



Vocational education and training in Croatia

Short description



Vocational education and training in Croatia

Short description

Please cite this publication as:

Cedefop (2020). *Vocational education and training in Croatia: short description*. Luxembourg: Publications Office of the European Union.
<http://data.europa.eu/doi/10.2801/121008>

A great deal of additional information on the European Union is available on the Internet.

It can be accessed through the Europa server (<http://europa.eu>).

Luxembourg:

Publications Office of the European Union, 2020

© Cedefop, 2020

Except otherwise noted, the reuse of this document is authorised under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed provided appropriate credit is given and any changes made are indicated. For any use or reproduction of photos or other material that is not owned by Cedefop, permission must be sought directly from the copyright holders.

This publication contains UK data and analysis based on research conducted before the United Kingdom's exit from the European Union on 31 January 2020. EU averages or other statistical parameters including the UK reflect the situation in the European Union before 31 January 2020 and should not be considered as representative of the situation in the EU thereafter. In this context 'EU-28' refers to the 28 EU member states prior to 31 January 2020.

PRINT

ISBN: 978-92-896-2953-9

doi:10.2801/424463

TI-03-20-151-EN-C

PDF

ISBN: 978-92-896-2950-8

doi:10.2801/121008

TI-03-20-151-EN-N

Printed in the European Union

The European Centre for the Development of Vocational Training (Cedefop) is the European Union's reference centre for vocational education and training, skills and qualifications. We provide information, research, analyses and evidence on vocational education and training, skills and qualifications for policy-making in the EU Member States.

Cedefop was originally established in 1975 by Council Regulation (EEC) No 337/75. This decision was repealed in 2019 by Regulation (EU) 2019/128 establishing Cedefop as a Union Agency with a renewed mandate.

Europe 123, 570 01 Thessaloniki (Pylea), GREECE
Postal address: Cedefop service post, 570 01 Thermi, GREECE
Tel. +30 2310490111, Fax +30 2310490020
Email: info@cedefop.europa.eu
www.cedefop.europa.eu

Jürgen Siebel, *Executive Director*
Barbara Dorn, *Chair of the Management Board*

Foreword

2020 marks Croatia's first presidency of the Council of the European Union (EU). The youngest Member State joined the EU in 2013.

The motto of the Croatian presidency is: 'A strong Europe in a world of challenges'. Encouraging digitalisation, investment in research and innovation, greater accessibility of high-quality and lifelong learning, and developing new skills adjusted to jobs of the future are seen as guarantees for the competitiveness of the European Union.

The beginning of the new decade calls for new commitments on strategic cooperation in vocational education and training (VET) at European level. Outlining new common objectives requires a reflective review of the results achieved within the previous framework. Discussions on the European future of VET will start during the Croatian presidency, building on the outcomes of the 2015 Riga conclusions.

The focus of the Croatian presidency is on two main areas:

- (a) teachers and trainers of the future;
- (b) further strengthening the mobility of learners and researchers.

Negotiations on the Erasmus programme 2021-27 during the Croatian presidency are seen as essential to help move the mobility agenda forward. Teachers and trainers are at the heart of all developmental and reform processes, as promoters and enablers of the new skills needed for the future. Supporting teachers in the different aspects of their new role will be a key element of discussions.

VET plays a prominent role in Croatia, with participation at upper secondary level being one of the highest in the EU. Transversal skills gained through school-based VET enable direct progression to tertiary education for almost half of its graduates. On the debit side, demographic changes have greatly impacted the share of learners in apprenticeship programmes, reducing this share by more than half in the past six years. One of the biggest challenges in Croatia is the low participation rate in lifelong learning.

This short description, drawn up in collaboration with Cedefop's national ReferNet partner, aims to provide an insight into Croatia's VET for a wider European audience. Our overall objective is to help readers understand VET, its

main features and challenges faced in a specific country context. In this way, we can help building bridges between VET systems, encourage learner and teacher mobility across Europe, and foster the understanding that VET is not a second-rate choice. While grasping its complexity, we want to emphasise its importance in achieving the common goals shared among Member States that incorporated VET in the very foundations of the EU. This is particularly important now, when we are facing a new decade and start discussing new objectives in our strategic cooperation.

We hope that the information in this publication will be useful as a source of inspiration for policy-makers, researchers, VET providers and other readers across and beyond Europe.

Jürgen Siebel
Executive Director

Loukas Zahilas
Head of department for
VET systems and institutions

Acknowledgements

This publication was produced by Cedefop, Department for vocational education and training systems and institutions, under the supervision of Loukas Zahilas. Jelena Letica, Cedefop expert, was responsible for the publication.

Cedefop would like to thank Vesna Anđelić, Nino Buić and Sandra Dobrić from the agency for vocational education and training and adult education (ReferNet Croatia), without whom this publication would not be possible. Thanks also go to Vesna Hrvoj-Šić, Vedrana Šenjug Užarević, Monika Vričko and Andreja Uroić Landekić, representatives from the Ministry of Science and Education for their valuable input and discussions.

The publication was peer-reviewed by Irina Jemeljanova, Cedefop expert.

Contents

Foreword	5
Acknowledgements	7
Croatia	11
1. External factors influencing VET	13
1.1. Demographics	14
1.2. Economy and labour market indicators	15
1.2.1. Economic structure	15
1.2.2. Employment and unemployment	16
1.3. Education attainment	17
1.4. Employment policies influencing VET	20
2. VET provision	23
2.1. Education and training system overview	25
2.1.1. Requirements to access IVET	26
2.1.2. IVET programme completion	26
2.1.3. Progression to higher education: State <i>matura</i> exams	27
2.2. Government-regulated VET provision	27
2.2.1. Initial VET pathways	28
2.2.2. IVET programmes preparing for labour market and tertiary education	29
2.2.3. IVET programmes preparing for the labour market	31
2.2.4. Adult education	34
2.3. Financing VET	36
2.4. VET governance	37
2.4.1. VET providers	39
2.5. Teachers and trainers	39
2.5.1. Vocational teachers and trainers	39
2.5.2. Continuous professional development, promotion and recognition of teachers	41
2.6. Recent policy changes	44
3. Shaping VET qualifications	45
3.1. Anticipating skills needs	47
3.2. Developing VET qualifications and curricula	48
3.2.1. VET curricula	49

3.2.2. Occupational and qualification standards	50
3.2.3. Managing VET qualifications and curricula	51
3.3. Quality assurance	53
4. Promoting VET participation	55
4.1. Incentives for learners	56
4.1.1. Compensation for practical training and apprenticeship	56
4.1.2. Scholarships for shortage occupations	56
4.2. Incentives for enterprises	56
4.2.1. Tax exemptions	56
4.2.2. Grants for SMEs offering apprenticeship	57
4.3. Guidance and counselling	57
4.4. Challenges and development opportunities	58
Acronyms and abbreviations	60
References	62
Further sources of information	65
Legislation	65
Websites and databases	69
Statistics	70

Boxes, tables and figures

Boxes

1. New experimental model of dual education.....	33
2. Establishment of a network of regional centres of competences	40
3. The concept of a new CPD model for VET teachers	42

Tables

1. Number of IVET providers, programmes and learners enrolled (2019/20).....	29
2. Levels and progression pathways of IVET programmes	30
3. Formal VET programmes types in adult education.....	35

Figures

1. Population forecast by age group and old-age-dependency ratio	14
2. Unemployment rate (aged 15 to 24 and 25 to 64) by education attainment level in 2008-18.....	17
3. Employment rate of VET graduates (aged 20 to 34, ISCED levels 3 and 4)	18
4. Population (aged 25 to 64) by highest education level attained in 2018 ...	19
5. Early leavers from education and training in 2009-18	20
6. Participation in lifelong learning in 2014-18	21
7. VET in the Croatian education and training system in 2019/20	24
8. Participation in IVET programmes (%), 2019-20	28
9. Main VET stakeholders.....	38
10. European skills index across Member States.....	46
11. New process of VET qualifications and curricula development.....	52

Croatia



Area	56 594 km²
Capital	Zagreb
System of government	Parliamentary Constitutional Republic
Population (2018) ⁽¹⁾	4 076 246
Per capita gross domestic product (GDP) (current prices, 2018) ⁽²⁾	EUR 51 496
Legislative power	Parliament (Sabor)

⁽¹⁾ Eurostat, tps00001 [extracted on 15.11.2019].

⁽²⁾ Croatian National Bank, 2018:

www.hnb.hr/statistika/glavni-makroekonomski-indikatori [accessed on 14.8.2019].

In Croatia, vocational education and training (VET) is offered in the form of initial VET (IVET) and adult education. Continuing VET (CVET) programmes are foreseen but not yet implemented.

In the last decade, the focus was on developing strategies and legislation. Many building blocks for IVET, fully informed by labour market needs and based on learning outcomes, have been developed: these include anticipating skills needs and new concepts and methodologies for occupational and qualification standards development. Many elements of the reformed system are under development: sectoral curricula, occupational standards, qualification standards and outcome-based VET curricula. This report presents the projections on timing for development and introduction of the new elements of the system as estimated by the Ministry of Science and Education and agency for vocational education and training and adult education in Croatia.

CHAPTER 1.

External factors influencing VET

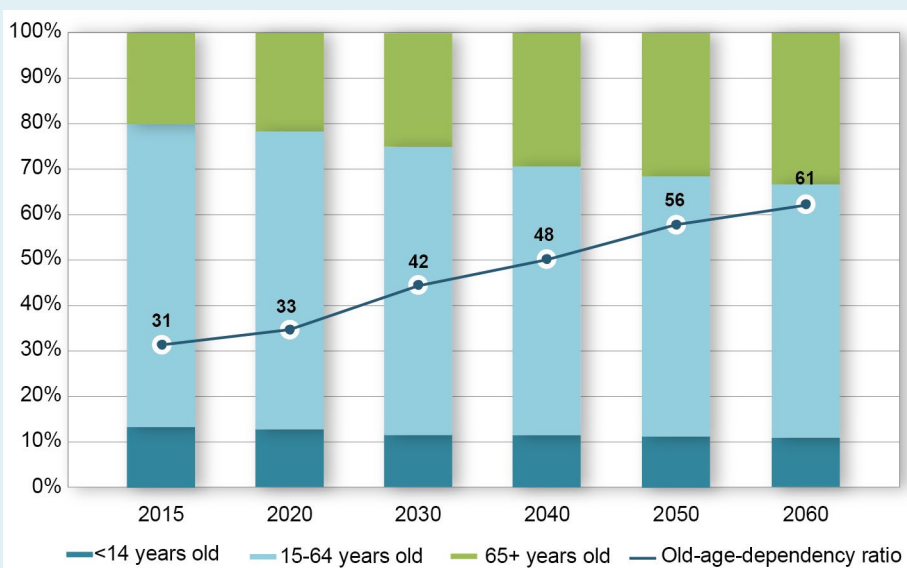


1.1. Demographics

Croatia's population is 4 076 246 (2019); it has decreased by 5.4% since 2009 ⁽³⁾. The country area of 56 594 km² comprises 21 counties (*županije*), 128 cities (*gradovi*) and 428 municipalities (*općine*) ⁽⁴⁾.

Croatia is facing changing and challenging demographic issues. According to the 2019 population forecast, a 16% decline in population is expected by 2050 ⁽⁵⁾.

Figure 1. Population forecast by age group and old-age-dependency ratio



Source: Eurostat, proj_15ndbims [extracted on 15.11.2019].

The population is aging (Figure 1) due to negative natural growth and emigration that has intensified since Croatia joined EU in 2013 (20 858 in 2014, 47 352 in 2017) ⁽⁶⁾. The EU/European Free Trade Association (EFTA) main destination countries are Germany, Austria and Switzerland ⁽⁷⁾. The ratio of 65+ year-old people to those aged 15 to 64 will continue increasing.

⁽³⁾ Eurostat, tps00001 [extracted on 11.7.2019].

⁽⁴⁾ DZS, 2018, p. 60.

⁽⁵⁾ Eurostat, proj_18np [extracted on 11.7.2019].

⁽⁶⁾ Eurostat, migr_emi2 [extracted on 11.7.2019].

⁽⁷⁾ Eurostat, migr_pop9ctz [extracted on 11.7.2019].

As of 1 January 2018, 518 242 Croatian citizens are usually resident in another EU/EFTA country.

Demographic changes have had an impact on overall participation in secondary education. Three-year initial vocational education and training (IVET) programmes were particularly affected; the total number of learners declined by 29.4% between 2013 and 2019. Once the most popular option among three-year programmes, with over 50% of learners in 2013, apprenticeships have fallen by half in the past six years ⁽⁸⁾. Enrolment in four-year IVET programmes and general education programmes (gymnasiums) remained steady over the years.

The minority population share is about 9.5% ⁽⁹⁾, and a small number of VET providers offer education in minority languages (nine institutions, 618 enrolled learners) ⁽¹⁰⁾. Language options include Serbian, Italian and Hungarian; VET providers are located in regions with higher representation of minority communities.

1.2. Economy and labour market indicators

After six years of downswing, with a cumulative GDP decline of more than 12%, the Croatian economy picked up starting from 2014-15; in 2019 it almost reached the pre-crisis level. GDP growth was 2.9% in 2017 and 2.6% in 2018 ⁽¹¹⁾. The economic recovery is attributed mostly to the positive economic environment and well-advised management of State finances, affecting Croatia's economic imbalances that are no longer excessive ⁽¹²⁾. GDP growth is driven by strong private consumption that springs from continuous growth of income and employment. Cuts in consumption taxes in 2019 and 2020 are expected to maintain this trend.

The percentage of people at risk of poverty or social exclusion is declining but still above the EU average and the capacity of social benefits to reduce poverty is limited ⁽¹³⁾.

1.2.1. Economic structure

Although the number of small and medium-sized enterprises (SMEs) decreased by 9.8% between 2010 and 2017, there has been a positive trend in business registration since 2016. The majority of SMEs in 2017 were micro enterprises

⁽⁸⁾ School data mining (*Školski e-Rudnik*, ŠeR):
<https://mzo.gov.hr/vijesti/ser-skolski-e-rudnik/2034> [accessed on 18.10.2019].

⁽⁹⁾ DZS, 2013.

⁽¹⁰⁾ School data mining.

⁽¹¹⁾ Croatian National Bank, 2018:
www.hnb.hr/statistika/glavni-makroekonomski-indikatori [accessed on 13.8.2019].

⁽¹²⁾ European Commission, 2019.

⁽¹³⁾ European Commission, 2019.

(91.2%) ⁽¹⁴⁾. SME contribution to the Croatian non-financial business economy is of key importance. In 2017, SMEs generated 60.8% of overall value added and 68.1% of employment, exceeding the respective EU averages of 56.8% and 66.4% ⁽¹⁵⁾.

SMEs are concentrated in major urban centres (Zagreb, Split, Rijeka, Osijek) and the surrounding areas.

According to total revenues, the leading industrial branches are the production of food, drinks and tobacco, chemical and oil industries.

Tourism is an important driver of the economy and generates strong multiplying effects spilling over to other economic fields. The total contribution of travel and tourism to GDP was 24.9% in 2018, against global average of 10.4% ⁽¹⁶⁾.

Capital investments in infrastructure would boost the economy's growth potential; this is particularly so in transport, energy efficiency, transition to a circular economy, public and private research and development and digitalisation, but benefit would also come from resources used getting people to work and promoting social inclusion ⁽¹⁷⁾.

Many occupations related to VET, such as occupations in crafts and trades, medical care, tourism and transportation, are regulated professions ⁽¹⁸⁾.

1.2.2. Employment and unemployment

Since 2015, economic growth has been accompanied by employment growth that reached 7.1% in 2018. This is slightly higher than the EU average of 6.0%. Yet, the proportion of working age population that is in employment is fairly low (65.2% in 2018 compared with 73.1% for the EU) ⁽¹⁹⁾.

Unemployment is significantly higher among young people (aged 15 to 24) than among those aged 25 to 64; it is distributed unevenly between those with low- and high-level qualifications (Figure 2). The recession affected unskilled workers aged 25 to 64 more severely than those with medium-level and tertiary-level qualifications; the gaps in unemployment rates reached a peak in 2014 and then started slowly decreasing. In 2018, unemployment among unskilled workers

⁽¹⁴⁾ Eurostat, sbs_sc_sca_r2 [extracted on 16.10.2019].

⁽¹⁵⁾ European Commission, 2018.

⁽¹⁶⁾ WTTC, 2019.

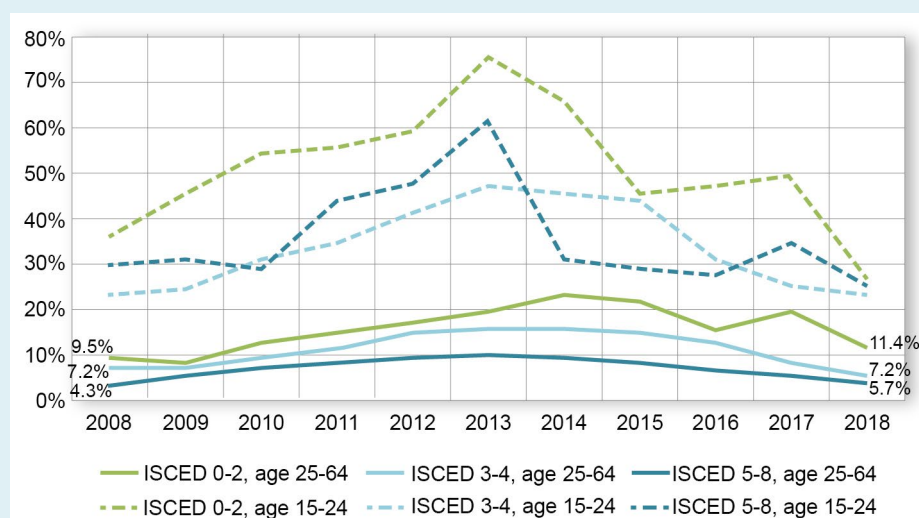
⁽¹⁷⁾ European Commission, 2019.

⁽¹⁸⁾ The list of regulated professions is published by the Ministry of Labour:
https://mrms.gov.hr/UserDocImages/dokumenti/Uprava%20za%20tr%C5%BEI%C5%A1te%20rada/Popis%20reguliranih%20profesija%20u%20Republici%20Hrvatskoj_3.1.2019.pdf

⁽¹⁹⁾ Eurostat, ifsa_urgaed [extracted on 14.8.2019].

is 11.4%, still high in comparison to those with medium-level qualifications, including most VET graduates (7.2%) and to those with tertiary education (5.7%).

Figure 2. Unemployment rate (aged 15 to 24 and 25 to 64) by education attainment level in 2008-18



NB: Data based on international standard classification of education (ISCED) 2011; breaks in time series low reliability for ISCED 5-8, age 15-24.
ISCED 0-2 = less than primary, primary and lower secondary education.
ISCED 3-4 = upper secondary and post-secondary non-tertiary education.
ISCED 5-8 = tertiary education.

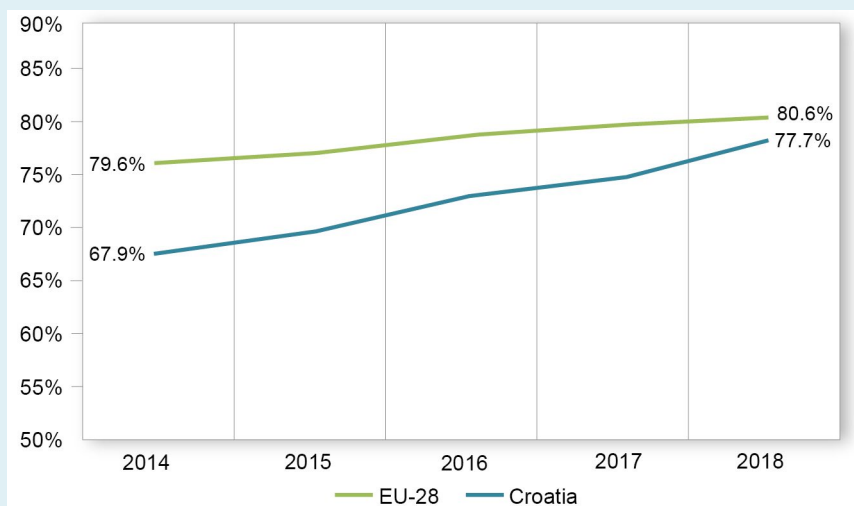
Source: Eurostat, Ifsa_urgad [extracted on 14.11.2019].

During 2014-18 the employment rate of VET graduates (age 20 to 34, ISCED levels 3 and 4) increased by 9.8 percentage points and reached 77.7% (Figure 3). In the same period, the employment rate of graduates of all education types in the same age group increased by 8.0 percentage points.

1.3. Education attainment

The level of education attainment in Croatia is high; 59.7% of population aged 25 to 64 have medium education level. In comparison to EU-28, Croatia has lower share of population with low level qualifications (14.9% versus 21.8%) but also a lower share of people with tertiary level education (25.4% versus 32.2%) (Figure 4).

Figure 3. Employment rate of VET graduates (aged 20 to 34, ISCED levels 3 and 4)



NB: Data based on ISCED 2011; breaks in time series.

ISCED 3-4 = upper secondary and post-secondary non-tertiary education.

Source: Eurostat, edat_ifse_24 [extracted on 14.11.2019].

There is a positive trend in tertiary education attainment among people aged 30 to 34 years; it increased by 12.8 percentage points from 2009 ⁽²⁰⁾ to 2018, reaching 34.1%. This almost meets the EU 2020 target of 35% for Croatia ⁽²¹⁾ and is lower than the EU-28 average of 40.7%. Among 2 019 four-year VET graduates, 45% enrolled in higher education in 2019/20 ⁽²²⁾.

Croatia has among the highest share of learners at upper secondary VET level in Europe (69.6% in 2017) ⁽²³⁾. Recent policy developments call for reducing the share of learners in VET to 60% by 2024, rebalancing the figures in favour of general education ⁽²⁴⁾.

The education system in Croatia is very successful in preventing early leaving from education and training, keeping it at a very low rate of 3.3% in 2018. This has met the national target since 2013 and is significantly lower than the EU-28 average of 10.6% (Figure 5).

⁽²⁰⁾ Eurostat, edat_ifse_03 [accessed on 22.7.2019].

⁽²¹⁾ European Commission.

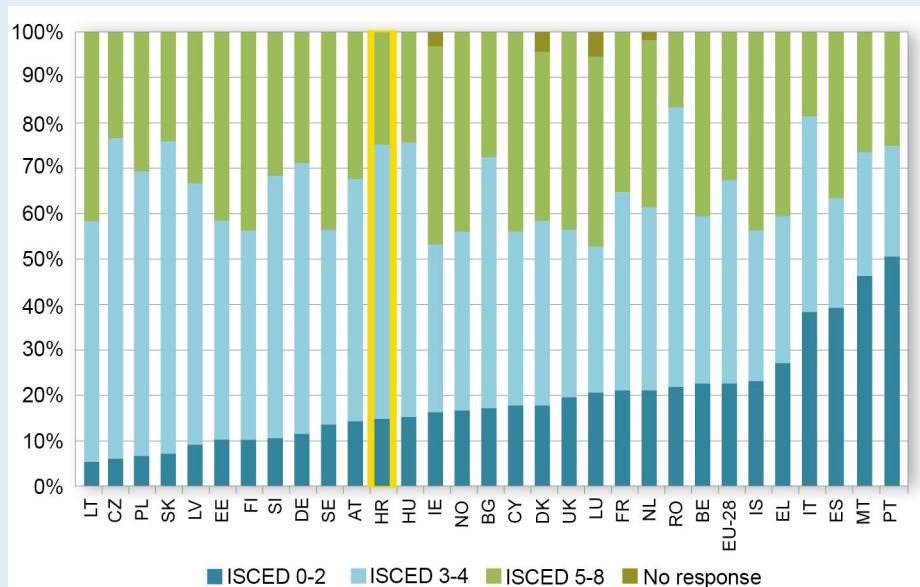
⁽²²⁾ Agency for science and higher education, school data:

<https://mzo.gov.hr/vijesti/ser-skolski-e-rudnik/2034> [accessed on 24.10.2019].

⁽²³⁾ Eurostat, educ_uoe_enrs01, educ_uoe_enrs04 and educ_uoe_enrs07 [extracted on 16.5.2019].

⁽²⁴⁾ MZO, 2019.

Figure 4. Population (aged 25 to 64) by highest education level attained in 2018



NB: Data based on ISCED 2011.

Low reliability for 'no response' in Czechia, Iceland, Latvia and Poland.

ISCED 0-2 = less than primary, primary and lower secondary education.

ISCED 3-4 = upper secondary and post-secondary non-tertiary education.

ISCED 5-8 = tertiary education.

Source: Eurostat, Ifsa_pgaed [extracted on 15.11.2019].

Against this backdrop, the participation of adults in lifelong learning remains among the lowest in the EU (2.9%), significantly below the EU-28 average of 11.1% (Figure 6); it has remained practically unchanged since 2014. Participation rates of the most vulnerable groups are even lower; 0.5% for the low-qualified and 1.5% for the unemployed in 2018. The 2014 strategy ⁽²⁵⁾ set the national target at 5% by 2020. This target was not supported by impactful interventions and is unlikely to be achieved.

The agency for VET and adult education (ASOO) conducted a survey on adult education in Croatia in 2017 ⁽²⁶⁾. It noted barriers to participation in formal programmes that included high fees for adult education programmes (30.2%), other personal priorities (27.8%), professional (26.4%) and family (21.8%) responsibilities, insufficient information on available programmes (14.8%),

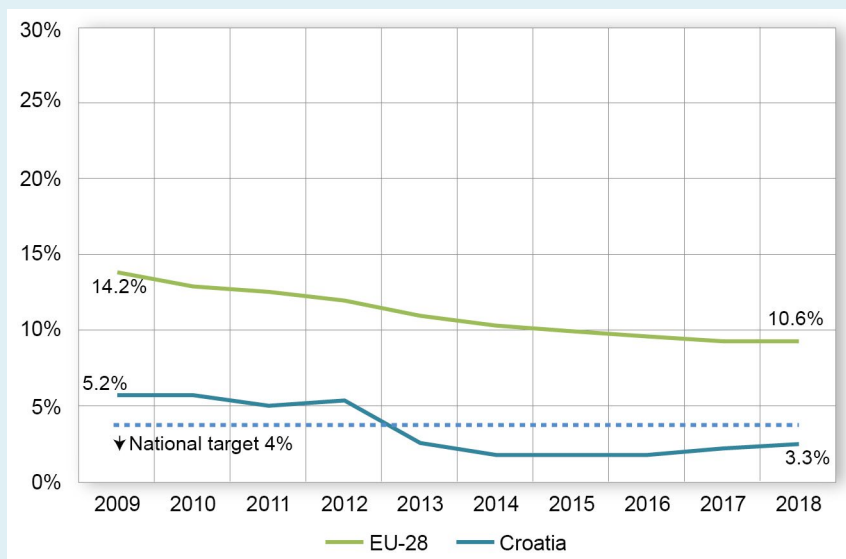
⁽²⁵⁾ Strategy for science, education and technology.

⁽²⁶⁾ Vučić et al., 2017.

distant location of education providers (14.3%), health issues (11.7%) or untimely application (9.9%).

ASOO promotes lifelong learning through awareness-raising campaigns, largely funded through European structural and investment funds (ESIF).

Figure 5. Early leavers from education and training in 2009-18



NB: Share of the population aged 18 to 24 with at most lower secondary education and not in further education or training.

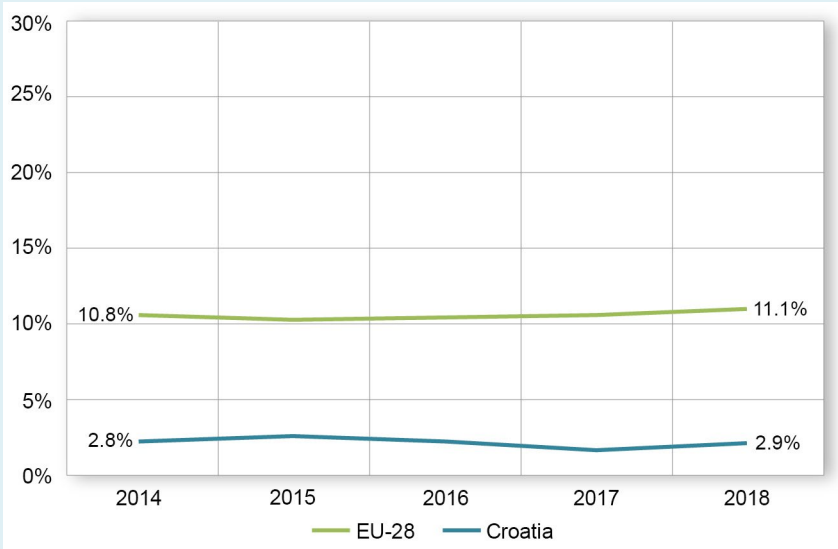
Source: Eurostat, edat_ifse_14 [extracted on 16.5.2019].

1.4. Employment policies influencing VET

The Ministry of Labour and Pension System manages active labour market policies (ALMPs) and the *Youth guarantee scheme*. The Croatian employment service (*Hrvatski Zavod za zapošljavanje*, HZZ) is in charge of their implementation.

Croatia faced serious challenges of having high proportions of both youth unemployment and young people aged under 25 not in employment, education or training (NEETs). Since 2013, the trends have been favourable and these proportions have been decreasing. Youth unemployment fell from 34.1% in 2013 to 21.8% in 2017 (EU-28 average 13.2%). In the same period, proportions of NEETs dropped from 22.3% to 17.9%, which is still higher than the EU average of 13.4%.

Figure 6. Participation in lifelong learning in 2014-18



NB: Share of adult population aged 25 to 64 participating in education and training in the past four weeks before the survey.

Source: Eurostat, trng_lfse_01 [extracted on 15.11.2019].

Croatia has used the *Youth guarantee* as an instrument to increase employment, particularly among NEETs, since 2014 ⁽²⁷⁾. The labour ministry (MRMS, *Ministarstvo rada i mirovinskog sustava*) develops two-year implementation plans that rely on the education system, particularly VET. The latest Youth guarantee plan for 2019-20 ⁽²⁸⁾ put more emphasis on self-employment and internship; it enables employers to pay intern wages with no ceiling, with half subsidised by the State. In 2017, the share of NEETs supported by the Youth guarantee scheme fell to 45%, nine percentage points less than in 2016 ⁽²⁹⁾.

In 2016, the participation of unemployed persons in ALMPs was very low, at only 7%. In 2018, the new ALMP package (*Od mjere do karijere*) of measures was introduced, replacing the previous ones. It brought nine measures in total, simplified procedures for education and training provision, and widened the scope of potential beneficiaries. These measures are:

⁽²⁷⁾ Based on the EU Council recommendation of 22 April 2013.

⁽²⁸⁾ MRMS, 2019.

⁽²⁹⁾ European Commission, 2019.

- (a) grants for employment;
- (b) grants for training;
- (c) grants for self-employment;
- (d) education for the unemployed;
- (e) on-the-job training;
- (f) measures to gain first work experience/internship;
- (g) public work;
- (h) support for preserving jobs;
- (i) seasonal work retention.

All measures (except for the public work measure) provide funding of education and training. Some target the most vulnerable groups, such as employees older than 50 with low qualifications (in a measure for preserving jobs), or the unemployed in on-the-job training.

CHAPTER 2.

VET provision

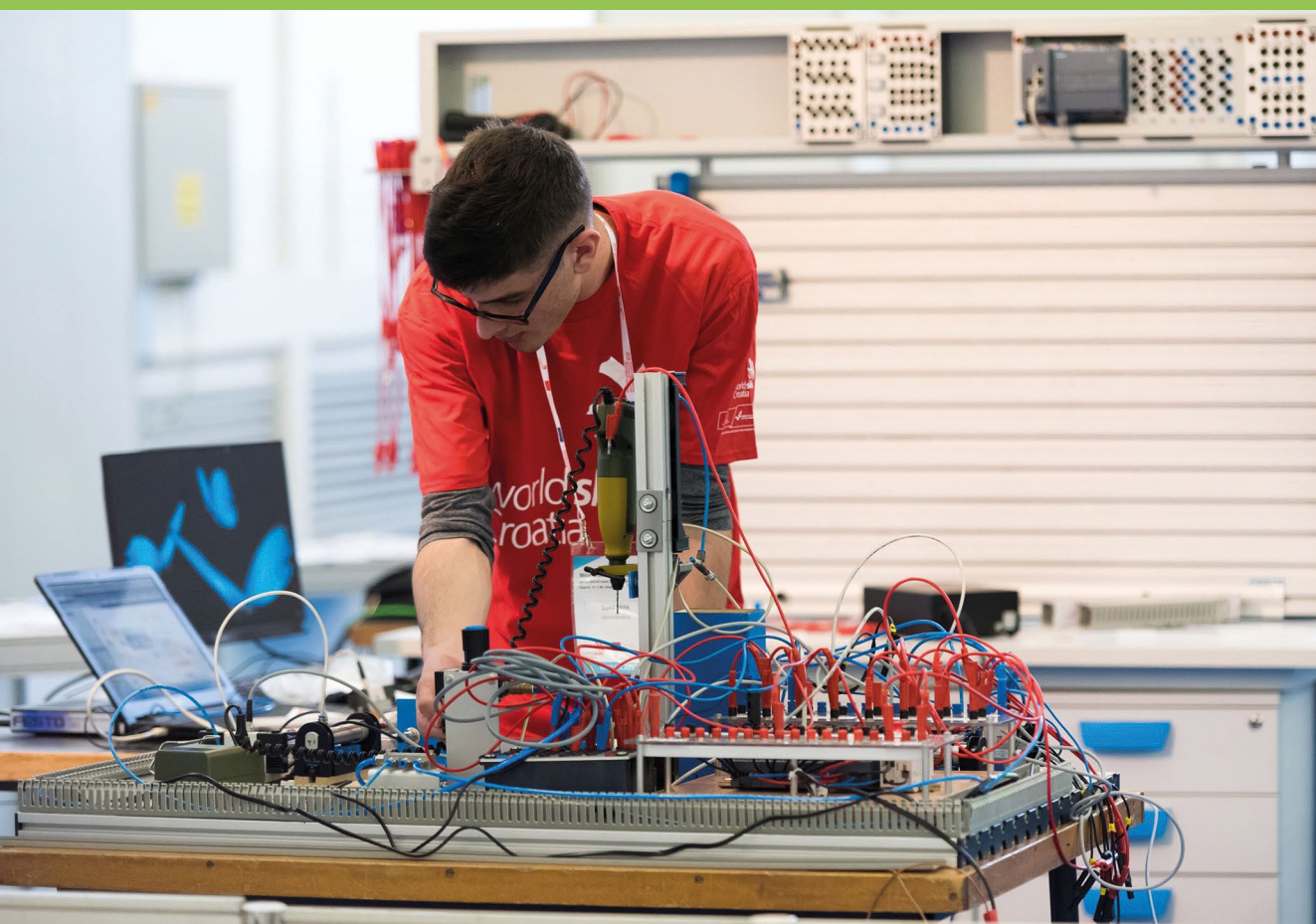
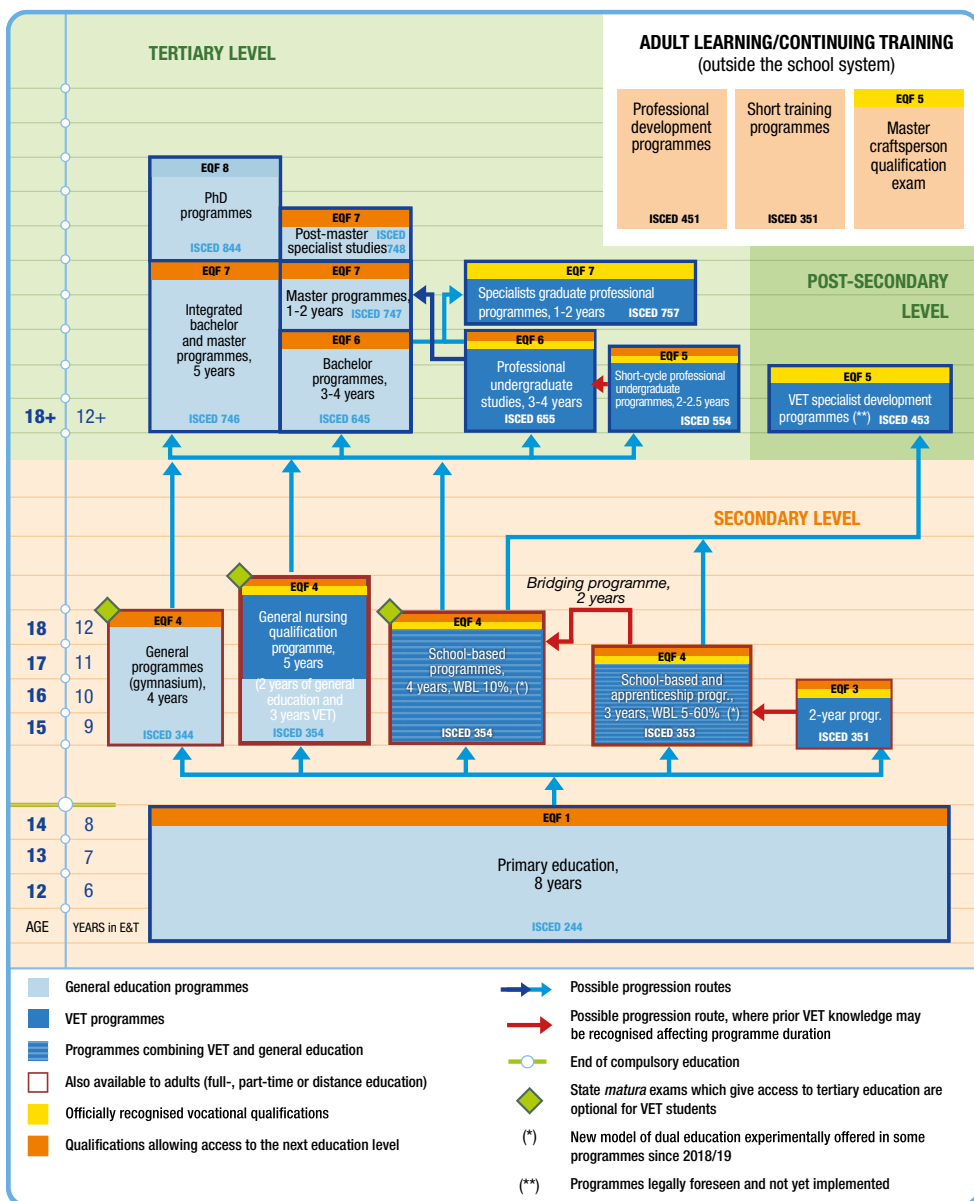


Figure 7. VET in the Croatian education and training system in 2019/20



NB: ISCED-P, 2011.

Source: Cedefop and ReferNet Croatia, 2020.

2.1. Education and training system overview

The right to education is guaranteed by the constitution; eight years of compulsory education are free of charge. Vocational education and training (VET) is offered at upper secondary level and provision is regulated by the following acts:

- (a) Primary and Secondary School Education Act (2008, last amended in 2019);
- (b) Vocational Education and Training Act (2009, last amended in 2018) defines the acquisition of IVET qualifications, quality assurance, stakeholder cooperation and in-service training for VET teachers;
- (c) Crafts and Trades Act (2013) regulates trade and craft qualifications and responsibilities of stakeholders involved in apprenticeships;
- (d) Adult Education Act (2007, last amended in 2010) regulates adult education including VET.

Since 2013, all strategic documents have stated that future VET development will be in accordance with the tools and procedures defined by the Croatian qualifications framework Act (2013, last amended 2018).

The education and training system in Croatia comprises:

- (a) pre-school education ⁽³⁰⁾;
- (b) integrated primary and lower secondary education (ISCED level 2) (hereinafter primary education) ⁽³¹⁾;
- (c) upper secondary education (ISCED 3) including (Tables 2 and 3):
 - (i) four-year general or specialised gymnasium programmes;
 - (ii) four-year art programmes;
 - (iii) initial VET programmes, comprising:
 - two-year programmes;
 - three-year programmes for professions in craft and industry;
 - four-year programmes providing access to higher education;
 - five-year programme for general care nurse, providing access to higher education;
- (d) post-secondary non-tertiary education (ISCED 4) ⁽³²⁾;
- (e) higher education, including:

⁽³⁰⁾ Early childhood and preschool education is offered from an age of six months and is provided at childcare institutions. One-year pre-school education is compulsory before enrolling in primary education.

⁽³¹⁾ Typically, from age 6 to 15, at the latest until 21 for learners with special education needs.

⁽³²⁾ Programmes legally foreseen but not developed or delivered yet. Therefore, these programmes will not be further elaborated in this report.

- (i) academic (university) study programmes (ISCED 6-8);
- (ii) professional study programmes (ISCED 5-7).

Professional higher education programmes are the following:

- (a) short-cycle professional undergraduate programmes last two to two-and-a-half years and lead to qualifications at Croatian qualifications framework (CROQF)/ European qualifications framework (EQF) level 5;
- (b) three- to four-year professional undergraduate programmes lead to a professional bachelor diploma at CROQF/EQF level 6. Professional bachelors may continue their studies in university programmes subject to successful completion of additional exams and other requirements established by individual higher education institutions;
- (c) specialist graduate professional studies last one to two years and lead to a professional specialist diploma at CROQF/EQF level 7.

Figure 7 presents the education and training system in more detail.

2.1.1. Requirements to access IVET

The education ministry defines the elements and criteria for enrolment ⁽³³⁾ and students enrol into upper secondary education through the centralised e-system ⁽³⁴⁾. To enter IVET, they need to have a certificate of completion of primary education and adequate physical and mental health, as required by VET curricula.

2.1.2. IVET programme completion

To complete an IVET programme and receive a formal qualification, all learners have to develop and present a final practical assignment (*izradba i obrana završnog rada*). Assessment is organised and conducted by VET schools ⁽³⁵⁾. Upon passing it, a learner acquires a secondary school qualification and receives a certificate of completion (*svjedodžba o završnome radu*) from the VET school.

⁽³³⁾ Regulation on elements and criteria for enrolment in the first year of secondary school (Official Gazette Nos 49/2015, 109/2016, 47/2017); Decision on enrolment of learners in the first year of upper secondary school (Official Gazette No 53/2019), yearly basis.

⁽³⁴⁾ National informational system for applying and enrolling into secondary schools (NISpuŠŠ), more at: www.upisi.hr/upisi/

⁽³⁵⁾ Regulation on the development and defence of the final exam (Official Gazette Nos 87/2008, 86/2009).

2.1.3. Progression to higher education: State *matura* exams

According to the legislation ⁽³⁶⁾, both horizontal and vertical progression are stipulated. Enrolment in higher education requires taking State *matura* exams (*ispiti državne mature*). For most of the tertiary education programmes, graduates in four- and five-year IVET programmes have to take these exams if they want to study at tertiary level.

The National Centre for External Evaluation of Education (NCVVO) administers the State *matura* exams in cooperation with upper secondary schools. Exams serve three aims: final examination and requirement for graduation from general upper secondary schools; entrance exams for undergraduate studies at tertiary level for all learners (including VET graduates); and external evaluation of learner competences. State *matura* exams are administered in general education subjects only, as obligatory and optional exams. Croatian language, mathematics and foreign language exams are obligatory, and they may be taken at A (advanced) and B (elementary) level. The list of optional exams is determined by the NCVVO, based on input from higher education institutions, for each school year. Higher education institutions set their admission criteria independently, including the level and optional exams required.

Three-year IVET programmes prepare for the labour market (Table 2). As of 2014, graduates of these programmes can enter an optional one- to two-year bridging programme and, if successful in gaining a four-year qualification, can also take Matura exams to access higher education. Using this option, students enter a four-year VET programme leading to a different qualification. Therefore, they need to pass specified exams to compensate for both general education and vocational subjects before continuing into and completing a fourth year as a regular learner ⁽³⁷⁾.

2.2. Government-regulated VET provision

VET in Croatia is defined as a process leading to a qualification for practising an occupation or job and pursuing further education and lifelong learning ⁽³⁸⁾. The VET area also covers further professional development that does not lead to a qualification; it is rather part of a lifelong learning process for adults. VET is

⁽³⁶⁾ VET Act (2009) and the amendments to the Act on Primary and Secondary Education (2008) of 2012.

⁽³⁷⁾ Regulation on conditions and pathways of continuing education to higher level of qualification (Official Gazette No 8/2016).

⁽³⁸⁾ VET Act (Official Gazette Nos 30/2009, 24/2010, 22/2013, 25/2018).

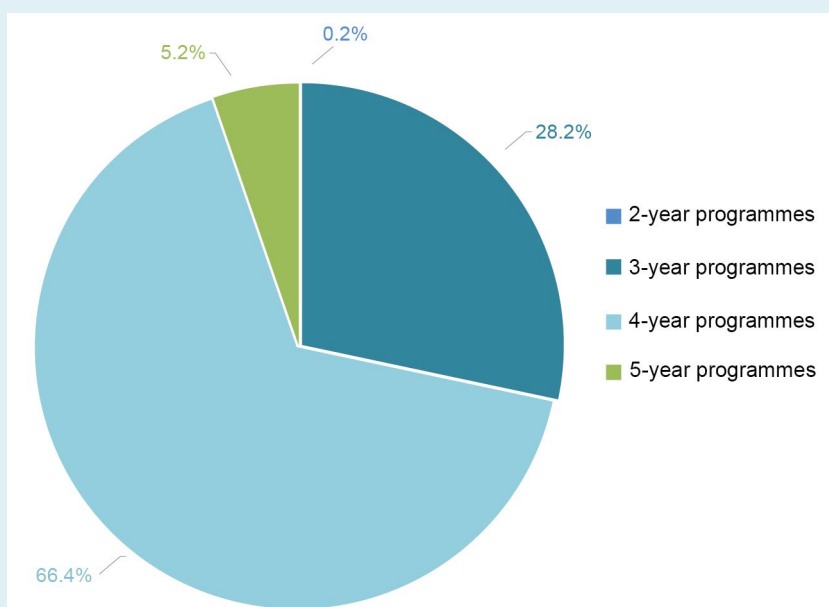
offered on levels 2 to 5 of the Croatian qualifications framework, corresponding to the same levels in EQF.

2.2.1. Initial VET pathways

Croatia is one of the EU Member States with the largest participation in VET (69.6% of learners at upper secondary level 2017) ⁽³⁹⁾. Most IVET programmes are for three or four years, leading to formal upper secondary VET qualifications ⁽⁴⁰⁾ at ISCED-P 3 and EQF 4 ⁽⁴¹⁾ level (Figure 8).

In 2019/20, there are 279 IVET programmes (Table 1).

Figure 8. Participation in IVET programmes (%), 2019-20



Source: ReferNet Croatia.

⁽³⁹⁾ Eurostat, educ_uoe_enrs01, educ_uoe_enrs04 and educ_uoe_enrs07 [extracted on 16.05.2019].

⁽⁴⁰⁾ VET specialist development programmes leading to EQF level 5, ISCED 453 (*programi stručnog obrazovanja i osposobljavanja nakon srednjeg obrazovanja*) are legally foreseen by the Act on NQF (2013) and the national VET curriculum (2018). They are envisaged as further education programmes (specialisation) at the post-secondary level and have not yet been introduced.

⁽⁴¹⁾ National qualification framework makes a distinction between levels 4.1 and 4.2 which both are referenced to EQF 4.

Table 1. **Number of IVET providers, programmes and learners enrolled (2019/20)**

IVET programme type	VET schools	Programmes	Learners
Five-year general nursing programme	24	1	5 046
Four-year programmes (school-based; two programmes offered experimentally as dual education)	287	131	64 013
Three-year programmes (school-based for industry; school-based programmes for crafts; apprenticeship type of programmes for crafts and trades (JMO); four experimental dual programmes)	214	139	27 172
Two-year programmes	8	8	158
Total	308	279	96 389

NB: Most VET schools offer more than one type of programme.

Source: ReferNet Croatia; ŠeR: <https://mzo.gov.hr/vijesti/ser-skolski-e-rudnik/2034> [accessed on 18.10.2019].

Some programmes prepare for both labour market and higher education, some for the labour market alone (Table 2) but all include two parts: a general education part and a vocational part that is further divided into a professional-theoretical part and practical training and exercises (*praktična nastava i vježbe*).

2.2.2. IVET programmes preparing for labour market and tertiary education

2.2.2.1. Five-year initial VET programme

This programme leads to general nursing qualification (*strukovni program za medicinsku sestru opće njege*) at ISCED-P 354, EQF 4, CROQF 4.2. level with an opportunity for progression to tertiary education. It is a school-based

programme with a specific structure, different from other VET programmes in Croatia. The programme was created in 2010/11 to comply with the European regulation on training requirements for nurses responsible for general care ⁽⁴²⁾. It comprises two years of general education, followed by three years of VET.

Table 2. Levels and progression pathways of IVET programmes

VET programme	ISCED level/ sub-categories (2011-P)	NQF/ EQF level	Primary progression routes
Two-year programmes	3/351	3/3	labour market
Three-year school-based VET programmes for professions in industry and crafts	3/353	4.1/4	labour market
Three-year apprenticeship VET programmes for professions in crafts and trades (JMO)	3/353	4.1/4	labour market/ master craftsman exam
Four- and five-year VET programmes	3/354	4.2/4	labour market/higher education (after completion of State <i>matura</i> exams)

Source: ReferNet Croatia, 2019.

The certificate of completion is the final formal award. After completing the first two years of the programme, learners also receive a certificate of completion of two-year general education programme in support of attaining a medical care qualification (*uvjerenje o završenome dvogodišnjem općeobrazovnom programu za stjecanje zdravstvene kvalifikacije*).

2.2.2.2. Four-year initial VET programmes

Four-year VET programmes (*četverogodišnji strukovni programi*) lead to ISCED-P 354, EQF 4, CROQF 4.2. level qualification and prepare for both

⁽⁴²⁾ Directive No 2005/36/EC on recognition of professional qualifications, Annex V, point No 5.2.1.

the labour market and continuing education at tertiary level. Examples of VET qualifications awarded are beautician, mechanical engineering technician, information and communications technology (ICT) technician, agriculture technician, and technician in hotel and tourism industry.

The programmes consist of general education and vocational parts in approximately equal shares. The national curriculum for VET (2018) suggests a general education part of around 45%. Programmes are school-based with practical training at school and in company, with the work-based learning (WBL) part less than 10% on average ⁽⁴³⁾.

In 2019/20, only 25 of 131 programmes offered were learning-outcome-based ⁽⁴⁴⁾.

2.2.3. IVET programmes preparing for the labour market

2.2.3.1. Three-year initial VET programmes

Three-year IVET programmes prepare learners to enter labour market qualified for professions such as chef, hairdresser, photographer, computer numerically controlled (CNC) operator, and auto mechanic. They lead to qualifications at ISCED-P 353, EQF 4, CROQF 4.1 level.

Many programmes at this level, such as for assisting professions, are also suitable for learners with special education needs, such as moderate and severe disability. Special arrangements are available for them in VET schools and social welfare institutions.

Three-year IVET programmes have the same entry and completion requirements and progression opportunities ⁽⁴⁵⁾ (Sections 2.1.1, 2.1.2. and 2.1.3.) and are offered as:

- (a) school-based, for industry and for crafts. Industrial programmes (*industrijski strukovni programi*) prepare for industry-related occupations, such as CNC operator; programmes for crafts (*obrtnički strukovni programi*) prepare for crafts occupations such as carpenter;
- (b) apprenticeships programmes, referred to as 'unified model of education' (*jedinstveni model obrazovanja* in Croatian, hereinafter referred to as JMO), and implemented since 2004/05.

⁽⁴³⁾ ReferNet Croatia.

⁽⁴⁴⁾ New qualifications and vocational curricula in line with the national curriculum for VET (adopted in 2018) are yet to be developed in the VET reform process, which is currently under way.

⁽⁴⁵⁾ The opportunity to continue with a bridging programme to achieve a four-year IVET programme qualification is rarely chosen: in 2019/20 only 158 three-year IVET programmes graduates.

Apprenticeship providers are business entities, such as craft business workshops or trade associations, institutions or cooperatives, licensed to offer practical training and exercises for apprentices. In order to get the licence, apprenticeship providers must ensure conditions for learners to acquire competences in the real work environment, including assigning a mentor with adequate qualifications and pedagogical competences.

The learner in a JMO programme has the status of a regular learner and an apprentice in craft. Entry requirements include completed primary education and demonstrated medical fitness for a particular profession; a placement and apprenticeship contract with a licenced apprenticeship provider has to be ensured in the first semester. The contract prescribes the employer obligation to pay monthly compensation to the learner. Upon completion of the programme and being awarded with certificate of completion, JMO graduates can also take a journeyman exam (*pomoćnički ispit*)⁽⁴⁶⁾. They can also apply for and take the master craftsman exam after two to three years of work experience in the field.

According to the findings of the Cedefop thematic review on apprenticeship⁽⁴⁷⁾, provisions for access to higher levels of education are not widely used in practice. It is very hard for JMO learners to continue with their further education: schools reported approximately 10% of their third-year learners continuing their studies. Learners have to take many exams⁽⁴⁸⁾ to catch up with learners from other programmes and enrol in the regular fourth year, the successful graduation from which gives access to the State matura (*državna matura*) exams (Section 2.1.3). Most schools offer, and learners opt for, adult education programmes that are not free of charge but are provided as an evening school option allowing learners to work full-time. The learners who decide to continue their education are mostly those with higher grades achieved during the three years of the JMO programme.

Various stakeholders are involved in the implementation of JMO programmes. The Ministry of Science and Education (*Ministarstvo znanosti i obrazovanja*, MZO) has overall responsibility. It also decides on enrolment quotas, approves VET curricula and adopts the programmes with prior consent of the ministry in charge of crafts. The ministry responsible for crafts shares responsibility with the ministry in charge of education. It defines and supervises

⁽⁴⁶⁾ Regulation on the procedure and way of implementation of journeyman's exam (Official Gazette Nos 63/2014, 86/2015).

⁽⁴⁷⁾ In 2017-18, Cedefop conducted an in-depth review of apprenticeship at the request of the Ministry of Science and Education of Croatia and published the results in Cedefop, 2019.

⁽⁴⁸⁾ According to some, about 20 to 25 exams, or equal to two years of schooling (Cedefop, 2019).

the licensing procedure for apprenticeship providers, maintains the database of licensed crafts, sets minimum conditions for apprenticeship contracts and keeps record of the contracts; it also defines the method and process of the journeyman exams and issues journeyman certificates. ASOO is responsible for organising journeyman exams. The chamber of trades and crafts issues licences to apprenticeship providers and publishes lists of licensed apprenticeship providers; the providers offer practical training and exercises to learners. VET schools enrol learners in JMO programmes, implement the general, vocational theoretical part and a smaller part of the practical training of the programme, organise the preparation and presentation of the final practical assignment and issue certificates of completion.

JMO programmes have been facing a steady decline in participation, with the number and share of JMO learners in all VET programmes falling by more than a half in the past six years.

Box 1. New experimental model of dual education

In 2018/19, the Ministry of Science and Education launched the experimental dual education programme based on the concept described in the model of Croatian dual education (MZO, 2018). Implementation is in cooperation with economic and crafts chambers, associations of employers and with support from partner institutions from Austria, Germany and Switzerland. Piloting is also supported by the *Modernisation of VET programmes* project, realised through Swiss-Croatian cooperation.

In 2019/20, dual education is offered experimentally in three-year and four-year programmes leading to EQF level 4 qualifications (three-year programmes for salesman, glazier, chimneysweeper and painter-decorator at CROQF level 4.1 and four-year programmes for beautician and hairdresser at CROQF 4.2). In total, 19 VET schools and 469 learners are involved.

In the first year of the dual programme, learning takes place in the VET school. In the following years, most work-based learning is undertaken in companies: 161 companies employing 522 people are involved so far. Companies are required to employ and provide training and continuous professional development to mentors, as well as to ensure quality assurance of work-based learning. Learners sign a contract for work-based learning with companies during the first year and are entitled to monthly remuneration; bonus might be paid as well. Remunerations are unified per qualification and per year of education and training.

Source: Ministry of Science and Education; Swiss-Croatian cooperation programme.

2.2.3.2. Two-year IVET programmes

Two-year IVET programmes (*dvogodišnji strukovni programi*) lead to qualification at ISCED-P 351, EQF 3 level and prepare for occupations such as welder or administrator. Programmes target mostly young people at risk of early leaving from education and training. Learners with disabilities may enrol in adapted two-year VET programmes, which could extend for up to three years. These programmes are a minor IVET pathway with very small number of learners enrolled (Table 1).

2.2.4. Adult education

Regulated by the Adult Education Act ⁽⁴⁹⁾, adult education in Croatia covers programmes leading to qualifications at levels up to EQF 5 for learners older than 15. The Act distinguishes between formal and non-formal adult education.

2.2.4.1. Formal adult education providers

Formal adult education is provided by State-registered providers, public or private, that offer verified programmes leading to a formal certificate. Registered adult education providers are subject to the inspection of the education ministry while ASOO monitors the teaching part of the process (*stručni nadzor*).

According to the ASOO ⁽⁵⁰⁾ data registry, there are over 600 adult education providers registered in Croatia. One third are VET schools, and others are providers established by the State, local or regional self-governments and other legal entities or natural persons.

2.2.4.2. Formal adult education programmes

Formal adult education programmes are developed by the registered adult education providers and may require a certain vocational qualification or work experience from learners as prerequisite. For programmes with ASOO endorsement and approval from the education ministry, adult education providers may award formal certificates (*javna isprava*) (Table 3). According to the legislation ⁽⁵¹⁾, VAT exemptions are available for adult education providers offering verified programmes, encouraging them to undergo the approval process.

⁽⁴⁹⁾ Adult Education Act (Official Gazette Nos 17/2007, 107/2007, 24/2010).

⁽⁵⁰⁾ Andragogical general data registry (*Andragoški zajednički upisnik podataka*, AZUP), data from October 2019.

⁽⁵¹⁾ Value Added Tax (VAT) Act (Official Gazette Nos 73/2013, 99/2013, 148/2013, 153/2013, 143/2014, 115/2016, 106/2018); Regulation on value added tax (Official Gazette Nos 79/2013, 85/2013, 160/2013, 35/2014, 157/2014, 130/2015, 1/2017, 41/2017, 128/2017, 1/2019).

Table 3. Formal VET programmes types in adult education

VET programmes types in adult education	Type of certificate	Duration
Equivalent to IVET programmes (<i>srednjoškolski strukovni programi</i>) ⁽⁵²⁾	Certificate of completion (<i>svjedodžba o završnome radu</i>)	0.5-1 year on average (prior education might be recognised and can affect programme duration)
Professional development programmes (<i>programi usavršavanja</i>)	Professional development certificate (<i>uvjerenje o usavršavanju</i>)	Minimum 150 hours
Short training programmes (<i>programi osposobljavanja</i>)	Training certificate (<i>uvjerenje o osposobljavanju</i>)	Minimum 120 hours

Source: ReferNet Croatia, 2019.

To obtain a secondary level VET qualification, adults will follow the IVET equivalent programmes. The WBL part of the programmes must be the same as in the equivalent IVET programme. The adult education provider adjusts the IVET programmes and must be endorsed by the VET agency prior to the approval of the education ministry.

The most common learning modalities include in-person group instruction and individual consultations in person or through online or distance learning forms.

Adult learners most often opt for short training programmes (*programi osposobljavanja*), over 70% of them in 2018 ⁽⁵³⁾.

2.2.4.3. Non-formal adult education programmes

Many training programmes are defined as non-formal by the legislation on adult training. They fall under the control of the public authorities and are not subject to approval or quality assurance procedures as in formal adult education (Section 2.2.4). Consequently, they may not award officially recognised public certificates

⁽⁵²⁾ At least 50% of the adult education programme has to be the same as in the equivalent IVET programme.

⁽⁵³⁾ Andragogical general data registry data from October 2019.

(*javna isprava*). They are fee-based and generally financed by learners. The programmes encompass a broad range of learning opportunities, such as developing technical skills, digital competences, fostering sustainable living and many others.

2.3. Financing VET

Since 2001, the financing of public upper secondary VET schools has been decentralised.

The State budget finances:

- (a) salaries for teachers and other employees in education;
- (b) in-service training of teachers and other specialists;
- (c) education of at-risk groups (such as ethnic minorities, learners with special needs) and gifted learners;
- (d) teaching materials and equipment;
- (e) transportation costs of upper secondary learners;
- (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 employees in upper secondary education schools;
- (d) joint financing of food and lodging in learner residences;
- (e) capital investments (buildings, infrastructure) according to criteria determined by the education ministry ⁽⁵⁴⁾.

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

In 2015, expenditure on upper secondary education comprised about one-fifth of the overall education budget of the country (22.4%) ⁽⁵⁵⁾.

⁽⁵⁴⁾ Local authorities as the legal founders and owners of the schools can also be investors regarding buildings/infrastructure.

⁽⁵⁵⁾ European Commission et al., 2015, p. 22.

In adult education, adult learners usually cover the expenses of the education programmes they attend. The exception is primary education programmes, which are free of charge for adults and financed by the MZO. The public employment service, as a part of ALMP, covers the education expenses of the unemployed; some adult education programmes have recently been financed through different ESF-funded projects.

The planned reforms of IVET and adult education ⁽⁵⁶⁾ strongly rely on EU structural funds.

2.4. VET governance

Although several 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.

Since the mid-2000s, the government has established several new agencies, with the agency for VET in 2005 marking the beginning of VET modernisation. In 2010, VET and adult education agencies merged into a single agency for VET and adult education ⁽⁵⁷⁾. ASOO is an executive body in charge of the overall development and organisation of the VET system.

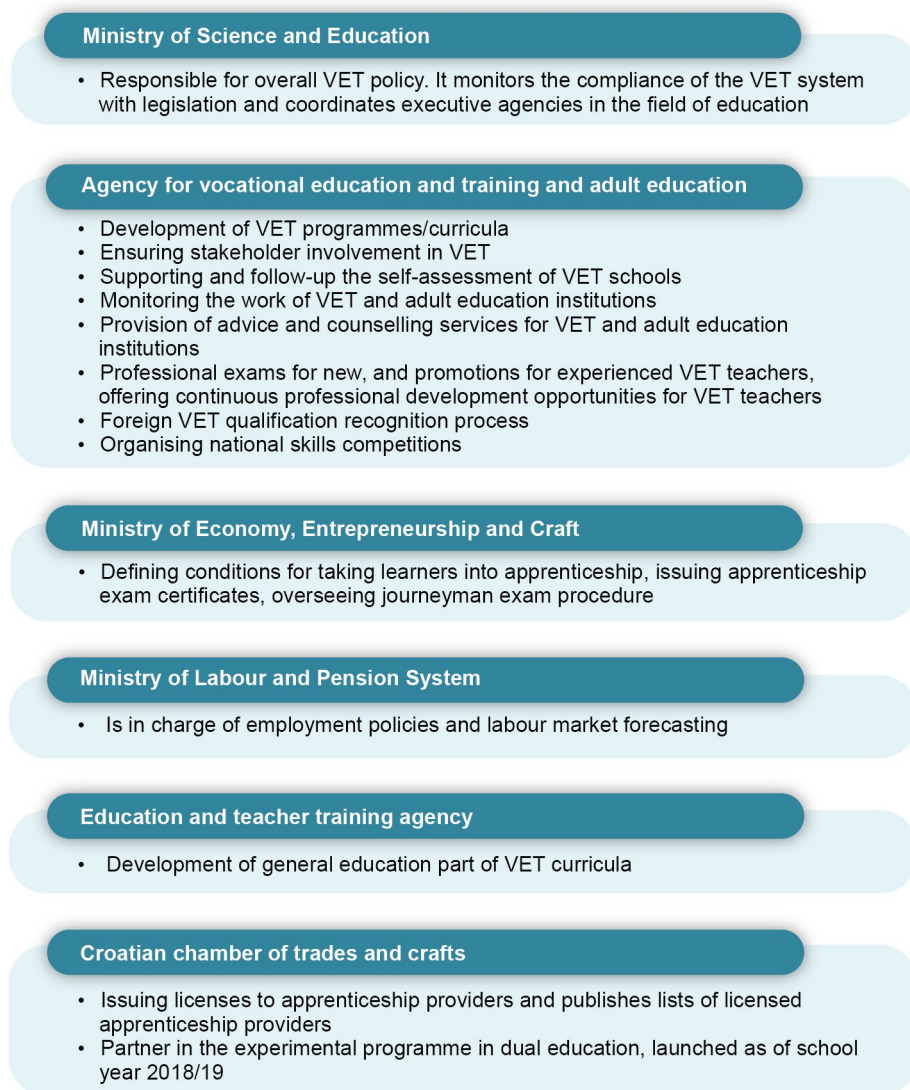
With the CROQF development in 2013, Ministry of Labour and Pension System took a more prominent role in anticipating labour market skills needs for the education sector.

The role of the Ministry of Economy, Entrepreneurship and Crafts (*Ministarstvo gospodarstva, poduzetništva i obrta*, MINGO) and the Croatian Chamber of Trades and Crafts (*Hrvatska obrtnička komora*, HOK) is focused on apprenticeship/JMO programmes. The amendments of the Act on Craft of 2013 reduced the HOK responsibility as the journeyman exam organisation was transferred to ASOO. HOK is responsible for licensing crafts and legal entities to provide apprenticeships.

⁽⁵⁶⁾ Government of the Republic of Croatia, 2016.

⁽⁵⁷⁾ Act on Agency for VET and Adult Education (Official Gazette No 24/2010).

Figure 9. Main VET stakeholders



Source: ReferNet Croatia; Cedefop.

Other stakeholders in VET are:

- (a) the Council for VET (*Vijeće za strukovno obrazovanje*) consists of 21 members from a range of stakeholders. The role of this body is to coordinate the activities of all VET stakeholders, initiate the development of new curricula and revision of existing curricula, recommend new developments

in VET, and to provide its assessment for the establishment of the network of regional centres of competence;

- (b) the Croatian Chamber of Economy (*Hrvatska gospodarska komora*) is a partner in the experimental programme in dual education launched in 2018/19;
- (c) industrial trade unions ⁽⁵⁸⁾ participate in advisory bodies, such as sector councils.

2.4.1. VET providers

IVET providers are mostly public secondary vocational schools that can be vocational or polyvalent (offer both general education and VET programmes); the share of private VET schools is 4%. Local authorities are legal founders and owners of the public schools. The profile of VET schools ranges from delivering programmes in several different sectors to those offering 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, and construction. There are 308 VET schools in 2019/20 in Croatia (Table 1). On average, secondary schools have 400 learners and offer 10 education programmes; this can be challenging in terms of financing, organisation and human resource management. The programmes are perceived as costly and their offer is not aligned with labour market, demographic or local development needs, which affects the availability of work-based learning and the quality and learning outcomes in VET. In 2019, MZO published the guidelines for optimising the network of VET providers ⁽⁵⁹⁾.

2.5. Teachers and trainers

2.5.1. Vocational teachers and trainers

In VET, there are:

- (a) general subject teachers;
- (b) vocational teachers and trainers.

Teachers of general subjects, such as mathematics and Croatian language, are qualified according to general regulations on teachers set by the education

⁽⁵⁸⁾ Six confederations of trade unions.

⁽⁵⁹⁾ Ministry of Science and Education, 2019.

ministry. These require that teachers have completed graduate university or professional studies and have pedagogical competences.

Box 2. Establishment of a network of regional centres of competences

Based on legislative provision from 2018 ⁽⁶⁰⁾, 25 VET schools from five sectors designated as priority (tourism and hospitality, mechanical engineering, electrical engineering and ICT, health care, and agriculture) were selected to act as future regional centres of competences. These centres will serve as hubs of excellence in VET. Central features include innovative learning opportunities, the excellence of teachers and workplace mentors supported by state-of-the-art facilities, and intensive cooperation with local enterprises and other VET stakeholders. Over EUR 130 million from the European structural and investment funds will be invested in equipment, boarding room for VET learners and teachers, expanded opportunities for work-based learning, closer cooperation with employers and advanced teacher training opportunities. Along with the VET programmes and professional guidance for learners, the centres will offer continuous professional development and training for professionals, VET teachers and workplace mentors.

Source: ReferNet Croatia.

Teachers and trainers in IVET and formal adult education ⁽⁶¹⁾:

- (a) teachers of theoretical vocational subjects (*nastavnik stručno-teorijskih sadržaja*) must have higher education (180 ECTS or more), have completed supplementary pedagogical-psychological education (60 ECTS) and meet other requirements according to the VET curriculum;
- (b) teachers of practical training and exercises (*nastavnik praktične nastave i vježbi*) must have an undergraduate university or professional degree (180 ECTS or more), pedagogical competences (60 ECTS) and hold a qualification of a required profile;
- (c) vocational teachers (*strukovni učitelji*) must have the level of education defined by the VET curriculum (at least secondary vocational education of the corresponding profile) pedagogical competences ⁽⁶²⁾ and at least five years of work experience in the appropriate profession;
- (d) teaching associates (*suradnik u nastavi*) must have secondary education, pedagogical competences and at least five years of work experience, unless regulated differently by the vocational curricula. Teaching associates assist the vocational teachers.

⁽⁶⁰⁾ Amendments to the VET Act (Official Gazette No 25/2018).

⁽⁶¹⁾ Vocational Education and Training Act (Official Gazette No 30/2009).

⁽⁶²⁾ Acquired through programmes set by the education ministry.

According to the VET Act, all learners participating in practical training with an employer as part of their programme have to have a mentor with adequate qualification and pedagogical competences.

According to the Craft and Trades Act ⁽⁶³⁾, in JMO programme mentors can be either:

- (a) a master craftsperson;
- (b) persons who have the same rights as the those who have passed the master craftsman's exam and also have passed the exam that proves their basic knowledge on teaching;
- (c) persons with the appropriate high school qualification, who have their trades and crafts businesses registered in the region of particular national interest and have three years of experience in the profession for which they conduct apprenticeships, and have passed the exam that proves their basic knowledge on teaching;
- (d) persons who have the appropriate high school qualification and at least 10 years of work experience in the profession for which they conduct apprenticeship and have passed the exam that proves their basic knowledge on teaching ⁽⁶⁴⁾.

In 2017, approximately 15 200 teachers taught either vocational or general education subjects in upper secondary vocational education ⁽⁶⁵⁾.

2.5.2. Continuous professional development, promotion and recognition of teachers

The continuing professional development (CPD) and in-service training of VET staff is mainly provided by ASOO and is based on an annually updated catalogue for in-service training (*katalog stručnog usavršavanja*). Data related to the in-service training of VET school teachers are regularly recorded in the information system ⁽⁶⁶⁾, where teachers register for in-service teacher training events. Travel and accommodation costs of in-service training for teachers are covered by VET institutions, which affects the number of teachers attending training. The provision of in-service training for VET staff is generally underfinanced and perceived as insufficient.

⁽⁶³⁾ Crafts and Trades Act (Official Gazette No 143/2013); Regulation on minimum requirements for apprenticeship contracts (2014).

⁽⁶⁴⁾ Cedefop, 2019.

⁽⁶⁵⁾ Eurostat, educ_uoe_perp01 [accessed on 18.10.2019].

⁽⁶⁶⁾ VET information system (VETIS).

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.

Apart from the State-funded training described above, in-service training of VET teachers is also provided 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.

These form of in-service training do not require programme or provider accreditation.

Box 3. The concept of a new CPD model for VET teachers ⁽⁶⁷⁾

In 2018, ASOO developed new CPD model for VET teachers. This model revised the CPD yearly schedule and defined 13 basic and 12 elective outcome-based modules. The basic modules address the areas that the VET teachers' survey found the most important: planning personal CPD and lifelong learning, teaching special education needs learners, developing sector-specific skills, teacher training in enterprises and cooperation with the business sector, classroom management, student assessment, and digital competences. Elective modules included induction into the teaching profession, teaching adults, self-assessment in VET schools, integration of ICT in teaching and learning, service learning, project management and EU funds.

Source: Anđelić et al., 2019.

2.5.2.1. Promotion of teachers

Promotion of teachers, vocational trainers and teaching associates is legally regulated ⁽⁶⁸⁾. Regulation guides the promotion and defines levels, conditions and ways of progression. Teacher expertise and teaching excellence are evaluated on:

- (a) teaching success, such as methodological creativity in teaching, application of the latest working methods in teaching, and the latest sources of knowledge;
- (b) extracurricular expert work, such as lecturing in teacher training events at a minimum of county level, mentorship of a trainee up to in-service

⁽⁶⁷⁾ Anđelić et al., 2019.

⁽⁶⁸⁾ Regulation on professional advancement of teachers, education professionals and school directors in primary and secondary schools and student dormitories (Official Gazette No 68/2019).

- professional exam, mentorship of learners who won one of the three first places in international competitions, authorship of a textbook;
- (c) participation in in-service teacher training.

Holders of advanced professional titles are expected to deliver professional training, participate in online public consultations on education policy proposals, and publish digital education content.

Promotion depends on the number of years of work experience, years of holding a professional title, number of points collected by taking part in different categories of extracurricular activities, complying with requirements from the national qualifications standards for teachers, and regular in-service teacher training. The teacher initiates the process of promotion, with the evaluation of teacher's work by the teacher council; ASOO completes the process.

As a result of their promotion, teachers can acquire the title of mentor, advisor and excellent advisor ⁽⁶⁹⁾; they can also be awarded recognition for outstanding achievements in education. The 2019 regulation restructured the professional titles, defined the responsibilities of the holders, and requirements and criteria for advancement and the evaluation procedure, as well as validity periods.

The titles are valid for five years and teachers can be re-elected.

2.5.2.2. *Recognition for teachers*

The 2019 regulation ⁽⁷⁰⁾ stipulates the evaluation procedure and the award criteria, as well as financial bonuses for teachers. The new framework favours teaching innovation, taking part in professional development, developing open digital education content, participation in projects, as well as contribution to the education system through engagement in working groups for policy development, research or experimental programmes in education.

In December 2019, a significant increase in teachers' salaries was negotiated between the Government and teachers' unions ⁽⁷¹⁾.

⁽⁶⁹⁾ The title of the excellent advisor was introduced in 2019 by the Regulation on professional advancement of teachers, education professionals and school directors in primary and secondary schools and student dormitories (Official Gazette No 68/2019).

⁽⁷⁰⁾ Regulation on awards to teachers, education professionals and school directors in primary and secondary schools and student dormitories (Official Gazette No 53/2019).

⁽⁷¹⁾ Ordinance on amendments of the Ordinance on workplace titles and coefficients of job complexity in public services (Official Gazette No 119/2019); Agreement on wage supplement for the employed in primary and secondary education institutions and institutions in science and higher education (Official Gazette No 122/2019).

2.6. Recent policy changes

Redesign of the VET system has been long in planning; roll-out is foreseen in 2022/23 ⁽⁷²⁾. The system is transforming from input- to learning-outcomes-oriented, responding to current demand and looking forward (Section 3.2).

In 2013, the Act on NQF introduced new mechanisms for feedback loops between the labour market and education (both VET and higher education). As foreseen by this Act, the education ministry has finished establishing 13 sector councils relevant to VET ⁽⁷³⁾ in 2017. Methodologies connecting VET curricula developments with labour market needs have been defined.

The VET Act amendments of 2018 provided for the establishment of the regional centres of competences and national and sectoral VET curricula. In 2018, the Minister for Education endorsed the first national framework curriculum for VET.

In parallel to the existing apprenticeships, JMO, the education ministry has initiated experimental implementation of dual education in 2018/19 (Box 1).

Emphasis has been placed on improving the continuous professional development of teachers, advancement opportunities and their financial status (Section 3.5.2).

Aimed at promoting excellence in VET, the first *WorldSkills Croatia* competition launched a reformed model of VET learner competitions with over 580 competitors in 46 disciplines and over 10 000 visitors in 2019. The event ensured high visibility and stakeholder endorsement, becoming the leading national event for the promotion of VET.

⁽⁷²⁾ ASOO ESIF project VET system modernisation:
www.asoo.hr/default.aspx?id=1173#PUK

⁽⁷³⁾ Out of 25 in total.

CHAPTER 3.

Shaping VET qualifications



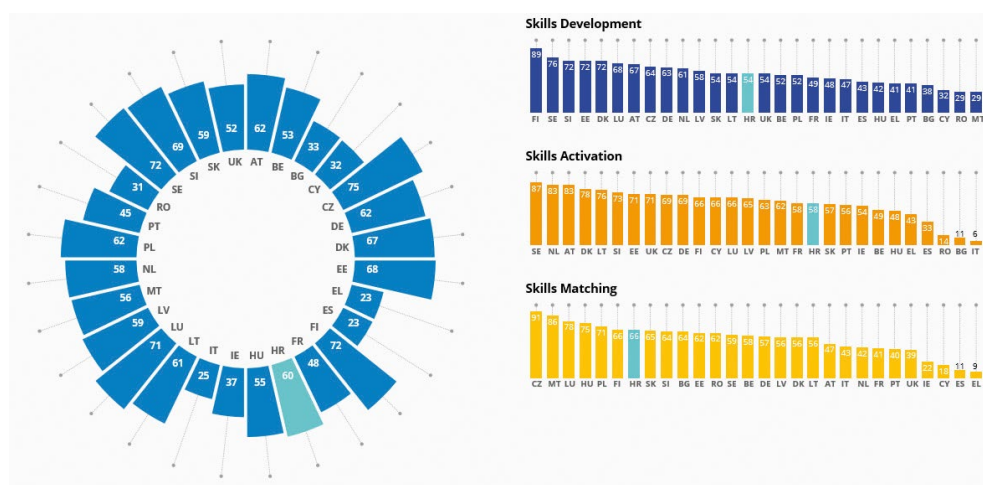
Croatia ranks 12th ⁽⁷⁴⁾ as a whole on the European skills index and belongs to the 'middle achieving' group of the EU ⁽⁷⁵⁾.

Croatia's performance on skills development is average (rank 14th). Skills development indicates the training and education activities of the country and the immediate outputs of the system in terms of the skills developed and attained (strong performance in 'participation in VET' with rank third and poorly in 'high computer skills' and 'participation in recent training', rank 25th in both).

The country has an average performance in skills activation (rank 18th), indicating how smooth is the transition from education to work. Despite ranking first in 'early leavers from training', indicators such as 'recent graduates in employment' and 'activity rate (25-54)' place Croatia at 23rd.

Croatia does well in skills matching that represent the degree of successful utilisation of skills and the extent to which skills are effectively matched in the labour market. It is ranked seventh among the EU countries.

Figure 10. European skills index across Member States



NB: 2016 data.

Source: Cedefop, 2016 [data accessed on 30.9.2019].

⁽⁷⁴⁾ Cedefop, 2017.

⁽⁷⁵⁾ Cedefop's European skills index measures countries' 'distance to the ideal' performance in terms of skills development, activation and matching:

https://skills Panorama.cedefop.europa.eu/en/indicators/european-skills-index?field_pillar_tid=&field_countries_tid=7

3.1. Anticipating skills needs

Skills anticipation is in the process of development in Croatia. There is a recognised need to improve overall coordination of the various organisations engaged in this activity. The impact of various anticipation exercises on learners and educational institutions has been limited. In this regard, the process is still under-developed and neither the education system nor future learners are adequately informed ⁽⁷⁶⁾.

In 2010, ASOO introduced concepts of occupational and qualification standards in VET, as precursors of VET curricula development ⁽⁷⁷⁾, and developed first sector profiles ⁽⁷⁸⁾ for 13 VET education sectors. Published in 2012, they combine available data from different sources, including the Croatian Bureau for Statistics, HZZ, and different ministries.

In 2013, the CROQF ⁽⁷⁹⁾ was introduced as the main instrument for alignment of education with labour market needs. As the main coordinating body in charge of NQF, the education ministry ordered, and the Institute of Economics published in 2016, a first experimental forecast on future labour market developments and skills needs for the period 2015-20 ⁽⁸⁰⁾ with quantitative forecasts for 25 CROQF sectors (13 relevant to VET).

MRMS produced and maintains the CROQF web portal ⁽⁸¹⁾, the central portal with labour market and education indicators. It offers insights into current labour market trends, rather than offering forecasts for the future. It integrates data on employment from the Croatian Pension Insurance Institute, data on unemployment from the HZZ, enrolment in secondary and higher education programmes from MZO, key economic activities and corresponding employment rates, and distribution of different occupations in sectors in relation to economic activities from the Croatian Bureau of Statistics.

Based on the Government Decree ⁽⁸²⁾, HZZ developed a process for assessing which occupations are and will be in surplus and which will suffer shortage. This affects mainly the recommendations of HZZ regarding education and training enrolment quotas and stipend policies (*Preporuke za obrazovnu upisnu politiku i politiku stipendiranja*). These recommendations are regionally

⁽⁷⁶⁾ Skills Panorama, 2017.

⁽⁷⁷⁾ ASOO, 2011a.

⁽⁷⁸⁾ ASOO (2012) 13 sector profiles: <https://www.asoo.hr/default.aspx?ID=1254>

⁽⁷⁹⁾ Croatian Qualification Framework Act (Official Gazette Nos 22/2013, 41/2016, 64/2018).

⁽⁸⁰⁾ Ekonomski Institut, 2016.

⁽⁸¹⁾ <http://hko.poslovnja.hr/>

⁽⁸²⁾ Regulation on the monitoring, analyses and prediction of the labour market needs and the development of an educational enrolment recommendations (Official Gazette No 93/2010).

and locally determined and are qualitative, rather than quantitative in nature, indicating only if there is a need for an increase or reduction in enrolment in a specific VET programme. These recommendations have not always been taken into account while determining the enrolment quotas in the specific VET programmes; the need for a more efficient and precise system was recognised.

3.2. Developing VET qualifications and curricula

For over a decade, Croatia has invested significant efforts in modernising VET. There was stimulus in 2005 when ASOO was established ⁽⁸³⁾ and more human and financial resources were designated to VET.

The main strategic orientation was to:

- (a) establish the link between education and labour market;
- (b) replace the input-oriented system with output/learning outcomes-based approach.

These strategies and new legislation set up the framework for developing new, more complex approaches and methodologies and redefining roles and responsibilities in the VET system. New processes have been designed, particularly in shaping VET qualifications. New concepts were introduced, such as occupational and qualification standards. A range of stakeholders is involved (Figure 9). New standards and modernised curricula are under development or foreseen. Full transition to a new, learning-outcomes-oriented VET system with links established between VET and the labour market is planned in 2022/23 ⁽⁸⁴⁾.

According to the VET Act, implementation is based on curricula that set out the teaching process leading to achieving learning outcomes and a qualification. The new process of curriculum development foresees each curriculum as aligned with two inputs; one from the education sector and the other from labour and employment. Each curriculum is to be informed by (Figure 9):

- (a) national curriculum for VET and sectoral curriculum;
- (b) occupational standard and qualification standard.

⁽⁸³⁾ Agency for VET and agency for adult education merged in 2010 forming agency for VET and adult education (ASOO).

⁽⁸⁴⁾ All projections given of the timeline for developments foreseen are given by the VET agency and education ministry.

3.2.1. VET curricula

The VET Act ⁽⁸⁵⁾ defines a hierarchy of curricula used in the Croatian system. Implementation is based on the:

- (a) national curriculum for VET;
- (b) sectoral curricula;
- (c) VET curricula;
- (d) VET provider curricula.

3.2.1.1. *National curriculum for VET*

The first national curriculum for VET ⁽⁸⁶⁾ was endorsed in 2018 by the education ministry. It defines values and goals. For each qualification level, it proposes teaching time devoted to general content, vocational modules, elective modules and work-based learning. The national curriculum for VET also defines general entry and completion requirements for different types of programme, general horizontal and vertical permeability, and the general forms of assessment of learning outcomes. The assessment of work-based learning is expected to result from the cooperation of VET teachers and workplace mentors, while the assessment of learners with special needs will be tailored to individual learning plans. Detailed assessment methods, criteria and processes are to be further elaborated by sector and vocational curricula. The national curriculum allows learning flexibility and specialisation through up to 30% of elective modules integrated in upper secondary VET curricula.

3.2.1.2. *Sector curricula*

Envisaged by the VET Act amendments in 2018, sectoral curricula will set out the framework for all VET curricula for qualifications at CROQF/EQF levels 2 to 5 within education sectors. ASOO is in charge of methodology for sectoral curricula development: this is foreseen for the last quarter 2019, with sectoral curricula available by 2022 ⁽⁸⁷⁾. These curricula will define all VET qualifications within a particular sector, the duration of education, possibilities and conditions for permeability within the sector, and recommended models of work-based learning. It will ensure the acquisition of broader competences relevant for all occupations within a sector.

⁽⁸⁵⁾ VET Act (Official Gazette Nos 30/2009, 24/2010, 22/2013, 25/2018).

⁽⁸⁶⁾ Decision on promulgation of the national curriculum for VET (Official Gazette No 62/2018).

⁽⁸⁷⁾ Cedefop expert discussions with ASOO experts on 14 and 15 October 2019 in Zagreb.

3.2.1.3. *VET curriculum*

The VET curriculum enables achieving a specific VET qualification and both key and professional competences. It consists of mandatory and elective modules, and describes teaching units, learning environment and assessment of learning outcomes. It can also define who can teach in these programmes. VET curricula are endorsed by the education ministry following positive evaluation by ASOO or, in the case of JMO, by the Ministry of Economy, Entrepreneurship and Craft.

3.2.1.4. *VET provider curriculum*

The VET provider curriculum is created by the VET school that implements a programme, based on the VET curriculum and sectoral curriculum. It sets out a plan and a timeline of teaching, methods of teaching and learning, and assessment plan.

3.2.2. **Occupational and qualification standards**

Standards aim to ensure that VET curricula are demand-driven and informed by labour market needs for qualifications and competences. Guidelines for occupational standards development are defined by MRMS and guidelines for qualification standards by the education ministry. Qualification standard development (Figure 9) follows the general process described in the CROQF Act ⁽⁸⁸⁾ and the regulation on the CROQF register ⁽⁸⁹⁾. The register, split into two sub-registers, represents the central repository of approved occupational standards, qualification standards and units of learning outcomes.

3.2.2.1. *Occupational standards*

Occupational standards identify the tasks performed in an occupation and broad skills and knowledge required. They are within the remit of the MRMS which also runs the sub-register of occupational standards. According to ASOO ⁽⁹⁰⁾, the analytical basis has been prepared for the selection of priority occupations; development of approximately 200 VET occupational standards is foreseen until mid-2020, approximately half by the MRMS and half by ASOO.

3.2.2.2. *Qualification standards*

VET qualification standards will translate the skills and knowledge identified in occupational standards into learning outcomes and criteria against which learners will be evaluated. The assessment criteria establish the assessment

⁽⁸⁸⁾ According to CROQF Act (Official Gazette Nos 22/2013, 41/2016, 64/2018).

⁽⁸⁹⁾ Regulation on CROQF register (Official Gazette No 62/2014).

⁽⁹⁰⁾ Cedefop expert discussions with ASOO experts on 14 and 15 October 2019 in Zagreb.

process and benchmarks that must be achieved. Qualification standards will be composed of mandatory and elective transferable units with an assigned credit value. Qualification standards are under the remit of the education ministry, which provides guidelines on standard development, runs the sub-register of qualification standards and approves standards. According to ASOO experts ⁽⁹¹⁾, development of approximately 200 VET qualification standards will start in 2020, following the development of 200 occupational standards (Section 3.2.2.1).

3.2.3. Managing VET qualifications and curricula

The architecture of managing VET qualifications and curricula has been designed, with most building blocks and processes established. Several bodies are involved in the processes (Figures 9 and 11):

- (a) the education ministry;
- (b) the labour ministry;
- (c) ASOO;
- (d) sector councils;
- (e) the national council for the development of human potential.

The education ministry is responsible for national curricula in VET. It also endorses sectoral curricula and VET curricula. The ministry is the national coordinating body responsible for the CROQF and establishes and supports the work of sector councils. It offers methodological guidelines for the development of qualification standards and decides on their inclusion in the CROQF register.

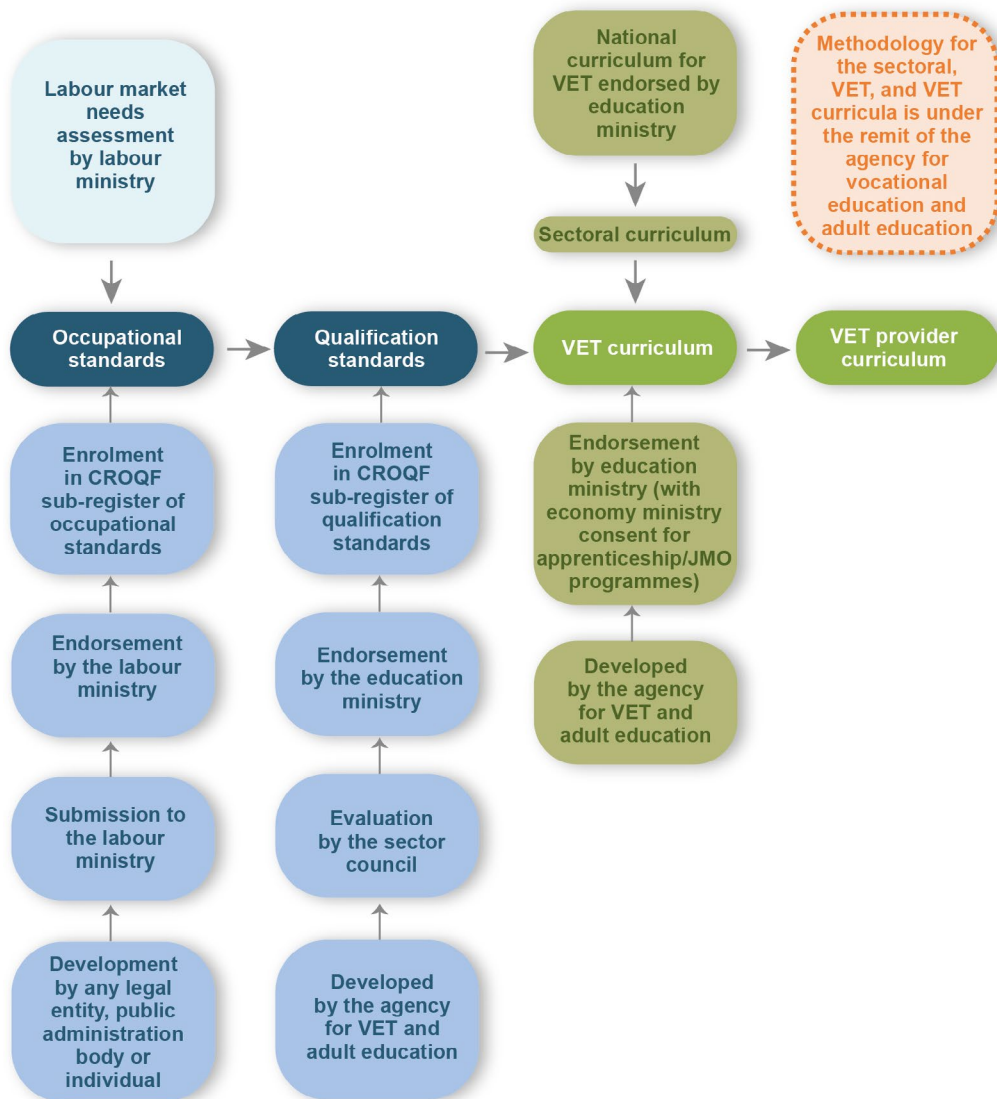
The MRMS monitors labour market needs and is expected to produce the evidence base for the development of occupational standards. It offers methodological guidelines for occupational standards development and approves the listing of new occupational standards in the register.

ASOO is in charge of designing the methodology for development of both sectoral, VET and VET provider curricula and of sectoral and VET curricula. Currently, ASOO is leading a large-scale project for the comprehensive redesign of VET curricula.

Sector councils are advisory bodies at sector level established by the education ministry. There are 25 sector councils, 13 of which are relevant to vocational occupations and qualifications. They evaluate proposals for occupational standards, qualification standards and units of learning outcomes. They also analyse existing and required competences at sector level and recommend changes to qualification standards based on changes in occupational standards.

⁽⁹¹⁾ Cedefop expert discussions with ASOO experts on 14 and 15 October 2019 in Zagreb.

Figure 11. New process of VET qualifications and curricula development



Source: Cedefop, based on VET Act and CROQF legislation.

The national council for the development of human potential is a strategic advisory body responsible for the CROQF. It offers recommendations for policies relevant to qualification development and the alignment of education to the labour market.

Formal qualifications cannot be acquired in Croatia through validation of non-formal and informal learning.

3.3. Quality assurance

IVET quality is supported by the following instruments:

- (a) VET school inspection ⁽⁹²⁾ performed by the education ministry and professional-pedagogic supervision by the ASOO ⁽⁹³⁾; this also applies to adult education;
- (b) self-assessment by VET providers is based on the VET Act ⁽⁹⁴⁾ and relevant methodology ⁽⁹⁵⁾ and was introduced in 2011. It follows an annual cycle and results in a school self-assessment report. To assist VET schools in the process, ASOO developed an online e-quality tool ⁽⁹⁶⁾ (*e-kvaliteta*) that enables VET schools to present their self-assessment data and plans for improvements, both evidence-based. In 2019, ASOO started producing feedback reports with recommendations to VET schools for improving their self-assessment. Self-assessment primarily permits the schools to reflect on their strengths and weaknesses and come up with plans for improvement. It covers six broad assessment areas, each broken down into quality fields, which are described by using individual quality criteria. The six areas are:
 - (i) planning and programming of work;
 - (ii) teaching and support to learning;
 - (iii) learning outcomes;
 - (iv) material and human resources, including continuing professional development of staff;
 - (v) cooperation within the VET school and with stakeholders;
 - (vi) administration and management;
- (c) as part of the external evaluation in education ⁽⁹⁷⁾, there is an intention to introduce national skills exams in IVET programmes. These exams were recently designed and conducted by the NCVVO in some VET qualifications (IT technician, salesperson, general care nurse) and shift from a theoretical toward a skills-oriented approach. In all VET schools offering the general

⁽⁹²⁾ School Inspection Act (Official Gazette Nos 61/2011, 16/2012, 98/2019).

⁽⁹³⁾ Professional-Pedagogical Monitoring Act (Official Gazette No 73/1997).

⁽⁹⁴⁾ Vocational Education and Training Act (Official Gazette Nos 30/2009, 24/2010, 22/2013, 25/2018).

⁽⁹⁵⁾ ASOO, 2011b.

⁽⁹⁶⁾ <http://e-kvaliteta.asoo.hr>

⁽⁹⁷⁾ Regulation on the means of implementing external evaluation and using the results of external evaluation of education providers (Official Gazette No 23/2011).

care nursing programme, national exams in theoretical subjects have been conducted regularly since 2015, and skills exams since 2018. Although voluntary, 97% of all final-year learners took the theoretical exam in 2018. The NCVVO processes and delivers exam results to schools that use them in student assessment. From 2017/18, higher education providers in nursing have begun to include the national exam results in their enrolment criteria;

(d) CROQF procedures ⁽⁹⁸⁾ for assuring quality of VET qualifications (Section 3.2).

In 2016, the VET strategy ⁽⁹⁹⁾ called for the establishment of a coherent, unified system of VET quality assurance at national level, at the level of VET providers and at the level of qualifications developed in line with EQAVET recommendations and to be used for both IVET and adult education. However, quality assurance instruments are not yet integrated.

⁽⁹⁸⁾ Regulation of CROQF register (Official Gazette No 62/2014).

⁽⁹⁹⁾ Government of the Republic of Croatia, 2016.

CHAPTER 4.

Promoting VET participation



4.1. Incentives for learners

Most education provision is publicly funded and free for learners from pre-primary to higher education levels.

4.1.1. Compensation for practical training and apprenticeship

Both practical training by the employer and apprenticeships provide learners with remuneration; the contract for practical training (*ugovor o provedbi praktične nastave*) and the contract for apprenticeship (*ugovor o naukovanju*) regulate learner compensation as stipulated by the legislation ⁽¹⁰⁰⁾.

4.1.2. Scholarships for shortage occupations

The Ministry of Economy, Entrepreneurship and Crafts awards scholarships ⁽¹⁰¹⁾ to learners in JMO in crafts and trades where there are labour shortages; 3 020 scholarships were awarded in 2018. The total amount awarded was around EUR 3.6 million, indicating a sharp increase from 2017, when the amount was EUR 2.8 million. The list of eligible programmes is determined nationally, but allows regional modification. Local communities, professional associations and private firms also provide incentives and stipends for learners.

4.2. Incentives for enterprises

4.2.1. Tax exemptions ⁽¹⁰²⁾

Companies that provide apprenticeships for JMO learners have tax breaks, reducing their taxable income. Entrepreneurs that train one to three learners per year on their premises may reduce their taxable income by 5%; an additional learner further reduces the taxable income by one percentage point, up to a limit of 15%.

There are incentives for entrepreneurs in the form of tax deductions of up to 60% of adult education and training costs (up to 80% for small and medium-sized enterprises). According to the Regulation on VAT, exemptions are available

⁽¹⁰⁰⁾ Regulation on minimum requirements for apprenticeship contracts (Official Gazette Nos 63/2014, 80/2018); VET Act (Official Gazette Nos 30/2009, 24/2010, 22/2013, 25/2018); Regulation on the way of organising and implementing education process in VET schools (Official Gazette No 140/2009).

⁽¹⁰¹⁾ About HRK 750 per month (Cedefop, 2019).

⁽¹⁰²⁾ Act on State Aid for Education and Training (Official Gazette Nos 109/2007, 134/2007, 152/2008, 14/2014).

to adult education providers that offer programmes approved by the education ministry.

4.2.2. Grants for SMEs offering apprenticeship

Managed by the MINGO, over EUR 1.4 million was awarded through 190 grants to SMEs offering apprenticeships in 2018 ⁽¹⁰³⁾.

4.3. Guidance and counselling

The Croatian employment service organises activities aimed at giving information, guidance and counselling for learners in the final years of primary and upper secondary education (including VET).

Several elements developed by HZZ within this comprehensive guidance and counselling system are aimed at the young. In recent years, HZZ has organised a regional network of 13 centres for career information and guidance under the name of CISOK ⁽¹⁰⁴⁾ (*Centri za informiranje i savjetovanje o karijeri*). This allowed for a tailor-made approach to guidance and counselling. The services are free of charge and open to both learners and parents. Trained guidance counsellors provide services. Guidance is 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 learners and parents.

Career guidance for learners is conducted through the joint efforts of school counsellors and HZZ career guidance counsellors. Particular attention is devoted to learners with disabilities who, according to evaluations, might face labour market problems after they complete their education. Secondary school learners 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, along with 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. HZZ then recommends the most suitable upper secondary qualifications for primary education graduates. Upper secondary learners with poor achievements may use HZZ expert opinions to change their learning pathway and enrol in programmes for different qualifications.

⁽¹⁰³⁾ ReferNet Croatia.

⁽¹⁰⁴⁾ www.cisok.hr

HZZ has also developed a web portal *e-Guidance* ⁽¹⁰⁵⁾ to offer the information needed in selecting education programmes and to provide assistance in setting and reaching professional goals and searching for jobs.

HZZ also conducts a yearly survey of the vocational intentions of primary and secondary school learners. Using the results, expert teams of school and HZZ representatives define 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 education and employment at both regional and national level.

4.4. Challenges and development opportunities

Current priorities for VET development focus on increasing its labour market relevance, quality, attractiveness and internationalisation. Determined reform efforts are under way to address outdated curricula, skills mismatch, the quality of work-based learning and apprenticeship, as well as the public image of VET. As the flagship initiative, VET curriculum reform is oriented towards comprehensive redesign in line with labour market needs, focus on learning outcomes, work-based learning, contemporary teaching and close support to VET providers. New VET curricula are expected to be implemented in 2022/23.

Youth unemployment has been gradually falling (23.8% in 2018 among 15 to 24 year-olds), as has the share of young people (aged 15 to 24) neither in employment nor in education and training, to 13.6% in 2018. *Youth guarantee* schemes are in place to help young people get into employment, apprenticeship, traineeship or get the chance to continue their education or training within four months of leaving school or becoming unemployed.

National demographics are reducing the number of learners, particularly in three-year IVET programmes. Those most affected are the apprenticeship programmes (JMO), losing half of their learners in the past six years. An experimental programme based on the new model of dual education has been piloted since 2018 to improve the quality of work-based learning and apprenticeships in Croatia.

Participation in adult learning in 2018 was only 2.9%, positioning Croatia at the lower end of the EU range despite the tax incentives available for entrepreneurs for education and training costs, and VAT exemptions for adult education providers offering programmes approved by the education ministry.

⁽¹⁰⁵⁾ <https://e-usmjeravanje.hzz.hr/>

Core activities aim at promotion of lifelong learning in Croatia through awareness-raising efforts by ASOO ⁽¹⁰⁶⁾ and MZO ⁽¹⁰⁷⁾, largely funded through ESIF. Further systemic measures are needed to combat these low figures and support adult learning. Developing a system for validation of informal and non-formal learning would also support adults in achieving new skills and qualifications.

⁽¹⁰⁶⁾ www.asoo.hr/default.aspx?id=1173#PCU

⁽¹⁰⁷⁾ <http://obrazovanje-odraslih.hr/>

Acronyms and abbreviations

ALMPs	active labour market policies
ASOO	agency for vocational education and training and adult education
Cedefop	European Centre for the Development of Vocational Training
CNC	computer numerically controlled
CPD	continuing professional development
CROQF	Croatian qualifications framework
DZS	<i>Državni zavod za statistiku</i> Croatian Bureau of Statistics
EFTA	European Free Trade Association
EQF	European qualifications framework
ESF	European Social Fund
ESIF	European structural and investment funds
EU	European Union
EU-28	28 Member States of the European Union including the UK
Eurostat	statistical office of the European Union
GDP	gross domestic product
HOK	<i>Hrvatska obrtnička komora</i> Croatian chamber of trades and crafts
HZZ	<i>Hrvatski zavod za zapošljavanje</i> Croatian public employment service
ICT	information and communications technology
ISCED	international standard classification of education
IVET	initial vocational education and training
JMO	<i>jedinstveni model obrazovanja</i> apprenticeship programmes (unified model of education)
MINGO	<i>Ministarstvo gospodarstva, poduzetništva i obrta</i> Ministry of Economy, Entrepreneurship and Crafts
MRMS	<i>Ministarstvo rada i mirovinskog sustava</i> Ministry of Labour and Pension System
MZO	<i>Ministarstvo znanosti i obrazovanja</i> Ministry of Science and Education
NCVVO	National Centre for External Evaluation of Education

NEETs	people not in employment, education or training
NISpuŠŠ	national informational system for applying and enrolling into secondary schools
PES	public employment service
ŠeR	<i>Školski e-Rudnik</i> school data mining
SMEs	small and medium-sized enterprises
VET	vocational education and training
VETIS	VET information systems
WBL	work-based learning
WTTC	World Travel and Tourism Council

References

[URLs accessed 24.1.2020]

- Anđelić, V. et al. (2019). *Koncept novog modela stručnog usavršavanja nastavnika strukovnih predmeta*. [Concept for a new model of professional development of VET teachers]. Zagreb: Agencija za strukovno obrazovanje i obrazovanje odraslih.
- ASOO (2011a). *Metodologija za razvoj strukovnih standarda zanimanja, kvalifikacija i kurikuluma* [Methodology for the development of VET occupational standards, qualifications and curricula]. www.asoo.hr/UserDocsImages/projekti/kvalifikacije/eu%20knjige/3%20Metodologija.pdf
- ASOO (2011b). *Hrvatski okvir za osiguranje kvalitete u strukovnom obrazovanju i osposobljavanju: Priručnik za samovrjednovanje*. [Croatian framework for quality assurance in VET: manual for self-assessment]. www.asoo.hr/UserDocsImages/Priru%C4%8Dnik%20za%20samovrjednovanje.pdf
- Cedefop (2016). *European skills index* [database]. <https://skillspanorama.cedefop.europa.eu/en/indicators/european-skills-index>
- Cedefop (2017). *Skills panorama: European skills index in Croatia 2016* [database]. https://skillspanorama.cedefop.europa.eu/en/indicators/european-skills-index?field_pillar_tid=&field_countries_tid=7
- Cedefop (2019). *Apprenticeship review: Croatia. Improving apprenticeships through stronger support and care*. Luxembourg: Publications office. Thematic country reviews. www.cedefop.europa.eu/files/4173_en.pdf
- DZS (2013). *Popis stanovništva, kućanstava i stanova 2011: stanovništvo prema državljanstvu, narodnosti, vjeri i materinskom jeziku* [Census of population, households and dwellings 2011: population by citizenship, ethnicity, religion and mother tongue]. Zagreb: Državni zavod za statistiku.
- DZS (2018). *Statistički ljetopis Republike Hrvatske 2018*. [Statistical yearbook of the Republic of Croatia 2018]. Zagreb: Državni zavod za statistiku.
- Ekonomski Institut (2016). *Projekcije o budućim kretanjima na tržištu rada* [Projections on future labour market trends]. www.kvalifikacije.hr/sites/default/files/documents-publications/2017-04/Studija.pdf
- European Commission. *Europe 2020 targets: statistics and indicators for Croatia* [database]. <https://ec.europa.eu/info/business-economy-euro/>

- economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/european-semester-your-country/croatia/europe-2020-targets-statistics-and-indicators-croatia_en#tertiary-education-attainment
- European Commission (2018). *Annual report on European SMEs 2017/2018: SMEs growing beyond borders*. Contract EASME/COSME/2017/031. <https://publications.europa.eu/en/publication-detail/-/publication/a435b6ede888-11e8-b690-01aa75ed71a1/language-en>
- European Commission (2019). *Country report Croatia 2019*. COM(2019) 150 final. https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-croatia_en.pdf
- European Commission; EACEA; Eurydice (2015). *National sheets on education budgets in Europe 2015: facts and figures*. <https://op.europa.eu/en/publication-detail/-/publication/1cfe4716-be77-11e5-9e54-01aa75ed71a1/language-en>
- Government of the Republic of Croatia (2016). *Program razvoja strukovnog obrazovanja i osposobljavanja 2016-20 [VET system development programme 2016-20]*. <https://vlada.gov.hr/UserDocsImages//Sjednice/2016/41%20sjednica%20Vlade//41%20-%202.pdf>
- MRMS (2019). *Plan implementacije Garancije za mlade za razdoblje od 2019 do 2020 godine [Youth guarantee implementation plan 2019-20]*. www.gzm.hr/wp-content/uploads/2014/11/Plan-implementacije-Garancije-za-mlade-za-razdoblje-od-2019.-do-2020.-godine.pdf
- MZO (2018). *Model hrvatskog dualnog obrazovanja [Model of Croatian dual education]*. https://mzo.hr/sites/default/files/dokumenti/2018/OBRAZOVA_NJE/Strukovne-Dualno/model_hrvatskoga_dualnog_obrazovanja.pdf
- MZO (2019). *Guidelines for the development of the network of education institutions and education programmes for founders [Smjernice za izradu mreže školskih ustanova i programa odgoja i obrazovanja za osnivače]*. <https://mzo.gov.hr/UserDocsImages//dokumenti/PristupInformacijama/eSavjetovanja-2019//Smjernice%20za%20izradu%20mre%C5%BEe%20%C5%A1kolskih%20ustanova%20i%20programa%20odgoja%20i%20obrazovanja%20-%20e-Savjetovanje%2023-4-2019.pdf>
- Skills Panorama (2017). *Skills anticipation in Croatia*. Analytical highlights series. https://skillspanorama.cedefop.europa.eu/en/analytical_highlights/skills-anticipation-croatia#_summary
- Vučić, M. et al. (eds) (2017). *Obrazovanje odraslih u Hrvatskoj 2017: rezultati istraživanja [Adult education in Croatia 2017: survey results]*. Zagreb: Agencija

za strukovno obrazovanje i obrazovanje odraslih. www.cjelozivotno-ucenje.hr/wp-content/uploads/2017/10/ASOO_Obrazovanje-odraslih_report_za_web.pdf

WTTC (2019). *Croatia 2019 annual research: key highlights* [database]. www.wttc.org/economic-impact/country-analysis/country-data/

Further sources of information

[URLs accessed 24.1.2020]

- ASOO (2017). *Strateški okvir promocije cjeloživotnog učenja 2017-21 [Strategic framework for the promotion of lifelong learning 2017-21]*. https://epale.ec.europa.eu/sites/default/files/strateski_okvir_hr_priprema_za_tisak.pdf
- AVETAE (2018). *Guidance and outreach for inactive and unemployed: Croatia*. Cedefop ReferNet thematic perspectives series. http://libserver.cedefop.europa.eu/vetelib/2018/guidance_outreach_Croatia_Cedefop_ReferNet.pdf
- Cedefop (2018). *Developments in vocational education and training policy in 2015-17: Croatia*. Luxembourg: Publications Office. Cedefop monitoring and analysis of VET policies. www.cedefop.europa.eu/files/croatia_-_vet_policy_developments.pdf
- Cedefop (2019). *2018 skills forecast Croatia*. www.cedefop.europa.eu/files/cedefop_skills_forecast_2018_-_croatia.pdf
- Government of the Republic of Croatia (2014). *Strategija obrazovanja, znanosti i tehnologije [Strategy of education, science and technology]*. www.kvalifikacije.hr/sites/default/files/news/2018-01/Nacrt-prijedloga-strategije-obrazovanja-znanosti-i-tehnologije.pdf
- Government of the Republic of Croatia (2017). *Smjernice za provedbu mjera aktivne politike zapošljavanja za razdoblje 2018 do 2020 godine [Guidelines for the development and implementation of active labour market policy in the Republic of Croatia for 2018-20]*.

Legislation

Acts

- Republic of Croatia (1997). *Zakon o stručno-pedagoškom nadzoru [Professional-Pedagogical Monitoring Act]*. *Official Gazette No 73/1997*.
- Republic of Croatia (2003). *Zakon o priznavanju inozemnih obrazovnih kvalifikacija [Recognition of Foreign Education Qualifications Act]*. *Official Gazette Nos 158/2003, 198/2003, 138/2006, 45/2011*.

- Republic of Croatia (2004). Zakon o Nacionalnom centru za vanjsko vrednovanje obrazovanja [National Centre for External Evaluation of Education Act]. *Official Gazette No 151/2004*.
- Republic of Croatia (2007a). Zakon o državnoj potpori za obrazovanje i izobrazbu [State Aid for Education and Training Act]. *Official Gazette Nos 109/2007, 134/2007, 152/2008, 14/2014*.
- Republic of Croatia (2007b). Zakon o obrazovanju odraslih [Adult Education Act]. *Official Gazette Nos 17/2007, 107/2007, 24/2010*.
- Republic of Croatia (2008). Zakon o odgoju i obrazovanju u osnovnoj i srednjoj školi [Primary and Secondary School Education Act]. *Official Gazette Nos 87/2008, 86/2009, 92/2010, 105/2010, 90/2011, 5/2012, 16/2012, 86/2012, 126/2012, 94/2013, 152/2014, 7/2017, 68/2018*.
- Republic of Croatia (2009). Zakon o strukovnom obrazovanju [Vocational Education and Training Act]. *Official Gazette Nos 30/2009, 24/2010, 22/2013, 25/2018*.
- Republic of Croatia (2010). Zakon o Agenciji za strukovno obrazovanje i obrazovanje odraslih [Agency for VET and Adult Education Act]. *Official Gazette No 24/2010*.
- Republic of Croatia (2011). Zakon o prosvjetnoj inspekciji [School Inspection Act]. *Official Gazette Nos 61/2011, 16/2012, 98/2019*.
- Republic of Croatia (2013a). Zakon o Hrvatskom kvalifikacijskom okviru [Croatian Qualification Framework Act]. *Official Gazette Nos 22/2013, 41/2016, 64/2018*.
- Republic of Croatia (2013b). Zakon o obrtu [Crafts and Trades Act]. *Official Gazette No 143/2013*.
- Republic of Croatia (2013c). Zakon o porezu na dodanu vrijednost [Value Added Tax (VAT) Act]. *Official Gazette Nos 73/2013, 99/2013, 148/2013, 153/2013, 143/2014, 115/2016, 106/2018*.
- Republic of Croatia (2015). Zakon o reguliranim profesijama i priznavanju inozemnih stručnih kvalifikacija [Regulated Professions and Recognition of Foreign Professional Qualifications Act]. *Official Gazette Nos 82/2015, 70/2019*.

Agreements

- Government of the Republic of Croatia (2019). Sporazum o dodatku na plaću zaposlenima u osnovnoškolskim i srednjoškolskim ustanovama te ustanovama u znanosti i visokom obrazovanju [Agreement on wage supplement for the employed in primary and secondary education institutions

and institutions in science and higher education]. *Official Gazette No 122/2019*. https://narodne-novine.nn.hr/clanci/sluzbeni/2019_12_122_2418.html

Decisions

Ministry of Science and Education (2018). Odluka o donošenju nacionalnog kurikulumu za strukovno obrazovanje [Decision on promulgation of the national curriculum for VET]. *Official Gazette No 62/2018*. https://narodne-novine.nn.hr/clanci/sluzbeni/2018_07_62_1295.html

Ministry of Science and Education (2019). Odluka o upisu učenika u prvi razred srednje škole u školskoj godini 2019/20 [Decision on enrolment of learners in the first year of upper secondary school in 2019/2020]. *Official Gazette No 53/2019*. https://narodne-novine.nn.hr/clanci/sluzbeni/2019_05_53_1020.html

Directives

Republic of Croatia (2005). *Directive No 2005/36/EC on recognition of professional qualifications*.

Regulations

Ministry of Entrepreneurship and Craft (2014a). Pravilnik o postupku i načinu polaganja pomoćničkog ispita [Regulation on the procedure and way of implementation of journeyman's exam]. *Official Gazette Nos 63/2014, 86/2015*. http://narodne-novine.nn.hr/clanci/sluzbeni/2014_05_63_1209.html

Ministry of Entrepreneurship and Craft (2014b). Pravilnik o minimalnim uvjetima za ugovore o naukovanju [Regulation on minimum requirements for apprenticeship contracts]. *Official Gazette Nos 63/2014, 80/2018*.

Ministry of Finance (2013). Pravilnik o porezu na dodanu vrijednost [Regulation on value added tax]. *Official Gazette Nos 79/2013, 85/2013, 160/2013, 35/2014, 157/2014, 130/2015, 1/2017, 41/2017, 128/2017, 1/2019*.

Ministry of Science and Education (2015). Pravilnik o elementima i kriterijima za upis u prvi razred srednje škole [Regulation on elements and criteria for enrolment in the first year of secondary school]. *Official Gazette Nos 49/2015, 109/2016, 47/2017*. https://narodne-novine.nn.hr/clanci/sluzbeni/2017_05_47_1109.html

Ministry of Science and Education (2016). Pravilnik o uvjetima i načinima nastavka obrazovanja za višu razinu kvalifikacije [Regulation on conditions

- and pathways of continuing education to higher level of qualification]. *Official Gazette No 8/2016*.
- Ministry of Science and Education (2019a). Pravilnik o nagrađivanju učitelja, nastavnika, stručnih suradnika i ravnatelja u osnovim i srednjim školama i učeničkim domovima [Regulation on awards to teachers, education professionals and school directors in primary and secondary schools and student dormitories]. *Official Gazette No 53/2019*.
- Ministry of Science and Education (2019b). Pravilnik o napredovanju učitelja, nastavnika, stručnih suradnika i ravnatelja u osnovim i srednjim školama i učeničkim domovima [Regulation on professional advancement of teachers, education professionals and school directors in primary and secondary schools and student dormitories]. *Official Gazette No 68/2019*.
- Ministry of Science, Education and Sport (2008a). Pravilnik o javnim ispravama u obrazovanju odraslih (Regulation on formal certificates in adult education). *Official Gazette Nos 129/2008, 50/2010, 61/2014*.
- Ministry of Science, Education and Sport (2008b). Pravilnik o standardima i normativima te načinu i postupku utvrđivanja ispunjenosti uvjeta u ustanovama za obrazovanje odraslih [Regulation on standards and norms and pathways and procedures for determining the compliance with conditions in adult education institutions]. *Official Gazette Nos 129/2008, 52/2010*.
https://narodne-novine.nn.hr/clanci/sluzbeni/2008_11_129_3708.html
https://narodne-novine.nn.hr/clanci/sluzbeni/2010_04_52_1285.html
- Ministry of Science, Education and Sport (2008c). Pravilnik o izradbi i obrani završnog rada [Regulation on the development and defence of the final exam]. *Official Gazette Nos 87/2008, 86/2009*.
- Ministry of Science, Education and Sport (2009). Pravilnik o načinu organiziranja i izvođenju nastave u strukovnim školama (Regulation on the way of organising and implementing education process in VET schools). *Official Gazette No 140/2009*.
- Ministry of Science, Education and Sport (2011). Pravilnik o načinu provedbe vanjskog vrednovanja i korištenju rezultata vanjskog vrednovanja školskih ustanova [Regulation on the means of implementing external evaluation and using the results of external evaluation of education providers]. *Official Gazette No 23/2011*.
- Ministry of Science, Education and Sport (2014). Pravilnik o Registru Hrvatskog kvalifikacijskog okvira [Regulation on CROQF register]. *Official Gazette No 62/2014*.

Ordinances

Government of the Republic of Croatia (2010). Uredba o praćenju, analizi i predviđanju potreba tržišta rada za pojedinim zvanjima, te izradi i uzimanju u obzir preporuka za obrazovnu upisnu politiku [Ordinance on the monitoring, analyses and prediction of the labour market needs and the development of an educational enrolment recommendations from 2010]. *Official Gazette No 93/2010*.

Government of the Republic of Croatia (2019). Uredba o izmjenama i dopunama Uredbe o nazivima radnih mjesta i koeficijentima složenosti poslova u javnim službama [Ordinance on amendments of the Ordinance on workplace titles and coefficients of job complexity in public services]. *Official Gazette No 119/2019*. https://narodne-novine.nn.hr/clanci/sluzbeni/2019_12_119_2360.html

Websites and databases

Centres for information and career advice (*Centri za informiranje i savjetovanje o karijeri*): www.cisok.hr

Croatian qualifications framework web portal:

<http://hko.poslovna.hr/>

E-Quality online tool for self-assessment of VET providers:

<http://e-kvaliteta.asoo.hr>

List of regulated professions published by the Ministry of Labour:

www.mrms.hr/popis-reguliranih-profesija-u-republici-hrvatskoj/

National informational system for applying and enrolling into secondary schools (NISpuSŠ): www.upisi.hr/upisi/

School data mining (*Školski e-Rudnik*, ŠeR):

<https://mzo.gov.hr/vijesti/ser-skolski-e-rudnik/2034>

Skills Panorama: European skills index, Cedefop:

https://skillspanorama.cedefop.europa.eu/en/indicators/european-skills-index?field_pillar_tid=&field_countries_tid=7

Statistics

The statistical data in this report were extracted from the Croatian Bureau of Statistics and from Eurostat between July and December 2019. The precise subjects and extraction dates are provided, case by case, in the text.

Croatian Bureau of Statistics:

www.dzs.hr/

Croatian National Bank:

www.hnb.hr/statistika/

Eurostat:

<https://ec.europa.eu/eurostat/web/main>

Vocational education and training in

Croatia

Short description

This short description contributes to better understanding vocational education and training (VET) in Croatia by providing insights into its main features and highlighting system developments and current challenges in recent years.

Croatia has a strong VET tradition; participation at upper secondary level is one of the highest in the EU. The share of early leaving from education and training is the lowest in the EU. Facilitating adult learning remains a major challenge as participation is very low.

The Croatian presidency of the Council of the EU in the first half of 2020 focuses on teachers and trainers who are at the heart of all developmental and reform processes, as promoters and enablers of the new skills needed for the future. Putting words into action, Croatia recently improved many factors in teacher status and has built a system that recognises and rewards excellence in teaching.


CEDEFOP

European Centre for the Development
of Vocational Training

Europe 123, 570 01 Thessaloniki (Pylea), GREECE

Postal address: Cedefop service post, 570 01 Themi, GREECE

Tel. +30 2310490111, Fax +30 2310490020, Email: info@cedefop.europa.eu

visit our portal www.cedefop.europa.eu

Publications Office
of the European Union