanja za višu razinu kvalifikacije). The regulation also states that while a student can enrol into the fourth year of education as a regular student, the number of the additional and supplementary exams determines the duration of the fourth year; students with a lower number of exams can immediately attend the regular classes but have to pass the exams before 31 of March of the following year. Students with a higher number of exams first take one year to pass the exams, and then the next year attends classes regularly.

According to the Eurostudent V 2014 survey, only 0.3% of tertiary students reported that they had previously completed a three-year vocational education programme and a further 0.5% reported that they had completed a three-year VET programme and an additional year of studies (Šćukanec et al., 2015). This scheme posed a great organisational and infrastructural demand requiring a great deal of determination on the part of both schools and students (European Training Foundation, 2013).

Studies suggest that transferring between the three and four-year programmes is usually allowed and encouraged at the beginning of the programmes (European Training Foundation, 2012; European Training Foundation, 2013). As time passes, this transfer becomes more difficult for students as the amount of practical training and the number of exams they must pass in order to make up for the difference between programmes is high. Therefore, students are more mobile within the similar courses or programmes. Low-achievers in four-year programmes often transfer to less demanding three-year programmes. Mobility from two-year to three year programmes or from three-year to four-year programmes represents a greater challenge. It is mostly merit-based, where students need to have strong grades to obtain approval from the teachers' council for the programme transfer. Horizontal mobility may increase the chance of grade retention for those students who were unable to find an apprenticeship in time or to make up for practical training. Transfer from VET schools to general secondary education, i.e. gymnasias, is not common due to the significant differences between these two types of secondary education.

Within the proposal of National Curriculum for VET, special emphasis was placed on increased flexibility in the organisation of teaching and learning processes and allowing schools to recognise both formal and informal competences of learners. The *VET System Development Programme 2016-20* clearly states that, by 2017, a new model for addressing the aforementioned challenges of both vertical and horizontal mobility should be developed and implemented.

2.2.4. Provision for groups at-risk

As shown in Table 4, the share of early leavers from education and training is one of the lowest compared to other EU member states. In order to maintain and further decrease this proportion, early leavers from education and training are encouraged by CES to enrol in adult education/CVET programmes offered by VET schools or adult education providers.

Table 4. **Early leavers from education and training, 2010-15 (%)**

	2010	2011	2012	2013	2014	2015
EU-28	13.9	13.4	12.7	12.0	11.2	11.0
Croatia	3.7	4.1	4.2	4.5	2.7	2.8

Source: Eurostat, Date of extraction: 30.10.2016.

Most early leavers are former students from VET programmes, and three-year programmes in particular. As in other member states, early leaving from education and training has been linked to social and economic deprivation, personal hardship, and health issues. Additional reason may lay in the fact that formal vocational education is free for learners until the age of adulthood. The issue of early school-leaving will need to be further researched, addressed, and linked to other policies for youth. The *Strategy of Education, Science and Technology* has developed further measures for the linking of different sectoral policies. Social inclusion efforts in secondary VET are primarily aimed at the integration of special needs learners or enabling Roma learners to reach upper secondary education in greater numbers (European Training Foundation, 2013b). In pursuing secondary education, learners with physical or learning disabilities generally have three options. The first option is to attend regular VET programmes accompanied by an individualised support. In the case of learners with severe disabilities, another option is to enrol in adapted programmes within the framework of one-year and two-year VET programmes, which prepare them for the so-called 'auxiliary' vocational occupations. Alternatively, learners may enrol in special educational institutions with tailored pedagogical approaches and infrastructure. Measures aimed at ensuring learning opportunities for unemployed persons are elaborated in Section 1.4 'Employment policies relevant to VET'.

The *VET Development Programme 2016–20* states that, by 2020, a comprehensive support and monitoring system for inclusion programmes for at-risk student groups should be in place. It further states that early warning systems for those at risk of leaving education should be developed and implemented and that alternative curricular and organisational arrangements for at-risk groups should be supported.

2.2.5. Governance and funding

Although several governmental ministries have an influence on the development of VET for the sectors under their remit, the Ministry of Science and Education is responsible for the overall VET policy. As such, it monitors the overall compliance of the VET system with legislation and coordinates multiple executive agencies in the field of education.

Since 2010, the Agency for VET and Adult Education is responsible for the implementation of most IVET and CVET policy. This agency is the result of a merger of two former agencies (the Agency for Adult Education, established in 2006, and the VET Agency, established in 2005). As an executive body in charge of the overall development and organisation of the VET system, the Agency for VET and Adult Education is responsible for the following:

- (a) development of the VET system and programmes;
- (b) cooperation with professional organisations;
- (c) supervision of VET and adult education institutions;
- (d) provision of advice and counselling services for VET and adult education institutions;
- (e) continuing professional development of employees in the field of VET;
- (f) promotion of participation in VET;
- (g) monitoring VET and adult education (database), including funding;
- (h) investment in VET.

The Agency develops and modernises the VET curricula based on occupational and qualifications standards based on labour market needs (see Chapter 3). The Agency is also responsible for the professional development of VET teachers by providing (in-service) training, organising professional exams and developing procedures for promotion.

The institutional framework for CVET is not fully established. Apart from participating businesses and workplaces, the overall responsibility and majority of actions in this area lies with the Agency for VET and Adult Education as well as with the Chamber of Crafts and Trades (e.g. coordination of the master crafts-person exams, re-training for trade and craft professions, etc.). Other stakeholders/social partners that have (in)direct influence on the overall development of VET are:

- (a) Education and Teacher Training Agency (*Agencija za odgoj i obrazovanje*) –assists in the preparation, development and implementation of national curricula;
- (b) Ministry of Economy, SME and crafts (*Ministarstvo gospodarstva, maloga i srednjega poduzetništva i obrta*) proscribes the conditions for apprenticeship contracts, means and the procedure of taking (for students) and externally evaluating apprenticeship exams, issuing apprenticeship exam certificates, oversees journeyman exam procedure etc.;
- (c) Ministry of Labour and Pension System (*Ministarstvo rada i mirovinskog sustava*) performs business related to: employment policy, labour market forecasting, labour market and active employment policy, retraining programmes and employment increase, pension insurance system and policy, management of unemployment and employment assistance, social partnerships with unions and employers in the field of employment and labour market etc.;
- (d) Adult Education Council (*Vijeće za obrazovanje odraslih*) is a counselling body of the Government of the Republic of Croatia whose mission is to monitor the condition and propose measures for the development of adult education, issue opinions on legislative proposals and suggest means and modes of financing of the adult education programmes;

- (e) Chamber of Economy (*Hrvatska gospodarska komora*) is an independent organisation of all legal bodies performing business activities. Its tasks are to represent interests of members during the development of economy system, assess means and conditions of economy growth, improve the development of entrepreneurship, develop business relations with foreign partners, support innovation and development etc.;
- (f) Employers' Association (*Hrvatska udruga poslodavaca*) is an independent organisation of all legal bodies performing business activities. Its tasks are to represent interests of members during the development of economy system, assess means and conditions of economy growth, improve the development of entrepreneurship, develop business relations with foreign partners, support innovation and development etc.;
- (g) Industrial trade unions (six confederations of trade unions).

Since 2001, the financing of secondary schools (including VET schools) has been decentralised. The intention was to increase education planning and management responsibilities of local government and to strengthen ties between schools and the social and economic environment. Funding for schools is derived from two sources. The State budget finances:

- (a) salaries for teachers and other employees in education;
- (b) in-service training of teachers and other specialists;
- (c) additional funding for education for at-risk groups (ethnic minorities, learners with special needs) and for gifted learners;
- (d) transportation costs (except for elementary school learners and employees of secondary schools, which is provided by local or regional governments);
- (e) teaching materials and equipment;
- (f) information and communication technology infrastructure and software for schools;
- (g) school libraries;
- (h) capital investments (buildings, infrastructure).

Local and regional governments cover:

- (a) costs related to school premises and equipment;
- (b) operating costs of secondary schools;
- (c) transportation costs of elementary school learners and employees of secondary schools;
- (d) co-financing of food and lodging in student residences;
- (e) capital investments (buildings, infrastructure) according to criteria determined by the Minister for Education ⁽¹⁰⁾.

If local/regional governments cannot ensure the minimum funding, the centrally managed equalisation fund (*Fond za izravnavanje*) provides the deficit amount.

⁽¹⁰⁾ Local authorities as the legal founders and owners of the schools can also be investors regarding buildings /infrastructure.

In 2015, the distribution of education expenditure ⁽¹¹⁾ indicates that the largest share (38.6%) of the education budget was spent on primary education (ISCED 1-2), while 14.0% was spent on pre-primary education (ISCED 0), 22.4% on secondary education (ISCED3, general and vocational) and 17.9% on higher education (ISCED 5-8).

The financing of CVET is provided by the budgets of the state, local and regional governments, as well as by individuals and employers. Most finances are managed by the CES, which procures training (mainly short courses for unemployed adults or redundant workers) within active labour market policy measures.

The planned IVET and CVET reforms detailed in the *VET System Development Programme 2016–2020* strongly rely on EU structural funds.

2.2.6. Teachers and trainers

IVET providers are the public and private secondary vocational schools that can be vocational or polyvalent (offer both gymnasium and vocational programmes). Vocational schools can be technical, industrial, craft and others, based on the type of programmes and their duration (two-, three- (industrial and crafts schools), four- or five-year (technical schools)).

Some VET schools offer programmes from a single education sector or subsector, such as health and medicine, economy, commerce, administration, forestry, carpentry, agriculture, veterinary medicine, maritime, traffic, aviation, hospitality, tourism, engineering, electrical engineering, construction, etc.

The teachers and trainers in IVET programmes are divided into two main groups:

- (a) general subject teachers (languages, mathematics and natural sciences, social sciences, art) with adequate pedagogical qualification (during their studies, these teachers gained competences in general pedagogy, didactics, psychology of education and teaching methodology);
- (b) VET teachers and trainers ⁽¹²⁾:
 - (i) teachers of vocational-theoretical subjects (*Nastavnik stručno-teorijskih sadržaja*) require higher education (180 ECTS or more) complemented by a pedagogical competence course (60 ECTS) and other requirements linked to the curricula;
 - (ii) teachers of practical training and exercises (*Nastavnik praktične nastave i vježbi*) require an undergraduate university/professional degree (180 ECTS or more) complemented by a pedagogical competence course (60 ECTS) along with the required qualification;
 - (iii) vocational teachers (*Strukovni učitelji*) require a level of education regulated by the curricula and at least a secondary vocational education of the

⁽¹¹⁾ Eurydice (2015). *National Sheets on Education Budgets in Europe 2015 - Facts and Figures*. (Croatia, Education budget by type of expenditure and level of education 2015, page 22).

<https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/images/8/8f/194EN.pdf>

⁽¹²⁾ As defined by the VET Act.

corresponding profile, complemented by a pedagogical competence course (60 ECTS) and at least five years of work experience in the appropriate profession;

- (iv) teaching associate (*Suradnik u nastavi*) requires a secondary education complemented by a pedagogical competence course (60 ECTS) and at least five years of work experience, unless regulated differently by the vocational curricula.

There are no pre-service higher education programmes for VET teachers and trainers. At present, none of the professional degree programmes includes courses in educational sciences. Therefore, higher education institutions educate the potential VET teachers. Upon obtaining their professional degree (four to five years), the potential VET teachers must complete an additional pre-service programme (a pedagogical competence course of 60 ECTS) that includes general pedagogy; didactics; psychology of education; methods of teaching; education for creativity; psychology of children with special needs; methodology of educational research; school pedagogy; theories of curriculum; general and developmental psychology; multimedia teaching; applied developmental psychology; and classroom management.

The VET teachers in three-year VET programmes for the fields not represented in higher education do not need a higher education degree, but a secondary school certificate at a minimum. In addition, they must complete a pedagogical competence course worth 60 ECTS credits. Master crafts-persons who teach in licensed crafts/workshops must be qualified to train students and are obliged to take an exam in industrial pedagogy as a part of master craftsman exam or take a programme for the attainment of pedagogical, psychological, didactical and methodical education programme at higher education institutions.

In IVET schools, there are approximately 6 300 teachers (FTE), trainers and assistants carrying out subject teaching, including 4 000 teachers of vocational-theoretical subjects, 1 500 trainers of practical workshops and laboratories, and 400 assistants. Due to difficulties in recruiting the appropriate teaching staff, a proportion of the teaching of vocational subjects is carried out by teachers not holding the required qualification.

The continuing professional development and in-service training of the VET staff is mainly provided by the Agency for VET and Adult Education and is based on an annually updated catalogue for in-service training (*Katalog stručnog usavršavanja*). The VET schools are also expected to provide in-house staff development activities. However, there is currently no data available on the quality or effectiveness of these activities (see also below for school-based developmental projects and mobility projects funded by EU programmes). Data related to the in-service teacher training of VET school teachers are regularly recorded in the VETIS system (Information system of vocational education and training), where teachers register their participation at in-service teacher training events. Travel and accommodation costs of in-service training for teachers are covered by VET institutions, which affect the numbers of teachers attending training. On the whole, the provision of in-service training for VET staff is extremely underfinanced and generally perceived as insufficient.

Apart from the state-funded in-service training described above, in-service training of VET teachers is also implemented by:

- (a) professional associations and other non-governmental organisations offering training (fee-based or free of charge);
- (b) public open universities (*Pučka otvorena učilišta*);
- (c) the Chamber of Crafts and Trades;
- (d) international institutions (through bilateral financial assistance), e.g. the British Council.

These in-service trainings do not require programme or provider accreditation.

Public institutions registered as providers of adult education, such as the public open universities, secondary schools, higher education institutions, the Chamber of Crafts and Trades and care services for persons with special needs and disabilities, may provide formal CVET programmes. These institutions may be funded by the State, local and regional governments or other legal entities. The provision of formal CVET programmes is subject to inspections and professional supervision.

CVET teachers and trainers are required to have the same qualifications as IVET teachers and trainers working in secondary VET. Support for the continuing professional development of CVET teachers and trainers is also provided through the work of the Andragogy Society (*Hrvatsko andragoško društvo*) and the Association of Adult Education Institutions (*Zajednica ustanova za obrazovanje odraslih*).

The Strategy of Education, Science and Technology emphasizes the need to modernise education and training programmes, to develop a model of continuing professional development and to monitor such systems based on the standards for teacher competency. *The VET System Development Programme 2016-2020* sets out measures and activities aimed at improving the ongoing professional development of VET teachers, reinforcing an emphasis on improving the standards in the teaching profession and the capacity of teachers to improve their social reputation. Within a quality assurance framework, the practice of licensing teachers for work in educational institutions in accordance with the competence standards for teachers has been proposed. The standards and the model for the periodic re-licensing of teachers are still not elaborated, however the idea is to enable professional progression in line with the verifiable, valid and objective criteria ⁽¹³⁾.

2.3. Other forms of training

The institutions that provide other forms of training are the open universities (public and private), the primary and secondary schools that implement the adult education programmes, polytechnics, universities and other institutions of higher education, companies or education centres in companies, various private schools (e.g. foreign language schools), driving schools, professional associations and organisations, non-governmental organisations, employers' associations, trade unions, correctional institutions and institutes, religious institutions, foreign institutions, etc.

⁽¹³⁾ http://www.refernet.hr/media/1111/refernet_hr_tt.pdf

Different job-related knowledge and the acquisition or improvement of skills and competences is provided at the sectoral or enterprise level, mainly in form of non-formal education, or short professional improvement courses. Non-formal training refers to organised learning for adults for work, social activities and personal development. Such training does not have to meet the prescribed standards for implementation. Instead, the conditions for programme implementation are a matter of the education provider's choice and the internal quality assurance. For certain regulated professions, other bodies may be consulted to ensure that the relevant occupational standards are met. The quality of provision is not otherwise monitored. In private enterprises, the training of employees is not mandatory. In most cases, learning in such settings depends on the initiative and resources of the enterprise. In general, enterprises tend to provide learning through external or internal courses.

Other non-formal training programmes can be financed by regional and local self-governments (decentralised/local budgets), the private sector, non-governmental organisations, users/adult learners, as well as through international funds and projects. Due to the dispersed nature of adult education and the large number of various funding sources, the data on overall investments in adult education are not available.

Table 5. **Participation of adults (25-64 years) in lifelong learning in 2009-15 (%)**

	2009	2010	2011	2012	2013	2014	2015
EU-28	9.3	9.1	8.9	9.0	10.5(b)	10.7	11.7
Croatia	2.3	2.2	2.3	2.4	2.9	2.5(u)	3.6

Source: Eurostat, Date of extraction: 30.10.2016

NB: (b) - break in series

(u) – unreliable

As presented in Table 5, the share of adults participating in training programmes in 2015 was among the lowest in the EU (3.6%). The data indicate that, in Croatia, the participation of those aged 45 and older is particularly low. There are various reasons for why people do not undertake continuing learning activities: a lack of knowledge of what is available, a lack of access to learning opportunities at work or in local communities, poor quality of existing opportunities in the local communities, high costs, or a basic lack of interest. When it comes to issues of geographical coverage, major gaps exist in the opportunities available in less prosperous and rural areas as well as on the majority of the Croatian islands. Companies, mostly SMEs, do not actively promote learning due to a lack of resources, low employee appreciation, or other reasons.

This indicator has been addressed in the *Strategy of Education, Science and Technology*, where the issue of lifelong learning and activities necessary for improving access to and participation in lifelong learning was highlighted as a priority. Particular emphasis was placed on:

- (a) improving learner motivation for learning;
- (b) providing incentives for employers to invest in lifelong learning;

- (c) addressing the needs of difficult-to-engage and disadvantaged groups;
- (d) devising curricula and teaching and learning methods addressing the needs of learners and employers;
- (e) devising coordination mechanisms for an effective adult learning policy.

Chapter 3. Shaping VET qualifications

3.1. Anticipation of labour market needs

Based on the Government's Decree on the monitoring, analyses and prediction of labour market needs and the development of an educational enrolment policy, CES conducts an annual analysis and prediction of labour market needs for specific qualifications. This analysis is based on relevant statistical data and employment indicators of currently unemployed persons with specific qualifications, data from the Employers questionnaire (Anketa poslodavaca) and regional and local development strategies and plans. Based on these analyses, the CES publishes the Recommendations for educational enrolment and stipend policies (*Preporuke za obrazovnu upisnu politiku i politiku stipendiranja*). These recommendations are regionally and locally determined and are qualitative, rather than quantitative in nature, indicating only if there is a need for an increase or decrease in the enrolment in a specific VET programme. As such, these recommendations are not always taken into account whilst determining the enrolment vacancies in the specific VET programmes. The need for a more efficient and precise system was recognised in the development of the CROQF and the *Strategy of Education, Science and Technology*.

In 2009-11, the Agency for VET and Adult Education established a mechanism for stronger links between VET, labour market needs, and the development of qualifications within a national qualifications framework. In these efforts, the Agency has designed a methodology for the occupational standards, qualifications, and curricula development, organised the work of Sector Skills Councils and introduced quality assurance tools in VET. The Agency developed the Sector Profiles (*Profili sektora, PS*), a comprehensive tool encompassing all the relevant statistical data and analytical information with regards to the respective economic development, the labour market and the provision of education in 13 VET sectors. The profiles were developed with the purpose of planning and the development of VET qualifications in line with the labour market needs, as well as for other purposes, e.g. as the basis for the planning of county-level quotas per educational programme.

Following six years of development, the government adopted the CROQF Act in February, 2013, which provided the necessary legislative and institutional framework for further development and implementation of the CROQF as well as for the referencing and self-certification of the CROQF to the European qualifications framework (EQF) and the Framework for Qualifications of the European Higher Education Area (QF-EHEA). The adoption of the CROQF Act launched a process of new tool development and implementation and the establishment of a new structure, including the modified sectoral councils called the 'CROQF sectoral councils' aimed at connecting the education sector with the labour market and establishing quality assurance practices.

3.2. Croatian qualifications framework

The development of the CROQF has been a national response to the need for a national framework of qualifications encompassing all awards for all aspects of education and training (Ministry of Science and Education /Agency for Science and Higher Education, 2014). The

aim is that, through CROQF, the coordination and integration of all stakeholders in the qualifications system can take place whilst paying attention to the needs of the labour market, individuals, and the society. It strives to guarantee the transparency, access to and a reliable acquisition of qualifications. It also relates the qualifications levels in Croatia to the qualifications levels of the EQF and QF-EHEA, as well as to the national qualifications frameworks of other countries. In the framework, there are eight levels (and in some cases, additional sub-levels). This structure is presented in Table 6.

Table 6. Levels and sub-levels of CROQF

EQF level	CROQF level	Sub-level	Full or partial qualifications
8	8	8.2	Full
		8.1	Partial
7	7	/	Full and partial
6	6	/	
5	5	/	
4	4	4.2	
		4.1	
3	3	/	
2	2	/	
1	1	/	

Source: Ministry of Science and Education /Agency for Science and Higher Education (2016), accessed on 30.10.2016

Within the CROQF, the process of adjusting education to labour market needs is based on several elements. This process begins with an estimation of future needs for knowledge and skills, as outlined in key strategic documents (Strategy of regional development, Industrial strategy, Smart specializations strategy, Innovation Strategy and Strategy of Science, Education and Technology). The process of adjustment between education and labour market needs is based on the development of Occupational standards (*Standard zanimanja*). These standards, empirically founded upon the modified Sector profiles (*Profil sektora*), were initially developed by the Agency for VET and Adult Education and the Occupation standard survey (*Anketa o standardu zanimanja*) and subsequently on the development of Qualifications standards (*Standard kvalifikacija*). These standards set learning outcomes that should inform the development of the curriculum. The accreditation of curricula using the CROQF Act is based on the Qualification Standards. These standards additionally act as part of the quality assurance system in that they will guarantee that the holder of a specific qualification has the formally defined competences. The continuing use of these mechanisms allows for the coordination of education and the labour market based on the dynamic needs of both society and the economy. The Sector profiles (*Profil sektora*) have been further developed in an interactive web-application: <http://www.hkoportal.hr>.

Another important part of the CROQF is the Register (*Registar HKO-a*), which has three sub-registers: the sub-register of occupational standards, the sub-register of

qualification standards and the sub-register of learning outcomes. The register provides a formal link between the qualifications and the quality assurance system of the CROQF. It is envisaged that the register will encompass all types of qualifications, including those outside the formal education system. Recognition of non-formal and informal learning is currently being developed within the CROQF and the Ministry of Science and Education is preparing for its regulation. In 2016, the web platform for the register has also been put into place: <https://hko.srce.hr/registar/>.

3.2.1. Bodies of CROQF

The National Council for the Development of Human Potential (*Nacionalno vijeće za razvoj ljudskih potencijala*) is a central strategic body for the CROQF. The members of the council are the representatives of the ministries of economy, labour, entrepreneurship and regional development, national agencies in the field of education, public VET/adult and higher education institutions, employers' associations/chambers, trade unions, public employment service, regional and local authorities, and NGO's. The council:

- (a) assesses the influence of public policies (mainly education, employment, lifelong guidance and regional development) on developing human capital potential and its contribution to achieving the strategic goals of the country;
- (b) gives recommendations for planning and developing human potential according to a national development strategy;
- (c) proposes measures for integrated and harmonised policies related to employment, education and regional development;
- (d) monitors and validates the impact of the CROQF and its qualifications, and gives recommendations on how to better adjust education to labour market needs;
- (e) conveys to the minister responsible for education and science its opinion on sectoral councils' recommendations referring to admission policy, admission quota and financing of qualifications from public sources, by qualification and by county;
- (f) monitors and validates CROQF sectoral councils' activities.

There are 25 CROQF Sectoral Councils (*HKO Sektorska vijeća*). Together with the cross-sectoral interdisciplinary council, they are the advisory bodies ensuring the development of human potential in line with labour market needs. They:

- (a) validate learning outcomes, occupational standards and qualifications standards;
- (b) analyse existing and required competences covered by a sector;
- (c) recommend policies to the national council for development of human potential, including quotas and financing of qualifications;
- (d) propose changes to qualifications standards based on changes in occupational standards;
- (e) propose changes in the national classification of occupations to the labour ministry;
- (f) advise the national council for the development of human potential about sector developments;
- (g) follow and analyse the implementation of recommendations given to the national council for the development of human potential about sector developments.

Sectoral councils are to be appointed for each of the following sectors (Table 8):

Table 7. **Sectors of the CROQF**

I. Agriculture, food and veterinary medicine	VI. Mechanical engineering, shipbuilding and metallurgy	XI. Transport and logistics	XVI. Basic technical sciences	XXI. Education and sports
II. Forestry and wood technology	VII. Electrical engineering and computing	XII. Health	XVII. Aviation, rocket and space technology	XXII. Philosophy, theology and religion sciences
III. Mining, geology and chemical technology	VIII. Construction and geodesy	XIII. Personal and other services	XVIII. Information and communication	XXIII. History, art science, archaeology, ethnology and anthropology
IV. Textiles and leather	IX. Economy and trade	XIV. Art	XIX. Law, political science, sociology, state administration and public affairs	XXIV. Security and defence
V. Graphic technology	X. Tourism and hospitality	XV. Mathematics, physics, geography, geophysics, chemistry and biology	XX. Psychology, educational rehabilitation, speech pathology and social work	XXV. Philology

Each sectoral council consists of 11 members. Three of these members are appointed by the responsible institutions:

- (a) the ministry responsible for the respective sector;
- (b) the CES;
- (c) Science and Higher Education Agency, Vocational Education and Training and Adult Education Agency, and Education and Teacher Training Agency.

In addition, each sectoral council includes eight sectoral experts. These experts are chosen on the grounds of public calls published by the education ministry. Separate public calls are published for each sectoral council. Experts can apply as individuals or as representatives of the relevant institutions. The selection of candidates is conducted by the Committee for Selection of Members of Sectoral Councils, which consists of representatives of the education and the labour ministries.

3.2.2. Responsibilities within the CROQF

The ministries of education, labour and regional development hold joint responsibility regarding the coordination and development of the CROQF. The CROQF Act stipulates that ministries should harmonize their methodologies and exchange current data in registers and databases that are independently managed by the ministries themselves or by the institutions for which they are responsible, as covered by their sector.

The Ministry of Science and Education is the national coordinating body responsible for the development and implementation of the CROQF and the designated national coordination point responsible for referencing CROQF levels to the EQF and the self-certification of the CROQF against QF-EHEA. To do so, the ministry is obliged to use a transparent methodology, provide access to information, guide stakeholders through the

referencing process, and promote the participation of stakeholders in the referencing process.

The responsibilities of the ministry include:

- (a) adopting guidelines for the development of qualifications standards;
- (b) developing and maintaining the IT system for the management of the CROQF register;
- (c) accepting decisions regarding registration into respective CROQF sub-registers;
- (d) referencing of the CROQF to the EQF and self-certification of the CROQF against the QF-EHEA;
- (e) monitoring the implementation and development of national qualifications frameworks from other countries, including those referenced and not referenced to the EQF and those self-certified and not self-certified against the QFEHEA;
- (f) monitoring and analysing the implementation and development of qualifications frameworks in the education policies of other countries;
- (g) establishing and coordinating the work of Sectoral councils composed of key stakeholders, according to the criteria stipulated by the CROQF;
- (h) coordinating quality assurance related to qualifications and learning outcomes;
- (i) developing a system for the recognition and validation of non-formal and informal learning;
- (j) monitoring and analysing the implementation of the system for the validation of learning outcomes acquired through non-formal and informal learning and proposing measures for its regulation;
- (k) adopting guidelines and preparing other material required for the implementation and development of the CROQF;
- (l) informing the public about technical issues related to the CROQF;
- (m) providing administrative support to the National Council;
- (n) developing the role of the CROQF in procedures related to the recognition and identification of qualifications.

The Ministry of Labour and Pension System is responsible for the following tasks:

- (a) establishing and developing a system of collecting information about current and future labour market needs and required competences;
- (b) collecting data about changes in competences required for occupations and proposing ongoing development of qualifications standards and occupational standards according to labour market needs;
- (c) participating in the preparation and elaboration of strategic background material, as well as analysis for developing the CROQF, aimed at enhancing employability and raising the competitiveness of the Croatian economy and society;
- (d) preparing and elaborating the analytical background material and the methodology for the elaboration of occupational standards and managing the sub-register of occupational standards;
- (e) monitoring the employability of persons with acquired qualifications;
- (f) accepting decisions regarding registration into respective CROQF sub-registers.

The Ministry of Regional Development and EU Funds shall perform the following tasks:

- (a) adopting guidelines for the development of regional labour markets;
- (b) monitoring the effects of the population's qualification structure on regional development;
- (c) analysing the demands for human resources development arising from the development strategies of specific counties/regions.

3.1.2.3. *Development of curricula (Strukovni kurikulum)*

Current approach

According to the *Methodology for the Development of VET Occupational Standards, Qualifications and Curricula (Metodologija za razvoj strukovnih standard zanimanja, kvalifikacija i kurikulum)*, introduced by the Agency for VET and Adult Education in 2011 on the basis of relevant provisions in the VET Act, three major stages of development are required.

1. Development of the Occupational Standard (*Standard zanimanja*)

The Occupational Standards are a tool developed to identify the skills and associated knowledge required to be 'competent' in a particular job role. The standards are broken into units, which classify the different sets of skills and knowledge. For the VET qualifications, the Occupational Standards are being developed to a level of detail that highlights and describes the broad skills and knowledge sets that may be applied across a number of sub-sectors and related job roles within a particular industry.

2. Development of the Qualification Standard (*Standard kvalifikacija*)

The Qualification Standards take the skills identified and described within the Occupational Standards and translate them into tools describing the criteria against which learners are evaluated. The Qualification Standards are broken down into a series of logical 'units'. Each unit is comprised of a set of 'learning outcomes' and 'assessment criteria'. The learning outcomes describe what a learner should be able to achieve once a programme of study has been completed. The assessment criteria establish the activities and benchmarks that must be achieved by the learner in order to demonstrate that learning outcomes have been achieved. Each unit is also given a credit value that identifies the amount of time required by an average learner to complete all relevant learning and assessment activities to achieve the required learning outcomes. Finally, when a range of Qualification Standards has been developed, a decision is made as to which units need to be 'mandatory' or 'elective'.

3. Development of the VET curriculum (*Strukovni kurikulum*)

The final phase of the development process is associated with the production of the VET curriculum, which sets out what needs to be taught in order to ensure that learning outcomes can be achieved. To help organise the delivery of content in an organised manner, the

curriculum template requires that content be split into 'modules' and 'subjects'. Modules are used to group themes arising from the Qualification Standards.

Changing the approach

In 2016, within the strategy for comprehensive curricular reform, a proposal of National Curriculum for Vocational Education was developed. This document represents a common framework for the future development of VET curricula in Croatia. In this document, substantial changes have been proposed for the development and structure of the curricula.

The development of curricula will be based on the instruments and mechanisms of the CROQF and will follow the development of the sector profiles, the occupational and qualification standards, assessment by CROQF sectoral councils and enrolment into the CROQF Registry. At the sectoral level, mapping of different qualifications and the identification of common learning outcomes is planned, which will form a sectoral component of the curricula. This is envisaged to allow flexibility and autonomy to VET providers in curricula delivery, as well as an increase of WBL in all VET curricula.

As within the curricular reform and the CROQF, the involvement of different social partners in the development of the VET curricula is planned.

3.1.3. Quality assurance tools in VET

The *Strategy of Science, Education and Technology* and the *VET System Development Programme 2016-20* call for the establishment of a coherent, unified system of VET quality assurance at the national level, at the level of VET providers and at the level of qualifications developed in line with EQAVET recommendations. This system is to be used for both IVET and CVET. Strong argumentation for a coherent, unified system comes from analyses indicating the existence of parallel and uncoordinated structures that are insufficiently used for the amelioration of school practice and the development of VET policy. Currently, the area of quality assurance is informed by:

- (a) self-assessment, based on the VET Act, conducted by the Agency for VET and Adult education;
- (b) external assessment by the National centre for external assessment;
- (c) external assessment of institutions, inspection, professional-pedagogic supervision by the Ministry of Science and Education, the Agency for VET and Adult Education, Education and the Teacher Training Agency;
- (d) quality assurance through the CROQF;
- (e) surveillance over organising and implementation of apprenticeships by the Ministry of Economy, SME and Crafts and the Ministry of Science and Education;
- (f) external assessment of journeyman exam by the Agency for VET and adult education and the National Centre for External Assessment.

Because the curricular reform emphasises the need for WBL, an integral part of this system will deal with quality assurance of the education that takes place in the workplace (i.e. the employers). The *VET System Development Programme 2016-20* clearly states that measurable indicators of quality assurance in VET will be developed and that they should be linked with those in EQAVET. As one of the main elements of the system, a mechanism for

employment tracking of VET students is also planned. In addition, there are measures for strengthening and modernising self-assessment practices and connecting it to external assessment.

In line with the relevant provisions of the 2009 VET Act, the Agency for VET and Adult Education developed a National Quality Assurance Framework for VET (*Nacionalni okvir za osiguranje kvalitete u strukovnom obrazovanju i osposobljavanju*). This framework based on the European quality assurance reference framework for VET, was aligned with the European quality assurance in VET's quality cycle, as well as various indicative descriptors and indicators (Letica, J., 2014). Since 2010, the Agency has developed a quality assurance approach/methodology and various relevant tools based on school self-assessment within the six assessment areas:

- (a) planning and programming of work;
- (b) teaching and support to learning;
- (c) learning outcomes;
- (d) material & human resources, including continuing professional development of staff;
- (e) cooperation within the VET school and with stakeholders; and
- (f) administration and management.

Each area is further broken down into quality areas, which are described using individual quality criteria. All areas are applied primarily to IVET. In 2011, secondary VET schools launched a self-assessment process and the first annual reports were produced and analysed. To assist VET schools in the process, the VET agency developed a comprehensive manual and an online 'E-quality' tool ⁽¹⁴⁾ (e-kvaliteta) that enabled secondary VET schools to effectively present their self-assessment data and plans for improvements. Both measures are evidence-based.

⁽¹⁴⁾ <http://e-kvaliteta.asoo.hr>

Chapter 4. Promoting participation in VET

4.1. Incentives for learners and enterprises

Since 2004, Croatia has used support from CARDS, Phare and IPA pre-accession programmes, in addition to national investments, to improve VET. With the accession to the EU in July, 2013, the country became eligible for structural funds, including the European Social Fund (ESF). At that time, the responsible ministries developed the 2014-20 'Efficient Human Resources' ESIF operational programme, which defines the measures aimed at enhancing the attractiveness and relevance of VET for both learners and enterprises. These measures include:

- (a) A National Curriculum for VET will be developed, as well as several priority VET Sectoral Curricula for Tourism and catering, Mechanical and electrical engineering, ICT, Agriculture and Healthcare sectors
- (b) Specific measures will tackle the issues of raising the capacities of VET teachers as well as ensuring high quality support for their work and professional development
- (c) Further strengthening of the work-based learning approach will be carried out, including the apprenticeship schemes for VET students and training for VET teachers that provides access to the latest developments in respective sectors
- (d) The visibility of the VET sector and promotion of its quality will be enhanced using a bottom-up approach, using the development of campaigns, student skills competitions, specialized school fairs, etc., thus enhancing conditions for the acquisition of practical skills. The main task at student skills competitions and student fairs will be the presentation of practical skills that the students obtained during their education to employers
- (e) In order to tackle the shortage of practical skills and to improve the quality of transition from school to the labour market, targeted investment will focus on establishing regional competence centres in the specific vocational sectors mentioned above
- (f) Interventions are planned in the area of capacity building for quality assurance development and implementation at a system level, as well as strengthening the capacities of VET schools for the implementation of the quality assurance approaches (e.g. self-assessment).

4.1.1. Incentives for learners

In the three-year VET programmes for crafts and trades, the contract for apprenticeship (*Ugovor o naukovanju*) regulates student allowances as stipulated by the VET Act.

In the 2015/16 academic year, the Ministry of Economy, SME and crafts awarded 1 280 scholarships to students in three-year VET programmes in crafts and trades (*Jedinstveni model obrazovanja, JMO*) for which there is a labour market shortage. The amount awarded was around EUR 1.5 million, or approximately 100 EUR per learner per month for one-year duration. The list of eligible programmes was determined nationally, but allows for regional modification. In the 2016/17 academic year, this amount has been doubled and includes a

larger number of programmes. It was also announced that, in 2016, student firms and student companies will be supported for the first time. Local communities, as well as professional associations and private firms, also provide incentives and stipends for students.

In order to increase the qualification level and employability potential of specific target groups, a system of vouchers is being introduced in adult education. There are two types of vouchers ⁽¹⁵⁾:

- (a) vouchers for acquiring the 1st level of qualification or a higher-than-existing qualification for programmes in tourism and catering, agriculture, mechanical and electrical engineering and information technology or programmes leading to the acquisition of basic skills (literacy, numeracy, ICT);
- (b) vouchers for the validation of non-formal and informal learning, with an aim of increasing the visibility of the qualification levels of citizens.

The *VET System Development Programme 2016-20* recognised the need to promote the attractiveness and excellence of VET. Specific measures were developed aimed at student competitions, the promotion of VET to different groups, simulations of work and business environments as well as fostering innovations in VET.

4.1.2. Incentives for enterprises

Since 2007/08, the Act on State Aid for Education and Training (*Zakon o državnoj potpori za obrazovanje i izobrazbu*) defines tax breaks for companies that provide apprenticeships for three-year VET programmes students by reducing their taxable income. Entrepreneurs that train one to three students per year on their premises may reduce their taxable income by 5%; an additional student further reduces the taxable income by one percentage point, up to a limit of 15%.

In 2012, the government introduced an annual stimulus 'Entrepreneurship impulse' (Poduzetnički impuls) package for SMEs. This initiative was later renamed to 'e-impuls'. The 2014 package comprises of four programme priorities, one of which is the *Promotion and education for entrepreneurship and crafts (Promocija i učenje za poduzetništvo i obrt)* with a budget of approximately EUR 326 000. It has provided training grants for SMEs under an apprenticeship-type scheme in crafts as well as scholarships for students in programmes addressing labour market shortages.

In 2016, the Ministry of Economy, SME and crafts opened a call for 'Apprenticeships for Crafts Occupations' (*Naukovanje za obrtnička zanimanja*) aimed at micro, small and medium enterprises in the amount of EUR 400 000. These financial incentives can be used as compensation for the allowance given to learners during apprenticeships, but also as payment to the mentors. Another scheme under the name of *Lifelong education for crafts (Cjeloživotno obrazovanje za poduzetništvo)* in the amount of EUR 267 000 aimed to provide

⁽¹⁵⁾ The voucher system itself is still in its early phases; the adult education institutions receive funds for the free enrolment of students, but it still does not work via vouchers which a person can obtain and bring to an institution of their choice participating in the programme. Regarding the funding, besides the national cofinancing, the entire cost is funded via European Social Fund.

compensation for acquiring licenses for apprenticeships, mentoring and passing of necessary exams. Other ministries, such as the Ministry of Tourism, also have schemes for the compensation of allowances paid to students during the apprenticeships.

4.2. Guidance and counselling

The Croatian Employment Service (CES) systematically organises activities aimed at giving information, guidance and counselling for students in the final years of basic and upper secondary (including VET) education, adults, unemployed persons and job seekers, as well as the employers. The work of the CES is organised into 22 regional offices and a coordination team at the central CES office. Their main activities include lifelong career guidance, education on methods and techniques for active job seeking, training for employment and professional rehabilitation. Vocational guidance is defined as a set of professional procedures to identify the possibilities, interests and competences of users so that they are able to make decisions about education, training and employment and to manage their own professional development.

Several elements developed by the CES within this comprehensive guidance and counselling system are aimed at young persons. In the last several years, the CES has organised a regional network of 11 centres for career information and guidance under the name of CISOK⁽¹⁶⁾ (*Centri za informiranje i savjetovanje o karijeri*). This regional network of centres offers a comprehensive approach to lifelong career guidance and a new philosophy in providing services in a more accessible, open, and flexible way to all citizens at a regional/local level. It allows for a tailor-made approach to guidance and counselling. It is free of charge and is open to both students and parents. Services are provided by trained guidance counsellors. Guidance is also provided to learners in transition from primary to secondary and from secondary to higher education through open days and career fairs. These initiatives are supported by chambers, employers, former students and parents.

Career guidance for learners is conducted through the joint efforts of school counsellors and CES career guidance counsellors. Particular attention is devoted to learners who, according to the evaluations, might face labour market problems after they complete their education, i.e. those with developmental and health issues, learning disabilities or behaviour disorders. The CES pays special attention to vocational guidance for VET learners with disabilities. Furthermore, secondary school students who achieve poor results are referred to an expert team for career guidance. Here, expert opinions concerning the most adequate choice for further education, labour market needs and educational opportunities are taken into account, as well as the learner's individual abilities and needs. If needed, a team evaluation is carried out, which might include psychological assessment, an interview and a medical examination by a physician specialising in occupational health.

The CES has also developed a web portal e-Guidance (www.e-Usmjeravanje.hzz.hr) to gather and organise all the information needed for the selection of educational programmes and to provide assistance in setting and reaching professional goals and searching for jobs. A core element of the web portal called the *Career Compass* (*Kompas karijere*) differentiates

⁽¹⁶⁾ See <http://www.cisok.hr>

the services and adapts the information for specific groups of users. Other important elements of the portal are the *My Choice (Moj izbor)* computer software for lifelong career guidance and a web questionnaire for the individual assessment of personality traits connected with careers (*Upitnik za samoprocjenu osobina ličnosti povezanih s poslom*). This tool is aimed at individuals and can be used to gain insight into the match between the personality traits and various educational and career characteristics.

The CES conducts a yearly survey of the vocational intentions of basic and secondary schools' learners. Using the results of this survey, expert teams of school and CES representatives define the target groups that need specific services for career guidance. The aggregate results of the survey indicate the trends in the intentions of learners and are forwarded to stakeholders in the fields of education and employment at both regional and national level.

Since 2011, Croatia has participated in the European Lifelong Guidance Policy Network with an aim to equalise the lifelong career guidance policies in the field of employment and education. This network provides support in the development of a system of national policies on lifelong career guidance; connecting employment, lifelong learning and social inclusion policies and allowing for the exchange of experience and knowledge among the member countries. Based on the decisions of the education and employment ministries, the CES has been appointed as a national representative and operational partner on this project. As a part of the network of centres connecting systems of career guidance in Europe, the Euroguidance network was established in Croatia at the Agency for Mobility and EU Programmes (*Agencija za mobilnost i programe EU*). Euroguidance promotes mobility and provides expert assistance to career guidance counsellors and individuals, thus enabling them to better understand the opportunities available to European citizens.

In December 2015, the Croatian government adopted the *Strategy of Lifelong Guidance and Career Development in the Republic of Croatia 2016-20*. This strategy addresses the future development of the guidance and counselling system and calls for greater integration of policies and services. Specifically, the strategy sets four priorities:

- (a) establishment of a comprehensive system for lifelong guidance;
- (b) synchronising lifelong guidance with labour market needs;
- (c) quality assurance of lifelong guidance;
- (d) raising awareness of the need for lifelong guidance and career development skills.

The issues of skills necessary for career and educational development have also been emphasised in the *Strategy of Science, Education and Technology* and the *Comprehensive Curricular Reform*. Furthermore, the *VET System Development Programme 2016-20* contains specific measures aimed at the amelioration of guidance in VET with clear links to the *Strategy of Lifelong Guidance and Career Development*.

List of abbreviations and acronyms

CARDS	Community Assistance for Reconstruction, Development and Stability
CISOK	Centre for Career Information and Guidance (<i>Centar za informiranje i savjetovanje o karijeri, CISOK</i>)
CROQF	Croatian Qualification Framework (<i>Hrvatski kvalifikacijski okvir</i>)
CVET	Continuing vocational education and training
DZS	Croatian Bureau of Statistics (<i>Državni zavod za statistiku</i>)
EQF	European Qualification Framework
EQAVET	European Quality Assurance in Vocational Education and Training
EU	European Union
GDP	Gross Domestic Product
CES	Croatian Employment Service (<i>Hrvatski zavod za zapošljavanje</i>)
ICT	Information and communication technology
IVET	Initial vocational education and training
JMO	Unified Model of Education (<i>Jedinstveni model obrazovanja</i>)
NEET	not in employment, education or training
QF-EHEA	Framework for Qualifications of the European Higher Education Area
SME	Small and medium enterprises
VET	Vocational education and training (<i>strukovno obrazovanje i osposobljavanje</i>)

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