

Cedefop monitoring of vocational education and training policies and systems

Progress towards the medium-term deliverables
of the Riga conclusions

Country chapter

CROATIA

Developments in vocational education and training policy
in 2015-19

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Introduction

In June 2015, the ministers in charge of vocational education and training in the EU Member States, the candidate countries and the European Economic Area countries, convened in Riga, agreed on objectives for vocational education and training (VET) policies for 2015-20 ⁽¹⁾.

Cedefop has been entrusted with monitoring the countries' policies implemented towards reaching these objectives.

This country chapter is part of the monitoring process. It was drafted based on input from the national ReferNet team. It presents an overview of the major policy developments that have taken place in the country in 2015-19, in the areas covered by the Riga medium-term deliverables (MTDs).

The country chapter is structured as follows:

- (a) the introductory section Aspects of vocational education and training context in 2015 briefly sketches the VET context in the country in 2015, highlighting selected figures and major policy initiatives that were just being adopted or started at that time. This introductory section is targeted at setting a baseline to put in perspective the policy choices and developments that have taken place since the beginning of the Riga cycle;
- (b) five thematic chapters then follow, devoted to the five respective MTDs outlined in the Riga conclusions. Each thematic chapter also begins with a 2015 baseline, more specifically addressing the MTD-related topics. The baseline is followed by the presentation of the major policy developments in the MTD since 2015;
- (c) the country chapter ends with a conclusion summarising the main lines of the 2015-19 policy developments and highlighting possible priorities for the future.

This country chapter is part of the information which the European Commission used to prepare the European Semester exercises ⁽²⁾ in 2017-19. It also informs the work of Cedefop and the European Training Foundation (ETF) in

⁽¹⁾ *Riga conclusions 2015 on a new set of medium-term deliverables in the field of VET for the period 2015-2020, as a result of the review of short-term deliverables defined in the 2010 Bruges communiqué:*

https://www.izm.gov.lv/images/RigaConclusions_2015.pdf

⁽²⁾ European Semester: https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester_en

preparing a joint monitoring report on the implementation of the Riga conclusions. Both the joint report and the country chapter are aimed at informing the work of EU Member States' Directors General for Vocational Training (DGVTs) and Advisory Committee for Vocational Training (ACVT) on taking stock of the outcomes of the Riga conclusions and preparing the next steps for the EU VET policy for the next few years.

Aspects of vocational education and training context in 2015

At the beginning of the reporting period, the proportion of upper secondary students enrolled in vocational education and training (VET) programmes in Croatia was above the EU average: 71.1% in 2013 (European Commission, 2015) against 48.9% in the EU; 70.7% in 2014, compared to 48% in the EU (Cedefop, 2017a, p. 69); 70% in 2015, compared to 47% in the EU ⁽³⁾. However, the employment rate of recent upper secondary graduates was low at 47.3% in 2014 (European Commission, 2015) compared to 70.8% in the EU. Adult participation in lifelong learning was also low: 2.5% in 2014 (European Commission, 2015) and 3.1% in 2015 compared to 10.7% on average in the EU in both years (Cedefop, 2017a, p. 69) (Table 1).

VET in the country faced the challenges of improving the approach to practical training and increasing the labour market relevance of programmes. Steps were being taken to address these issues. In 2014, incentives for employers to offer work placements had been increased. The Strategy for education, science and technology had been adopted, outlining – among others – the need for bringing education and training closer to labour market needs, introducing work-based learning and modularisation, and opening up access from VET to higher education. VET reform was being prepared.

⁽³⁾ Eurostat, data for 2015.

Table 1. Framework data: score on VET indicators in Croatia and in the EU: 2010-15

Indicator label	2010		2015 (*)		Trend in 2011-2015 (per year)		
	HR ^f	EU ^f	Yr	HR ^f EU ^f	Range	HR	EU
Access, attractiveness and flexibility							
IVET students as % of all upper secondary students	A	A	'14	70.7 ^b 48.0 ^b _{E1}	'13-'14	▪ 0.3	▪ 0.9
IVET work-based students as % of all upper secondary IVET	A	A	'14	0.0 ^z 34.0 ^b _{E2}	'13-'14	▪ 0.0	▪ 0.1
IVET students with direct access to tertiary education as % of all upper secondary IVET			'14	68.5 69.2 ^{E3}	'13-'14	▪ 0.2	▪ 1.4
Employees participating in CVT courses (%)	23.0	38.0 ^e	'10	23.0 38.0 ^e			
Employees participating in on-the-job training (%)	15.0	20.0 ^e	'10	15.0 20.0 ^e			
Adults in lifelong learning (%)	3.0		'15	3.1 10.7 ^b	'13-'15	→ 0.0	→ 0.0
Enterprises providing training (%)	57.0	66.0 ^e	'10	57.0 66.0 ^e			
Female IVET students as % of all female upper secondary students	A	A	'14	63.8 ^b 42.7 ^b _{E1}	'13-'14	▪ 0.4	▪ 1.0
Employees of small firms participating in CVT courses (%)	19.0	25.0 ^e	'10	19.0 25.0 ^e			
Young VET graduates in further education and training (%)			'15	30.9 ^b 33.0 ^b	'14-'15	▪ 0.8	▪ 0.3
Older adults in lifelong learning (%)	0.1 ^u	5.3	'15	0.3 ^u 6.9			
Low-educated adults in lifelong learning (%)			'15	4.3 ^b _C			
Unemployed adults in lifelong learning (%)	2.4 ^u		'15	2.4 ^u 9.5 ^b			
Individuals who wanted to participate in training but did not (%)	B	9.5 ^e _B	'11	9.5 ^e			
Job-related non-formal education and training (%)	B	80.2 ^e _B	'11	80.2 ^e			
Skill development and labour market relevance							
IVET public expenditure (% of GDP)			'13	0.56 ^b _{E4}			
IVET public expenditure per student (1 000 PPS units)			'13	6.4 ^b _{E5}			
Enterprise expenditure on CVT courses as % of total labour cost	0.4	0.8 ^e	'10	0.4 0.8 ^e			
Average number of foreign languages learned in IVET			'14	1.2 ^b 1.0 ^b _{E6}	'13-'14	▪ 0.0	▪ 0.0
STEM graduates from upper secondary IVET (% of total)	A	A	'14	38.7 ^b 30.0 ^b _{E7}			
Short-cycle VET graduates as % of first time tertiary education graduates			'14	0.1 9.3 ^{E8}	'13-'14	▪ 0.0	▪ 0.4
Innovative enterprises with supportive training practices (%)	54.3	41.5 ^{E9}	'12	60.0 41.6 ^{E9}	'10-'12	▪ 2.9	▪ 0.0
Employment rate for IVET graduates (20- to 34-year-olds)			'15	69.0 ^b 77.2 ^b	'14-'15	▪ 1.1	▪ 0.3
Employment premium for IVET graduates (over general stream)			'15	3.3 ^b 5.3 ^b	'14-'15	▪ 1.7	▪ 1.0

Indicator label	2010		2015 (*)		Trend in 2011-2015 (per year)			
	HR ^f	EU ^f	Yr	HR ^f	EU ^f	Range	HR	EU
Employment premium for IVET graduates (over low-educated)			'15	35.8 ^b	23.7 ^b	'14-'15	▪ 3.3	▪ -0.1
Workers helped to improve their work by training (%)			'15	87.3	83.7			
Workers with skills matched to their duties (%)	51.1	55.2	'15	60.7	57.3	'10-'15	▪ 1.9	▪ 0.4
Overall transitions and labour market trends								
Early leavers from education and training (%)	5.2	13.9	'15	2.8 ^u	11.0 ^c	'10-'14	↘ 0.5	↘ 0.7
30- to 34-year-olds with tertiary attainment (%)	24.5	33.8	'15	30.9 ^c	38.7 ^c	'10-'15	↗ 1.7	↗ 1.0
NEET rate for 18- to 24-year-olds (%)	20.6	16.6	'15	24.3	15.8	'10-'15	↗ 1.0	↘ 0.1
Unemployment rate for 20- to 34-year-olds (%)	16.8	13.1	'15	22.9	12.9	'10-'15	↗ 1.1	↗ 0.1
Employment rate of recent graduates (%)	71.6	77.4	'15	62.6 ^c	76.9 ^c	'10-'15	↘ 1.5	↘ 0.2
Adults with lower level of educational attainment (%)	22.7	27.3	'15	16.7 ^c	23.5 ^c	'10-'15	↘ 1.3	↘ 0.8
Employment rate for 20- to 64-year-olds (%)	62.1	68.6	'15	60.5	70.0	'10-'15	↘ 0.3	↗ 0.3
Employment rate for 20- to 64-year-olds with lower level of educational attainment (%)	46.2	53.4	'15	39.8 ^c	52.6 ^c	'10-'15	↘ 1.4	↘ 0.2
Medium/high-qualified employment in 2020 (% of total)			'16	92.7 ^d	82.8 ^d			

(*) The data in this column are the data available in 2016. Where 2015 data were not available, data from previous years were used.

(^A) UOE (UNESCO OECD Eurostat) back reconstruction of 2010 values based on ISCED (international standard classification of education) 2011 not yet available.

(^B) AES (adult education survey) 2011, used as proxy for 2010 baseline.

(^C) 2014 b flags in Eurostat online tables ignored on the basis of other relevant Eurostat metadata.

(^D) Forecast made in 2016.

(^{E1}) Based on 28 countries; partial information for NL.

(^{E2}) Based on 25 countries (missing: ES, PL, RO); partial information for NL.

(^{E3}) Based on 27 countries (missing: NL); partial information for EL, IT.

(^{E4}) Based on 19 countries (missing: BE, DK, IE, EL, FR, HR, IT, PT, SK).

(^{E5}) Based on 21 countries (missing: DK, IE, EL, FR, HR, IT, PT).

(^{E6}) Partial information for NL.

(^{E7}) Based on 25 countries (missing: HR, IT, UK).

(^{E8}) Based on 23 countries (missing: BE, IE, FR, CY, UK).

(^{E9}) Based on 22 countries (missing: DE, IE, EL, NL, SI, UK).

(^b) Break after 2010, therefore baseline data not included.

(^u) Eurostat: 'low reliability'.

([?]) Eurostat: 'not applicable'.

(^e) Eurostat: 'estimated'.

NB: EU refers to EU-28, unless otherwise specified. Arrows ↗ or ↘ signal a positive or negative trend based on more than two data points and of magnitude 0.1 per year or more. Trends based on more than two data points but of smaller magnitude are indicated by →; trends based on two points only are marked ▪. Trends are estimated by means of regression models.

Source: Cedefop, 2017a, p. 69.

CHAPTER 1.

MTD 1 – All forms of work-based learning with special attention to apprenticeships

1.1. Baseline 2015

At the beginning of the reporting period, the Ministry of Science and Education had the overall responsibility for VET. It monitored the implementation of the VET system in line with legislation and coordinated various executive agencies in the field of education. The ministry was supported by the Agency for VET and Adult Education (AVETAЕ), which was responsible for developing, organising, monitoring, evaluating and promoting VET.

AVETAЕ's management board included social partner representatives. The involvement of social partners and other stakeholders (chambers of trades and crafts, the employment service and professional associations) in VET was mandatory since the 2009 VET Act. The act also set up multipartite VET sector skills councils, responsible for proposing new or revised VET qualifications and developing recommendations and strategies ⁽⁴⁾.

Dual VET had been introduced in Croatia during the school year 1995/96. All Dual education programmes combined vocational and general competences and included mandatory work-based learning. Graduates received two certificates, one for general education and one for the VET part which qualified them for the labour market.

An apprenticeship scheme, that replaced dual VET, was introduced in the school year 2004/05. Apprenticeship contracts were concluded between the craftsman and the student (or his parents or guardian if the student is not of legal age). The contract governed the mutual rights, obligations and responsibilities of parties but was not a contract of employment ⁽⁵⁾. In 2013, the Crafts Act amended the regulation of apprenticeship.

In 2014, the Strategy for education, science and technology emphasised the importance of linking education and training closer to the labour market. Among its objectives were the gradual introduction of work-based learning, the

⁽⁴⁾ Cedefop; ReferNet (2015). Spotlight on VET: Croatia.

<http://www.cedefop.europa.eu/en/publications-and-resources/publications/8092>

⁽⁵⁾ Article on apprenticeship

https://cumulus.cedefop.europa.eu/files/vetelib/2015/ReferNet_HR_2014_WBL.pdf

establishment of regional competence centres, and the alignment of VET programmes to labour market needs ⁽⁶⁾.

Already before 2015, grants for companies offering apprenticeship places and scholarships for VET students in craft occupations with skills shortages were in place. VET was promoted through different tools including job fairs and career days. In 2015, an online apprenticeship database was set up.

1.2. Policy priorities for 2016-20

For the 2016-20 period, the country's priorities in this area ⁽⁷⁾, as set by the Director General for Vocational Education and Training (DGVT), are two-fold:

- (a) for apprenticeship:
- revise existing apprenticeship programmes to make them more relevant for the labour market;
 - improve the image of apprenticeship and promote it as a desirable career choice;
- (b) for work-based learning in school-based VET, raise the capacities of pilot schools for providing modern work-based learning in school-based VET programmes.

1.3. Main actions taken in 2015-19

1.3.1. National curriculum and regional competence centres

The VET reform aims to bring VET in line with labour market needs, with emphasis on work-based learning. In 2018, the *National curriculum for VET* was adopted and the network of regional competence centres was launched.

1.3.1.1. National Curriculum for VET

The *National curriculum for VET* (Section 3.3.1.4) highlights the importance of work-based learning in line with the priorities of the Strategy for Education, Science and Technology and the VET System Development Programme 2016-2020, which propose a significant move towards greater share of work-based

⁽⁶⁾ European Commission (2015). *Education and Training monitor 2015: Croatia*. http://ec.europa.eu/dgs/education_culture/repository/education/tools/docs/2015/monitor2015-croatia_en.pdf

⁽⁷⁾ According to a survey by Cedefop among Directors General for VET (DGVT) in early 2016.

learning in all VET programmes. For example, it defines that curricula for qualifications at CROQF/EQF level 2-3 should include at least 80% vocational content, including VET modules and work-based learning. Three-year VET programmes (CROQF level 4.1 / EQF level 4) should consist of 20-25% general education content and 75-80% VET content with a strong emphasis on work-based learning (45-50% of VET content). Four-year VET programmes at CROQF level 4.2/ EQF level 4 should consist of three parts: general education, sectoral, and vocational qualification part. The sectoral part applies only to the first year of the programme and focuses on acquiring general competences for the given sector. The vocational qualification part focuses on the competences closely related to a specific occupation. These programmes propose the lowest share of work-based learning of around 20% of the vocational qualification content.

1.3.1.2. *Regional competence centres*

In July 2018, following a public call procedure, the Ministry of Science and Education appointed 25 VET schools as the first regional competence centres in Croatia. Selection criteria included the quality of VET provision, the number of students in sectors, regional distribution of schools, and balanced geographic representation of the future centres. The centres were appointed in five priority sectors: tourism and hospitality, mechanical engineering, electrical engineering and ICT, health care and agriculture. The keywords for this initiative are: work-based learning, advanced technology, excellence, attractiveness, quality of VET provision, continuing professional development for teachers and professionals, and close cooperation with businesses. As hubs of excellence, the centres will offer VET programmes to students, professional guidance and training for professionals, VET teachers and workplace mentors. Over EUR 130 million will be invested in state-of-the-art equipment for the centres, the latest technological advancements, and accommodation for VET students. The centres will also promote successful transition of VET graduates to the labour market. The regional competence centres will thus support introducing the latest technology in Croatian schools and fostering VET student advanced skills. The initiative is in its initial phase. Monitoring will be ensured through the management and control system of the European structural and investment funds in Croatia (European Social Fund and European Regional Development Fund) from which the centres are funded. The Ministry of Science and Education will specify the conditions for reaccreditation of the centres after five years.

1.3.2. The 2016-20 VET system development programme

The VET system development programme 2016-20 (Section 3.3.1.2) focuses on strengthening all kinds of work-based learning models: alternance schemes,

apprenticeships, and on-the-job training periods in companies. It promotes stakeholder participation, especially stronger involvement of employers in work-based learning and in the planning and designing of VET programmes. Incentives are given to providers of practical training places and to companies who offer capacity-building to their mentors. The action plan detailed the measures, expected results, indicators, deadlines, and financial resources for the duration of the programme. The most important programme initiative for the advancement of work-based learning in IVET is the development of the new model of the Croatian dual education.

The Dual education experimental programme was launched in the school year 2018/19 by the Ministry of Science and Education. Dual VET had already been experienced in Croatia from 1995 to 2005. It is now being reintroduced to increase the quality and the share of work-based learning in VET programmes, hence their relevance and attractiveness. The new model of Croatian dual education involves businesses. VET schools and business cooperate in the planning and implementation of work-based learning, continuing professional development of VET teachers and in-company mentors, exchange of new technologies and know-how, monitoring and assessing students' progress in work-based learning activities, and the organisation of final exams. VET schools are responsible for teaching and learning activities, preparing students for work-based learning, supporting and supervising in-company mentors (including new technologies and teaching/learning equipment), and ensuring continuing teacher training. In the first year of the programme, work-based learning is mostly organised in VET schools; in the following years, most work-based learning will be undertaken in workplaces. Enterprises are required to provide continuous professional development to their mentors, and ensure appropriate working conditions, a monthly allowance for students, safety at work and quality assurance of work-based learning. Students sign an employment contract with enterprises. In the school year 2018/19, the experimental programme in dual education was piloted in four programmes (Level 4.1 for sales assistant, glazier, chimney sweep; Level 4.2 for beautician). 159 students were enrolled in dual education programmes in 11 VET schools. At least 20 VET schools are expected to enrol students in dual education programmes in the school year 2019/20. A range of stakeholders takes part in the initiative ⁽⁸⁾. Funding of the experimental

⁽⁸⁾ The Ministry of Science and Education is responsible for the implementation of the experimental programme in dual education in partnership with the Ministry of Economy and the Ministry of Labour and Pension System, as well as the Agency for VET and Adult Education and the Education and Teacher Training Agency,

programme is ensured by participating businesses, the State budget, and the Swiss-Croatian cooperation programme (as part of the project Modernisation of vocational education and training programmes). The monitoring and evaluation of the experimental programme will be carried out by the competent public bodies (Agency for VET and Adult Education, Education and Teacher Training Agency, the National Centre for External Evaluation of Education) in cooperation with the Ministry of Science and Education. The development of the continuing professional development of teachers will be monitored through the evaluation of their competence standards. The experimental phase of the programme will last for two school years (2018/19 and 2019/20).

1.3.3. Partnership for Apprenticeships in the Republic of Croatia

In January 2018, the Memorandum of understanding on the establishment of partnership for apprenticeships ⁽⁹⁾ in the Republic of Croatia was signed between the Ministry of Science and Education, AVETAE, the Ministry of Economy, the Ministry of Labour and Pension System, the Ministry of Tourism, the Croatian Chamber of Economy and the Croatian Chamber of Trades and Crafts; this occurred at the round table Partnership for quality apprenticeships. Throughout 2017, intensive policy dialogue preceded the establishment of the partnership, engaging key stakeholders in VET, such as relevant government institutions, agencies, chambers, regional authorities, youth organisations, social partners, VET schools and SMEs. The stakeholders examined the current position of apprenticeships in Croatia, including the legal framework, financing, support mechanisms, quality assurance and promotion. Stakeholder roles and responsibilities were discussed, as well as perspectives for increasing and facilitating the involvement of SMEs in apprenticeship schemes. The memorandum of understanding was then drafted, along with the Roadmap for partnership for apprenticeships.

The main issue encountered was engaging all stakeholders in policy discussion and developing the partnership structure. However, the issue was successfully resolved and resulted in active cooperation of all stakeholders.

Policy dialogue was accompanied by a public campaign for the promotion of apprenticeships, in particular through social media channels and the production of promotional videos featuring apprenticeship ambassadors who portrayed the benefits of apprenticeships. During the European vocational skills week 2017,

Chambers of Economy and Crafts, Croatian Employers' Association and a number of embassies in Croatia.

⁽⁹⁾ <http://supportapprenticeships.eu/en/>

open information days on apprenticeships featured panel discussions and presented the *Employers' guide to apprenticeship*.

This new partnership framework is expected to facilitate communication between key stakeholders in VET and steer policy dialogue towards targeted activities for the advancement of apprenticeships in Croatia. The partnership is expected to raise the attractiveness of apprenticeships and encourage employers to engage in apprenticeship schemes.

The initiative is funded through the Erasmus+ project *Get involved in EP4A: European partnerships for apprenticeships* ⁽¹⁰⁾. The project was successful in raising the visibility of apprenticeships in Croatia and supporting employers to engage in apprenticeship schemes. The promotional campaign was accompanied by establishing an apprenticeship help-desk line for tradesmen and entrepreneurs and the publication of the *Employers' guide to apprenticeships*. More stakeholders at national, regional and local levels are being encouraged to sign the declaration of support and engage in the partnership. By 2019, the declaration had been signed by 24 institutions, including the Agency for VET and Adult Education, the Croatian Employment Service, several line ministries, and VET schools and business entities across Croatia. Although the memorandum of understanding was signed at a high level and supported by several stakeholders, the partnership still has to prove its effectiveness in steering policy dialogue for the advancement of apprenticeships in Croatia.

1.3.4. Encouraging apprenticeships in craft and trade occupations

From 2016 to 2018, the Ministry of Economy awarded grants to Croatian small and medium-sized enterprises (SMEs) that offered apprenticeships to VET students in craft and trade occupations ⁽¹¹⁾. In 2016, 34 grants were awarded (total budget of EUR 283 966). The focus was on rare craft and trade occupations. In 2017, the scope was expanded to SMEs offering apprenticeships in all craft and trade occupations: a total budget of EUR 742 999 was awarded for 98 grants, joint financing of student awards and mentor allowances. The action has reached full-scale implementation in 2017-18. The Croatian Chamber of Trades and Crafts was involved in the initiative. Although some lack of motivation of entrepreneurs to participate in the grant scheme had been noted in previous years, the trend was reversed thanks to intensive and targeted promotional

⁽¹⁰⁾ Key Activity 3. The project itself has been positively evaluated by the Education, Audiovisual and Culture Executive Agency (EACEA) in terms of stakeholder engagement, timely execution of activities and wide dissemination of project results.

⁽¹¹⁾ <https://www.mingo.hr/public/Javni%20poziv%20Naukovanje%20za%20obrtni%C4%8Dka%20zanimanja.pdf>

efforts, as well as better timing for the call for applications launched by the Ministry of Economy. As a result, Croatian SMEs demonstrated significant interest in participating in the grant scheme in 2018. Over 1.4 million EUR was awarded in 190 grants to SMEs offering apprenticeships. A similar grant scheme is planned for 2019-21 with a higher budget.

In 2019, the Ministry of Economy is also preparing the project *Promotion of entrepreneurship* ⁽¹²⁾. The project aims to promote craft occupations, apprenticeships and opportunities in VET through a nationwide media campaign directed at primary school children who are about to enrol in secondary education, and their parents; entrepreneurs are also targeted in order to encourage their involvement in apprenticeships. The budget will be EUR 5 128 205.00, funded through the European Regional Development Fund.

1.3.5. Strengthening SME involvement in apprenticeship: the *Cap4App* project

The Erasmus+ project *Strengthening the capacities of the chambers and partners to help small and medium-sized enterprises to engage in apprenticeship* (Cap4App) started in October 2016 and ended in September 2018. It was coordinated by the Croatian Chamber of Economy (CCE) and run in cooperation with major national stakeholders and the Austrian Federal Chamber of Economy. It had a total budget of around EUR 500 000. The project aimed to train apprenticeship advisors, make apprenticeship programmes more attractive and facilitate their implementation by SMEs, improve the public perception of VET, and promote work-based learning in companies. Through the project, apprenticeship advisors were trained in CCE county chambers to provide administrative assistance and counselling services to SMEs and VET schools for the introduction of apprenticeship schemes. Project results included toolkits for apprenticeship advisors, a guidebook for the introduction of apprenticeships, a training programme for in-company mentors and a database of SMEs interested in participating in the implementation of apprenticeships.

1.3.6. Incentives to attract learners to craft education

During 2016-18, the Ministry of Economy continued the project *Scholarships for students in craft occupations*. In 2016, a total project budget of EUR 1 853 585 was granted and 1522 students in rare craft occupations received a scholarship. In 2017, the total project budget of EUR 2 844 534 was granted for 2 342

⁽¹²⁾ <https://strukturnifondovi.hr/natjecaji/promocija-poduzetnistva/>

scholarships to students in rare craft occupations. In 2018, a total budget of over EUR 3.6 million was granted for 3 020 scholarships.

1.3.7. International cooperation to strengthen VET and work-based learning

In December 2016, the Act of confirming the framework agreement between the Swiss Federal Council and the Government of the Republic of Croatia concerning the implementation of the Swiss-Croatian cooperation programme to reduce economic and social disparities within the enlarged European Union was adopted. Under this, the project *Modernisation of vocational education and training programmes* has focused on modernising vocational programmes for crafts and improving work-based learning as of 2017. In 2018, the activities of the project focused on the dual education model (Section 1.3.2). Ten joint meetings of employers and VET school representatives, three meetings with VET school directors and 37 meetings with employers were held to encourage their participation in the experimental dual education programme. Four training workshops were organised for teachers, mentors and human resource managers from September to November 2018. These focused on planning and programming issues as well as the selection of students and employers.

In addition, draft occupational standards, qualification standards and VET curricula for the qualifications of hairdresser, photographer and painter-decorator are being prepared. In November 2018, a public call was launched for the expression of interest of experts to participate in working groups for the development of proposals of occupational standards, qualification standards and VET curricula for the qualification of cook, waiter and CNC operator.

Also, at the beginning of 2017, the Croatian government started a joint project with Cedefop for a comprehensive analysis of the national apprenticeship system. The project includes interviews with apprentices and companies involved, as well as several exchange forums. The aim is to help national stakeholders to plan further development of the national apprenticeship scheme. In 2017, two rounds of interviews were held with 90 respondents from 11 education institutions and 24 companies in six counties, as well as with 22 representatives of key stakeholders in VET, including ministries, AVETAE, chambers and employment services. The aim of the interviews was to examine the current state of affairs, the challenges and the perspectives of the apprenticeship scheme with regard to its position in the VET system, governance structures, training content and learning outcomes, cooperation among learning venues, participation of and support to companies, requirements for and support to teachers and in-company trainers, financing and cost-sharing mechanisms, quality assurance, apprentices' access to employment, and responsiveness to

the labour market. Progress and findings from both interview rounds were presented in the 2nd validation meeting on thematic country review (TCR) on apprenticeship in Croatia in February 2018. Members of the project steering committee participated in the first international peer learning forum in 2017, which discussed the progress made in the thematic country review on apprenticeship in Croatia and other countries involved, as well as the challenges and the perspectives of apprenticeship schemes at national level. In October 2018, members of the project steering committee participated in the second peer learning forum, which discussed the main outcomes of the TCR in Croatia and other TCR countries, as well as the place of apprenticeship in the education and training system and its governance in other countries in Europe. The peer learning forum also invited participants to brainstorm on the opportunities to widen policy learning on apprenticeships to extended communities of practice, which would involve a broader network of stakeholders in apprenticeships. A TCR report has been drafted and includes recommendations for further development of apprenticeships in Croatia.

CHAPTER 2.

MTD 2 – Quality assurance mechanisms in line with EQAVET and continuous information and feedback loops to IVET and CVET

2.1. Baseline 2015

The Agency for VET and Adult Education (AVETAE) was formally appointed as the quality assurance national reference point (QANRP) in 2014. A national quality assurance framework for VET (including work-based learning) was developed in 2011 and partially implemented by 2015. At the beginning of the reporting period, legislation on quality standards for VET providers was in place. Quality standards were used as a condition for accreditation (for initial vocational education and training – IVET, and continuing vocational education and training – CVET). A methodology for internal and external evaluation and guidelines for the implementation of the quality standards had been devised for VET providers to promote a self-improvement culture. The Agency for VET and Adult Education (AVETAE) was responsible for monitoring the process of self-assessment; the National Centre for External Evaluation of Education conducted external evaluation of education based on national exams and the *State matura*. Since 2012, annual self-assessment had been mandatory for all VET providers.

On the CVET side, AVETAE was responsible for monitoring and supporting adult education providers while the Ministry of Science and Education carried out inspections. Adult education providers could carry out self-assessment through the *e-Kvaliteta* ⁽¹³⁾ online tool.

The forecasting system in Croatia was still relatively new in 2015 and had limited influence on the design of education and labour market policies. In 2010, the Government adopted the Regulation on monitoring, analysis and forecasting labour market needs for particular occupations. Based on this regulation, the Croatian Employment Service (CES) became responsible for an annual analysis and forecasting of labour market needs and the development of recommendations for enrolment policies. The main users of these forecasts were policy makers, educational providers and the Croatian Employment Service

⁽¹³⁾ <http://e-kvaliteta.asoo.hr>

(CES). The Ministry of Science and Education used CES recommendations to decide on enrolment quotas for secondary education programmes, as well as for determining the numbers of scholarships in particular educational programmes.

The national approach to quality assurance in VET included a system that collected information on IVET graduates. Graduate tracking data was collected from vocational schools by self-assessment, and the National Centre for External Evaluation of Education collected data on students that passed the *State matura* exams. The data were used when approving new enrolments (number of students), programmes, and staff recruitment. As part of VET system modernisation, the Ministry of Science and Education started in 2013 a pilot implementation of 23 unit and learning outcome based curricula in 54 out of 300 VET providers; graduate employability data were taken into account while developing the new curricula ⁽¹⁴⁾.

2.2. Quality assurance mechanisms in line with EQAVET in 2015-19

For 2016-20, the country's priorities in this matter, as set by the Director General for Vocational Education and Training, are to:

- (a) revise the current quality assurance framework (strategic and legal aspects);
- (b) draft recommendations for strengthening quality assurance based on EQAVET principles and good practice examples.

The March 2018 Amendments to the VET Act (Section 3.3.1.3) strengthened the regulatory framework for further development of a coherent quality assurance system in line with EQAVET. It clearly defined the roles and the responsibilities in mandatory self-assessment and external evaluation processes in VET. The amendments also obliged VET providers to use the results of quality assessments to improve their performance.

During the reporting period, action focused on improving the existing quality assurance arrangements. The 2016-20 VET system development programme defines the measures needed to establish a unified system of quality assurance, improve the existing self-assessment process, strengthen the capacities of VET

⁽¹⁴⁾ After the pilot period, AVETAE and the National Centre for External Evaluation of Education evaluated the curricula in 2016-17. As a result, the Ministry of Science and Education approved the introduction of 19 learning outcome-based curricula in VET schools as of school year 2017/18.

schools, and improve existing mechanisms for collecting and processing data. In response to the programme priorities and measures, AVETAE prepared an ESF project proposal for further development of the quality assurance system in VET. However, the evaluation for project funding is on hold. In the reporting period, AVETAE was continuously monitoring the self-assessment of VET schools and analysing existing self-assessment mechanisms. The resulting conclusions were used to advance the existing self-assessment process and graduate tracking mechanisms and to provide tailored support to VET schools. In particular, AVETAE is using *Erasmus+* grants ⁽¹⁵⁾ to analyse the VET schools' self-assessment reports, propose improvements to the self-assessment process, and organise training seminars to increase the capacity of VET schools to perform self-assessment.

International and national experts on quality assurance completed two reports which examined the current state of affairs and offered recommendations for the improvement of self-assessment by VET schools in line with the EQAVET recommendation. Following these recommendations, AVETAE organised capacity-building workshops for VET schools which presented the findings of the reports. Guidance on EQAVET and future self-assessment activities was also provided. In 2018, ten regional workshops on an online self-assessment tool were delivered for 200 participants in VET schools in six Croatian cities. AVETAE also organised one peer-learning activity in Croatia and participated in three international peer-learning activities at other national reference points (NRPs) in Europe.

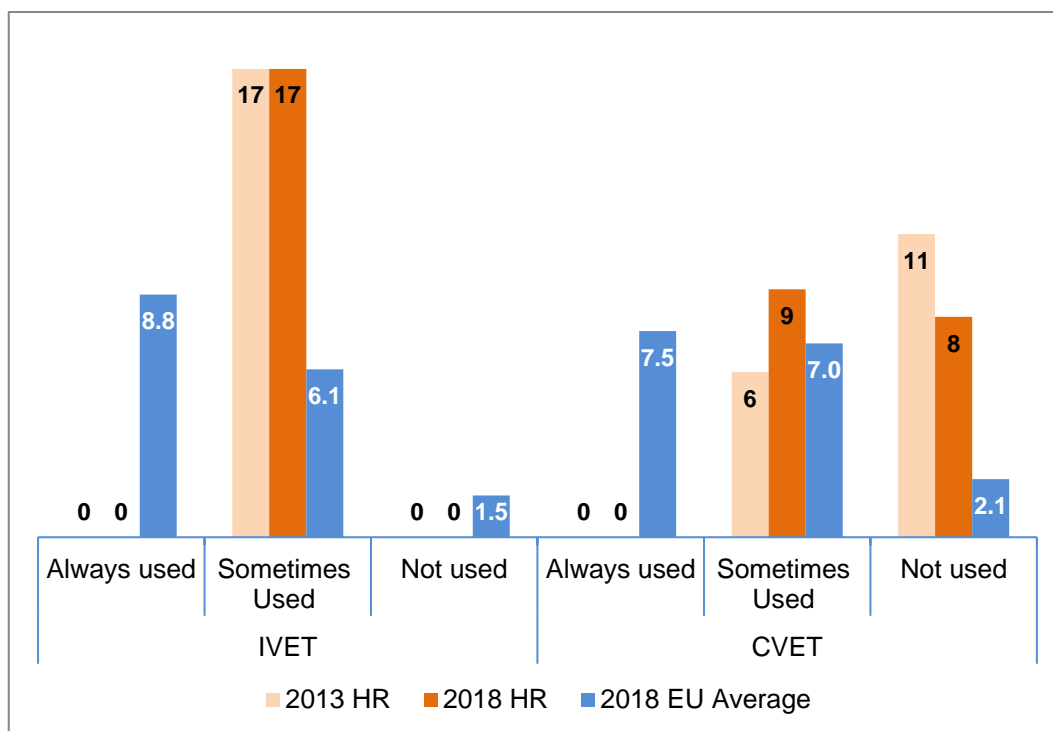
AVETAE is also involved in a transnational peer review exercise in cooperation with Austria, Finland and Slovenia. The peer review is aimed at strengthening the capacities of NRPs and VET providers in quality assurance at European and national levels. In 2017, standards for four quality areas along with the corresponding quality criteria were examined in a transnational peer review meeting and follow-up consultations. In 2018, three EQAVET quality areas standards were revised (pedagogical framework and planning the pedagogical process; teaching and learning; assessment and certification) and a new one (work-based learning outside the school) was drafted in two transnational peer review team meetings. A team of Croatian teachers was formed and trained, and conducted a national peer review in one Croatian VET school, testing two revised standards. One Croatian peer reviewer also participated in a transnational peer review in Finland.

⁽¹⁵⁾ *Support to European quality assurance in vocational education and training: national reference points (EQAVET NRP) in 2016-17 and 2017-19.*

In 2017, the National Centre for External Evaluation of Education and the Ministry of Science and Education started work on designing and piloting national vocational education exams. These exams will allow for standardised external evaluation of learning-outcome achievements in VET. They are expected to provide precise feedback on the learning outcomes level for a particular subject or a group of subjects, as well as data about differences in learning outcomes achievement among different groups. The exam results are intended to serve as the evidence base for policy development and continuous evaluation of policy effectiveness.

In 2018 Croatia was using all EQAVET indicators to monitor the IVET system but not systematically. Most of the EQAVET indicators were not used in CVET, including those on destination of learners, vulnerable groups, mechanisms to identify training needs and schemes to promote better access to VET.

Figure 1. Use of EQAVET indicators



NB: Of the 17 indicators suggested by the 2009 EQAVET recommendation, none of them was 'always used' in IVET in 2013 and 2018 in Croatia against 8.8 in the EU on average (2018).

EU average was calculated based on available information for 31 out of 35 VET systems.

Source: Cedefop calculations based on EQAVET Secretariat surveys for 2013 and 2018 data.

In 2018, the Kaunas Chamber of Industry and Crafts (coordinator), the Agency for VET and Adult Education (AVETA) and the Croatian Chamber of Trades and Crafts launched the *Erasmus+* project *Benchmarking for quality*

assurance in apprenticeships and work-based learning (BEQUAL.app) ⁽¹⁶⁾. The project will last from October 2018 until 30 September 2020. It is directed at developing, piloting and mainstreaming online benchmarking tools for quality assurance in apprenticeships and WBL for both VET providers and businesses. First, a quality assurance framework for apprenticeships and WBL will be developed. Next, two self-assessment questionnaires will be produced. An online platform will be launched, that will include quality assurance tools for apprenticeship and WBL providers, as well as additional resources, documents, links, articles, and videos. Two online benchmarking tools will be developed. Finally, a Bequal.app badge will be awarded to businesses that demonstrate best practices in apprenticeship and WBL management. Bequal.app is expected to have a positive impact on the planning, management and delivery of apprenticeships at VET provider and business level. Users of the benchmarking tool will be able to compare their performance to that of similar organisations in and outside their country, and thus take measures to improve the quality of their apprenticeship schemes. The online platform will serve as the single point of reference and resources for quality assurance of apprenticeships and WBL. Dissemination events will be held in six European cities in project partner countries, to present the online benchmarking tools and encourage businesses to participate in the European contest to find best practices in apprenticeship and WBL provision, and the award of Bequal.app badge to employers. The project aims to promote innovation (Bequal.app badge) and excellence. A range of partners is involved ⁽¹⁷⁾. Full-scale implementation is planned for 2019-20.

Also intended to improve quality is the initiative *Modernisation of the vocational education and training system*. The Agency for VET and Adult Education launched this action in November 2017, aiming to develop innovative and flexible curricula in VET in compliance with labour market needs. The initiative foresees, as a first phase, the setting-up of a strategic working group that will provide the methodological and strategic framework for the development of sectoral and vocational curricula. The methodological framework will rely on an

⁽¹⁶⁾ Financed through the Erasmus+ programme (KA2 Cooperation for innovation and the exchange of good practices), with national contribution. Total budget is EUR 256 220. <http://www.bequalapp.eu/en/>

⁽¹⁷⁾ The project coordinator is the Kaunas Chamber of Industry and Crafts, Lithuania, with project partners from Belgium, Germany Greece, Italy, Croatia and Slovenia representing public institutions responsible for VET, SMEs, consulting organisations and education institutions. Croatian partners are the Agency for Vocational Education and Training and Adult Education and the Croatian Chamber of Trades and Crafts.

occupational standards and qualifications standards approach in accordance with the Croatian qualifications framework (CROQF) and the national curriculum for VET (Section 3.3.1.4). Occupational standards and qualifications standards in VET will be developed based on the results of the occupational standards survey among Croatian employers and consultations with sectoral councils on priority occupations in each sector ⁽¹⁸⁾. From 2018 to 2020, sectoral curricula will be developed. Teaching manuals and materials will be produced from 2020 to 2022. During the entire project implementation period, AVETAE will provide extensive support to VET schools in introducing and implementing the sectoral curricula. An interactive online platform will support the reform process. In 2018, a large stakeholder working group was formed to propose the methodology for the development of sectoral curricula. A background document for the selection of priority occupations for the development of vocational curricula was drafted. The initiative is expected to bring VET curricula closer to labour market needs and improve students' competences for employment, further education and lifelong learning. A range of stakeholders was involved in the action ⁽¹⁹⁾. The project is funded under the European Social Fund with national joint financing ⁽²⁰⁾.

2.3. Continuous information and feedback loops in initial VET in 2015-19

For 2016-20, the country's priority in this matter, as set by the Director General for Vocational Education and Training, is to align the VET offer better with labour market needs.

⁽¹⁸⁾ In January 2019, the Ministry of Labour and Pension System started work on updating the national classification of occupations and aligning it to the classification of European Skills, Competences, Qualifications and Occupations (ESCO). It will produce new guidelines for the development of occupational standards and guidelines for the evaluation of proposals for occupational standards and the standards of units of competences. The action will advance the methodology for the development and interpretation of sector profiles and produce 15 new sector profiles. Finally, 200 new occupational standards for vocational occupations and adult education will be developed through the action.

⁽¹⁹⁾ Including the Ministry of Science and Education, the Agency for VET and Adult Education, the Education and Teacher Training Agency, VET school teachers and principals, representatives of employers and higher education institutions, and representatives of Croatian employers and the economic sector.

⁽²⁰⁾ In 2018, the project was approved for funding by the relevant national authorities in the management and control system of the European Structural and Investment Funds in Croatia. In January 2019, the grant agreement for the implementation of the project was signed.

The March 2018 Amendments to the VET Act (Section 3.3.1.3) redefined the Council for VET that now consists of 21 members from various stakeholder groups. The role of this body is to coordinate the activities of all stakeholders in VET, initiate the development of new curricula, as well as the revision of existing curricula, recommend measures, activities and strategies for the development of VET, and to provide its opinion on the establishment of the network of regional competence centres. The Amendments cancelled the provisions on multipartite VET sector skills councils which were established by the 2009 VET Act (see Section 1.1).

The 2016-20 VET system development programme sets graduate tracking as a priority. Although no systematic approach to VET graduate tracking is in place yet, there are some VET-graduate tracking measures, such as the data collection on VET graduates as part of the self-assessment performed by VET schools. In the framework of the Erasmus+ grant *Support to European quality assurance in vocational education and training: national reference points (2017-19)*, AVETAE intends to develop a model for monitoring VET students on completion of formal education. The system will cover both IVET and CVET. In 2017, AVETAE conducted one peer learning activity, which brought together 14 institutions from six countries and where models for monitoring VET graduates were discussed. In 2018, AVETAE started piloting a graduate tracking system in three Croatian VET schools with different sector profile and geographical location. The pilot began with statistical data collection from participating schools and development of databases with student contact and education information. From November 2018 to January 2019, the graduate survey was conducted online and via telephone for the target cohort of students who graduated in the school year 2016/17. Depending on the school, 30-60% of contacted graduates responded to the tracking survey. Data analysis is currently underway and future steps for graduate tracking will be defined based on the pilot results.

In 2018, the Ministry of Labour and Pension System established the CROQF web portal ⁽²¹⁾ which provides integrated data on employment (from the Croatian Pension Insurance Institute), unemployment (from the Croatian Employment Service), enrolment in secondary and higher education programmes (from the Ministry of Science and Education), 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). The portal provides aggregated data only, not personal data, in compliance with the General Data Protection Regulation (GDPR). The CROQF portal is meant to become the

⁽²¹⁾ <http://hkosektor.poslovna.hr/>

central database and tool for transition and labour market monitoring and mid/long-term skill and training needs anticipation. Future steps include the development of tools for career guidance, job placement and career development monitoring.

2.4. Continuous information and feedback loops in continuing VET in 2015-19

For 2016-20, the country's priority in this matter, as set by the Director General for Vocational Education and Training, is to align the VET offer better with labour market needs.

Since 2015, the Croatian Employment Service has run two projects: on the development and analysis of surveys to be used for revising standards according to labour market needs in 90 occupations; and on using the results for vocational guidance and professional counselling. From March 2015 until June 2016, the capacity, the methodology and the experience of conducting an occupational standards survey in Croatia was developed and the survey was conducted for 50 occupations. The results were primarily used as analytical basis for the development of occupational standards and disseminated through 60 workshops throughout Croatia. From August 2016 until October 2018, the survey questionnaire was adapted and the implementation of the occupational standards survey was conducted for a further 40 occupations. Additionally, proposals for occupational standards for vocational guidance counsellors and employment counsellors were drafted.

In 2016, the Ministry of Labour and Pension System launched a 12-month project to develop a mapping system for young people not in employment, education or training (NEETs). The system involves compiling a database, which cross-references information on student enrolment in secondary and higher education with databases of the Croatian Pension Insurance Institute and of the Croatian Employment Service; it aims to establish whether, upon graduation or early leaving, they were employed or active job-seekers. In the initial stage, the databases with information on student enrolment in secondary and higher education were customised so that they supplied information on early leavers and graduates. Different levels of education, programmes and territorial distribution of early leavers and graduates in NEET status were analysed by the Institute of Economics in Zagreb ⁽²²⁾. The purpose of the analysis was to gather

⁽²²⁾ https://www.eizg.hr/UserDocImages/projekti/neet_studija.PDF

data on specific NEET sub-groups, based on gender, education or residence, which are at higher risk of becoming NEETs and to produce recommendations for improving data quality. This would, in turn, improve the relevance of conclusions. After the analysis, personal data from the compiled database were destroyed. The conclusions of the aforementioned analysis will be used to help tailor specific policies to improve transition to work or to further education and training. The project is completed and the data exchange system established. Similar analysis is planned annually to pinpoint specific geographic areas or NEET sub-groups in need of tailored support.

CHAPTER 3.

MTD 3 – Access to VET and qualifications for all through more flexible/permeable systems, guidance and validation of non-formal and informal learning

3.1. Baseline 2015

VET had been given the priority already in 2005 by establishing the Agency for VET. The VET reform started in 2008 by adopting a VET Development Strategy 2008-13 ⁽²³⁾ followed by an Act on VET ⁽²⁴⁾ in 2009. These documents paved the way for more permeability and transparency. Further stakeholder engagement was encouraged. VET links with the labour market were established through sector councils and learning outcomes based VET curricula.

State Matura exams were introduced at national level in 2010/11 ⁽²⁵⁾ and were offered as an option to four-year upper secondary VET graduates and as a way to access tertiary education. Three-year VET programmes used to qualify students only for the labour market. Their right to progress and achieve four-year VET qualifications and progress further eventually was introduced in 2012 ⁽²⁶⁾.

The Strategy for Education, Science and Technology adopted in 2014 aimed at strengthening the links between education and the labour market; improving progression opportunities mostly by setting up an overarching national framework for VET curriculum along with a smaller number of sectoral curricula that would have general, VET and optional modules, leading to different qualifications. It stipulated also preconditions for better inclusion of adults in lifelong learning.

⁽²³⁾. http://www.asoo.hr/UserDocsImages/dokumenti/VET%20SYSTEM%20DEVELOPMENT%20STRATEGY_CROATIA_AVET.pdf

⁽²⁴⁾. http://www.asoo.hr/UserDocsImages/dokumenti/VET%20Act_Croatia_Official%20Gazette%2030_2009.pdf

⁽²⁵⁾. The Ordinance on the State Matura exams.

https://narodne-novine.nn.hr/clanci/sluzbeni/2008_08_97_3007.html

⁽²⁶⁾ Act on Primary and Secondary Education in RH adoptions. https://narodne-novine.nn.hr/clanci/sluzbeni/2012_11_126_2705.html

Guidance and counselling in primary and secondary education was still not well defined in legislation. Career guidance services were offered by the Croatian Employment Service. For learners 'at risk', career guidance that assesses their abilities and motivation led to extra points for priority enrolment in upper secondary education. Croatia had been a member of the European Lifelong Guidance Policy Network (ELGPN) since 2011. In 2013, the Ministry of Labour and Pension System had started establishing ⁽²⁷⁾ Lifelong Career Guidance Centres (CISOKs) with the aim to provide career guidance services to all citizens and above all enable (re)integration into the labour market. CISOKs provided on-line self-help tools that included labour market information and self-assessment. A Lifelong Career Guidance Forum (LLCG Forum) was established in 2014 as a mechanism of cooperation between all stakeholders.

A 2013 Act established the Croatian Qualifications Framework (CROQF). The CROQF Act stipulates an ordinance on validation of non/formal and informal learning that was not in place in 2015.

Croatia had committed to implementing ECVET: the decision had been taken to develop a credit system for IVET and CVET compatible with ECVET to facilitate transfer, validation and accumulation within the national and international context (VET Act 2009; VET Development Strategy 2008-13; Croatian Qualifications Framework Act 2013). A National team of ECVET experts was established in 2011 and since then had been working to prepare the grounds for efficient ECVET implementation and promotion.

3.2. Policy priorities for 2016-20

For the 2016-20 period, the country's priorities in this area, as set by the Director General for Vocational Education and Training, are two-fold:

- (a) for young people: ensure access to qualifications leading to employability;
- (b) for adults: increase the participation of adults (older workers) in lifelong learning.

⁽²⁷⁾ By December 2018, 13 centres had been opened in 12 cities (22 centres are foreseen by 2020).

3.3. Main actions taken in 2015-19

3.3.1. Reform of education and training

3.3.1.1. *Strategy for education, science and technology*

The implementation of the 2014 Strategy for education, science and technology started in 2015 with a wide public consultation. In 2016, the Ministry of Science and Education appointed a Committee for the Development of Education, tasked with preparing the legal and financial framework for the implementation of the strategy, providing advice, and ensuring continuation of the reform process. In 2017, a special expert committee was set up to coordinate and monitor the implementation process.

A major piece of the strategy is the comprehensive curriculum reform in general education subjects (both in general and vocational education), which was in experimental implementation in primary and secondary schools in the school year 2018/19, and expected to enter all schools as of school year 2019/20. The experimental programme for the implementation of the curriculum reform (*School for life*) involves 48 primary schools and 26 secondary schools across the country, 8 456 students and 2 000 teachers, school directors and staff. In VET schools, the programme is implemented in general education subjects in the first year of four-year VET programmes at CROQF level 4.2 / EQF level 4.

The participating schools benefit in several ways: the opportunity to implement new experimental curricula; new teaching materials; professional development; around EUR 5 million investment in digitalisation of the school infrastructure and equipment including fast broadband internet access, tablets and laptops for teachers and students; and expert guidance and support from the Ministry and government agencies. Support to schools, teachers and principals relies on virtual resources including webinars, virtual classrooms and ICT training. In order to facilitate teaching of the new curricula, the Ministry of Science and Education published methodological manuals for subjects taught within the experimental programme in primary and secondary schools.

Teacher conferences and consultation visits are also carried out. In October and November 2018, regional conferences on subject-specific curricula were organised in five cities in Croatia, attended by 2 220 participants involved in the implementation of the experimental programme *School for life*. The conference topics included student assessment, designing learning activities for the targeted learning outcomes, strategies of active learning and teaching, fostering problem-solving competences and curriculum planning of teaching and learning processes.

Further teacher training and support is under way for the mainstream introduction of curriculum reform in all primary and secondary schools as of school year 2019/20. In December 2018, subject-specific virtual classrooms were opened for teachers in primary and secondary education, and virtual classrooms for school directors and staff are announced for the forthcoming short-term period. In parallel, a number of subject-specific teacher conferences have been organised at local and regional levels. Conferences and special training opportunities are organised for school directors and ICT teachers. The Croatian Academic and Research Network (CARNET) organised training workshops on teaching and learning in digital environment for over 32 000 participants. In January and February 2019, 1 000 training events were organised for over 36 000 teachers from all primary and secondary schools across Croatia. Additional training cycles are planned.

Participating schools regularly report on their activities and challenges encountered; they receive expert guidance and feedback through consultation visits and ongoing communication with mentors. Most participants in subject-specific workshops assessed that they could apply the proposed teaching methodology and problem-solving approach to activities with their students. But they also requested more training in the learning outcomes approach, integration of ICT in education and inclusion of students with disabilities.

3.3.1.2. *The VET system development programme 2016-20*

The VET system development programme 2016-20 provides the strategic framework for VET development and reform. The programme was adopted by the Croatian government in September 2016 and a related action plan was adopted two months later by the Ministry of Science and Education. The programme foresees comprehensive reform of VET curricula. It provides for the development of work-based learning (see Section 1.3.2), for more permeability (Section 3.3.4) and for teacher/trainer training (Sections 5.2 to 5.5).

3.3.1.3. *Amendments to the VET Act*

In March 2018, the 2009 VET Act was amended to update the regulatory framework for VET in line with the Strategy for education, science and technology and the VET system development programme 2016-20. The Amendments aligned the curriculum framework for VET to the Croatian qualifications framework (CROQF). In particular, the Amendments provided the necessary framework for the introduction of the National curriculum for VET (Section 3.3.1.4), sectoral curricula (Section 2.2) and VET school curricula, and defined roles and responsibilities of stakeholders in drafting and adopting curriculum

documents. The amendments set the framework for the development of modular and outcome-based curricula on sectoral and sub-sectoral levels, as well as tailored VET school curricula, which would allow greater flexibility and autonomy to VET schools with regard to specific sectoral or school environments. The amendments also provide for the establishment of regional competence centres (Section 1.3.1.2).

3.3.1.4. *The National curriculum for VET*

The National curriculum for VET (*Nacionalni kurikulum za strukovno obrazovanje*) was adopted in July 2018 as the common framework for the development of VET curricula (at CROQF/EQF levels 2-5) in Croatia. It sets out the purpose, values, aims and principles of VET in Croatia and describes teaching and learning processes, including work-based learning (Section 1.3.1.1) and learning cycles. It encompasses qualifications on CROQF/EQF levels 2-5 and defines the curriculum framework for VET, which comprises sectoral curricula, vocational curricula and VET school curricula. The document sets out the structure for each qualification level in terms of the proposed teaching time devoted to general content, vocational modules, elective modules and work-based learning in line with sectoral and vocational curricula. The curriculum for VET defines enrolment, permeability and assessment in VET. It allows for learning flexibility and specialisation through elective modules integrated in qualifications at CROQF level 4.1. and 4.2. / EQF level 4 for up to 30% of vocational curricula.

3.3.2. Equal opportunity, equity, inclusion: broadening the rights to and within education and training

In 2018, AVETAE offered training and guidance on inclusive education to 1 042 VET school teachers through ten thematic teacher conferences and four national teacher conferences on teaching students with disabilities. The objective of this initiative is to ensure inclusive education for students with disabilities through continuing professional development of VET school staff, in line with the National strategy for providing equal opportunities for persons with disabilities 2017-20. Funding for the action is arranged through the State budget. A participant survey was carried out.

3.3.3. Guidance

3.3.3.1. *The 2016-20 Lifelong career guidance strategy*

The strategy was adopted in 2015. It was developed by the Lifelong Career Guidance Forum (LLCG forum), a national body for stakeholder cooperation, with

the aim of establishing a systemic approach to lifelong career guidance and career development and its integration in education and training. The approach is that of a coherent institutional system based on a multidisciplinary partnership that supports employability and inclusion. It is seen as a framework gathering all key stakeholders for the provision of quality information and career skills development. The strategy is also expected to help raise adult (especially the unemployed) participation in lifelong learning through adapted guidance and counselling on upskilling opportunities. The action plan for the implementation of the strategy was adopted in April 2018. It addresses lifelong guidance services in education, employment and social inclusion systems. It includes measures for developing a new qualification for career guidance counsellors and foresees the establishment of career development centres. In 2018, the analysis of the existing legislative base was carried out, as well as the analysis of NEETs in Croatia and the recommendations for the development of further activities for NEETs. Networks of lifelong guidance units were formed at universities.

An ESF-funded project, aimed at strengthening the capacity of the Lifelong Career Guidance Forum for monitoring the implementation of the strategy, started in August 2017. Besides capacity-building activities on career guidance policies for forum members, an e-learning platform was developed and offers updates and learning opportunities on career guidance policies to members. In 2018, a study was carried out on lifelong guidance provision in Croatia.

3.3.3.2. *E-guidance portal*

The e-guidance portal ⁽²⁸⁾, established in 2015, takes account of labour market analysis and skill needs anticipation and addresses a wide range of users, from pupils to the unemployed. It aims to provide easy access to information necessary to choose an education and training programme, look for a job, and achieve career objectives. It offers a career compass (*Kompas karijere*), a tool that enables different user groups to find targeted information.

3.3.3.3. *Guidance for specific groups*

Since 2016, Lifelong career guidance centres have been continuously signing cooperation agreements with local-level partners to identify the needs of specific groups and offer tailored career guidance services. Local partners include schools, colleges and universities, volunteer centres, Roma associations, public health and social welfare centres, youth associations, local stakeholders in trades, crafts and the economy, as well as development agencies. By the end of

⁽²⁸⁾ <https://e-usmjeravanje.hzz.hr/>

2018, 337 cooperation agreements were signed. Lifelong career guidance centres are the focal points for these activities as part of the national youth guarantee programme and the 2016-18 strategic plan of the Ministry of Labour and Pension System.

3.3.4. Permeability and flexibility

The VET system development programme 2016-20 elaborates the idea of more transparency and flexibility within the VET system through a new curriculum set-up composed of a national curriculum for VET and sectoral curricula. Instead of having about 200 unrelated upper secondary IVET curricula, sharing some modules will enable better permeability for learners.

3.3.5. Transparency, recognition, validation

3.3.5.1. ECVET ⁽²⁹⁾

Croatia is committed to implementing ECVET. A credit system for IVET and CVET, compatible with ECVET, has been developed to facilitate transfer, validation and accumulation within national and international contexts. The 2016-20 VET system development programme refers to improving mobility possibilities for students and teachers, including through ensuring visibility and better understanding of ECVET. ECVET is the main instrument for mobility recognition in Croatia. The VET Act from 2009 introduced credit points in relation to qualifications and curricula, and the use of ECVET was further supported by the amendments to the VET Act from 2018. These stipulated that VET students can acquire learning outcomes during periods of international mobility and is intended to support VET schools in setting up longer periods of VET student mobility. A national ECVET portal ⁽³⁰⁾ was developed in 2016. A growing number of Croatian institutions are recognising the benefits of ECVET. The national team of ECVET experts, established in 2011, focuses on further promotion and development of ECVET in Croatia through workshops and individual consultations aimed at both existing and potential Erasmus+ beneficiaries, including VET teachers, principals and EU project coordinators. Six workshops were organised in 2018, introducing around 230 participants to different aspects of ECVET and instructing them how to implement ECVET in mobility projects. The recognition of learning outcomes acquired by VET students during international mobility periods is at the discretion of VET schools. The choice of recognition mechanisms is granted on a case-by-

⁽²⁹⁾ Source: the ECVET users' group members.

⁽³⁰⁾ <http://www.ecvet.hr/>

case basis depending on the partnership arrangements and agreements between the sending and the receiving institutions, in line with specific learning agreements. Schools use different approaches when recognising learning outcomes acquired abroad. VET students generally go abroad for short-term mobility, which involves work-based learning. Accordingly, the entire process of recognition at school level is determined in consideration of the scope of activities undertaken during mobility and the results achieved. The national team of ECVET experts and the Agency for Mobility and EU Programmes designed and organised a new workshop on learning outcomes in 2018 to raise the capacities of VET schools for defining, writing and applying learning outcomes. Practical issues are consistently addressed, such as establishing partnerships with international peers, drafting memoranda of understanding and learning agreements, and advancing the quality of mobility projects. A total of 39 out of 62 beneficiaries opted for ECVET in mobility projects in 2018, compared to 15 out of 37 in 2017. A growing number of schools is showing interest in its future use: according to the evaluation feedback from one of the workshops, 97.2% of participants stated that they plan to use ECVET in their mobility projects. Additionally, the national team of ECVET experts and the Agency for Mobility and EU Programmes carried out a contest for the best national project implementing ECVET, and publicly presented the award at an event organised for potential Erasmus+ project applicants, attended by around 80 participants. Due to its success, the contest will be held again in 2019 to promote ECVET. The official website ⁽³¹⁾ is regularly updated with news and useful information for different stakeholders.

3.3.5.2. *Validation* ⁽³²⁾

Croatia does not have a national validation system, and no institution is dealing with this at national level. However, there are certain ad hoc validation procedures in different sectors, such as the master craftsman exam which validates learning outcomes mainly acquired through work experience. Formal qualifications (except for the master craftsman diploma) cannot be acquired through validation of non-formal and informal learning. The Strategy for education, science and technology (Section 3.3.1.1) adopted in 2014 recognises validation as an essential part of adult education and higher education ⁽³³⁾. The

⁽³¹⁾ www.ecvet.hr

⁽³²⁾ Cedefop, 2017b; Pavkov, M. 2016.

⁽³³⁾ Croatian Parliament's Strategy for Education, Science and Technology, adopted on 17.10.2014: <http://www.refernet.hr/media/1090/strategija-ozt.pdf>

Croatian qualifications framework Act adopted in 2013, and its amendments from 2018, provide for an ordinance on recognition and validation of non/formal and informal learning up to CROQF/EQF level 5; this is in preparation. In 2018, the National Council for the Development of Human Potential adopted recommendations which ensure the necessary conceptual framework for further development of the system. Future steps involve regulatory action in the adult education system as a prerequisite for the development of the validation and recognition system, as well as the adoption of internal regulations on recognition and validation of prior learning by higher education institutions, as stipulated by the Amendments to the Croatian qualifications framework Act. The CROQF Act also stipulates that accredited quality assurance institutions will ensure the quality of procedures for recognising and validating units of learning outcomes. In the reporting period, some providers in higher education have developed internal guidelines for recognising prior learning for specific purposes.

3.3.6. Supporting VET participation through increased attractiveness

3.3.6.1. Strategic framework for the promotion of lifelong learning in the Republic of Croatia 2017-2021

Adult participation in learning in Croatia is very low (3% in 2016). In 2017, the Agency for VET and Adult Education (AVETAE) produced and published the Strategic framework for the promotion of lifelong learning in the Republic of Croatia 2017-21. The aim is to determine the strategic orientation, priorities and specific communication plans for lifelong learning. The framework was developed following analysis of several best-practice models in Europe and the Survey on adult education in Croatia, also initiated by AVETAE in 2017. The survey of 2369 participants aimed to determine the types and modalities of adult education activities in Croatia, the social structure of adult learners, the motivational factors and the barriers, as well as the learning outcomes and the perceived benefits of participation in lifelong learning. The Framework offers an analysis of the current situation in lifelong learning in Croatia, the orientation for promoting lifelong learning activities, as well as specific communication plans. These plans outline promotional activities for specific target groups, including students in the formal education system, existing and potential participants in adult education, employers, vulnerable social groups, education policy decision-makers and providers of services in adult education. The main priorities for the promotion of lifelong learning in Croatia involve raising awareness of the need for it, learning for personal and social development, the benefits of lifelong learning for easier adjustment to fast labour market dynamics, career advancement and

employability, as well as the significance of non-formal and informal learning pathways.

The framework is intended to increase the participation of adults in lifelong learning (LLL), and, in particular, provide low-qualified adults and NEETs with access to upskilling pathways. Positive outcomes are expected in terms of competitiveness and flexibility of the Croatian workforce, as well as increased attractiveness of LLL and availability of LLL-related information and guidance services. As the key instrument for the implementation of the strategic framework policy guidelines, AVETAE has been conducting an ESF-funded project *Promotion of lifelong learning* from 2016 to 2019, which contributes to the advancement of the adult education system and adult learners' competences in Croatia. The project focuses on the strategic planning and implementation of a comprehensive set of activities for the promotion of lifelong learning and adult education. The activities encompass a nationwide media campaign, organisation of the annual Lifelong learning week and International andragogy symposium, capacity building for decision makers and adult education teachers and a number of dissemination conferences. Within the project, a network of regional coordinators acts as multipliers promoting lifelong learning. Through this initiative, AVETAE organised the Lifelong learning fair and the Lifelong learning week, with over 700 participating organisations and 890 promotional events across the country, attracting over 40 000 participants and resulting in 5 000 media announcements.

Key stakeholders were involved into the initiative, including the Ministry of Science and Education, the Croatian Employment Service, representatives of employers, higher education and adult education institutions, and professional and civil society organisations. A concept note for a follow-up project has been submitted for evaluation for future funding, which is currently underway. If approved, project implementation is planned from 2019 to 2022.

3.3.6.2. *Promoting student competences and VET through skills competitions and fairs*

In January 2017, an initiative on Promoting student competences and VET through skills competitions and fairs was launched to modernise VET student skills competitions in Croatia and encourage participation in national and international events. The objective is to promote excellence and participation in VET. In its initial stage in 2018, the project analysed existing national and international VET student skills competitions and fairs and developed a new model of competitions consistent with major international competitions such as WorldSkills and EuroSkills. In preparation for the implementation of the new model, the programme and rules of competitions were developed on the sectoral

level, along with test books and assessment criteria for each discipline in national skills competitions. Throughout the project, AVETAE supported VET schools, student mentors and students in the introduction of the new model of competitions, organisation of annual national skills competitions, and in preparation for and participation in international WorldSkills and EuroSkills competitions. Full-scale implementation is taking place until December 2021. In 2018, the project financed student competitions in all VET sectors in Croatia, encompassing 69 disciplines, 1048 students and 798 mentors. An award ceremony was organised for the national and the international champions. Supported by AVETAE, the WorldSkills Croatia team participated in the EuroSkills 2018 competition in Hungary, with 13 competitors and 11 experts in 11 disciplines. AVETAE used the opportunity to promote VET by organising a visit of primary school pupils from Croatia to the EuroSkills competition. In 2018, the agency prepared and presented the new model of skills competitions. In this, student skills competitions are viewed as a tool for promoting and raising the attractiveness of VET in Croatia, and as a platform for stronger cooperation between VET and companies.

In March 2019, AVETAE held the first national WorldSkills Croatia competition according to the new model of VET student competitions. As the largest national event for the promotion of opportunities in VET, the competition presented around 40 disciplines in one location for the first time.

The project is expected to improve the reputation of VET as a desirable and high-quality education option for Croatian students; and introduce students to excellence, professional skills at advanced level, high professional standards, contemporary business practices and state-of-the-art technologies.

Stakeholders are involved. VET schools contribute to the development and implementation of the new model of student skills competitions in Croatia, and participate in international skills competitions. Different stakeholders are asked to contribute to the project implementation by nominating prospective competitors and evaluators or potential partners from the business sector.

The project is funded through the European Social Fund with State budget contribution. It was evaluated by the relevant national authorities in the management and control system of the European Structural and Investment Funds in Croatia and approved for ESF funding and national joint financing during 2017-21. Budget spending, project progress and results are continuously monitored and evaluated by the relevant national authorities in the management and control system of the European Structural and Investment Funds in Croatia.

The new model of skills competitions will be consistently adjusted to, and aligned with, any future curriculum developments based on the learning outcomes approach.

CHAPTER 4.

MTD 4 – Key competences in both IVET and CVET

4.1. Baseline 2015

Major progress in promoting key competences in VET curricula have taken place since 2011, when the National Curriculum Framework for Pre-School Education, General Compulsory and Secondary Education (including VET) was adopted. The framework became operational in 2014 with the development of modular and outcome-based VET curricula. The curricula promoted eight key competences defined in the 2006 EU recommendation, either through stand-alone subjects or integrated in subjects ⁽³⁴⁾.

According to the Primary and Secondary Education Act ⁽³⁵⁾ and VET Act ⁽³⁶⁾, VET curricula comprised a general education part (offered by teachers of general subjects) and a vocational part (offered by teachers of vocational subjects). Their respective share depended on the qualification. For example, there were around 50% of general subjects in four-year VET programmes and 20% in three-year apprenticeship programmes for crafts. The VET Act defined the share of basic competences ⁽³⁷⁾ by qualification and year of studies. In the first year at least 60% of study time was devoted to basic competences, and at least 40% in the second ⁽³⁸⁾.

⁽³⁴⁾ For more information on key competences in VET see [Agency for Vocational Education and Training and Adult Education \(2016\). Key competences in vocational education and training – Croatia. Cedefop ReferNet thematic perspectives series.](#)

⁽³⁵⁾ Act on Education in Primary and Secondary Schools, *Official Gazette* No. 87/2008, 86/2909, 92/2010, 105/2010, 90/2011, 5/2012, 16/2012, 86/2012, 126/2012, 94/2013.

⁽³⁶⁾ Vocational Education and Training Act, *Official Gazette* No. 30/2009, 24/2010

⁽³⁷⁾ Which were acquired through general subjects study, e.g. language, mathematical competence, competences in science and technology, etc.

⁽³⁸⁾ For more information on key competences in VET see [Agency for Vocational Education and Training and Adult Education \(2016\). Key competences in vocational education and training – Croatia. Cedefop ReferNet thematic perspectives series.](#)

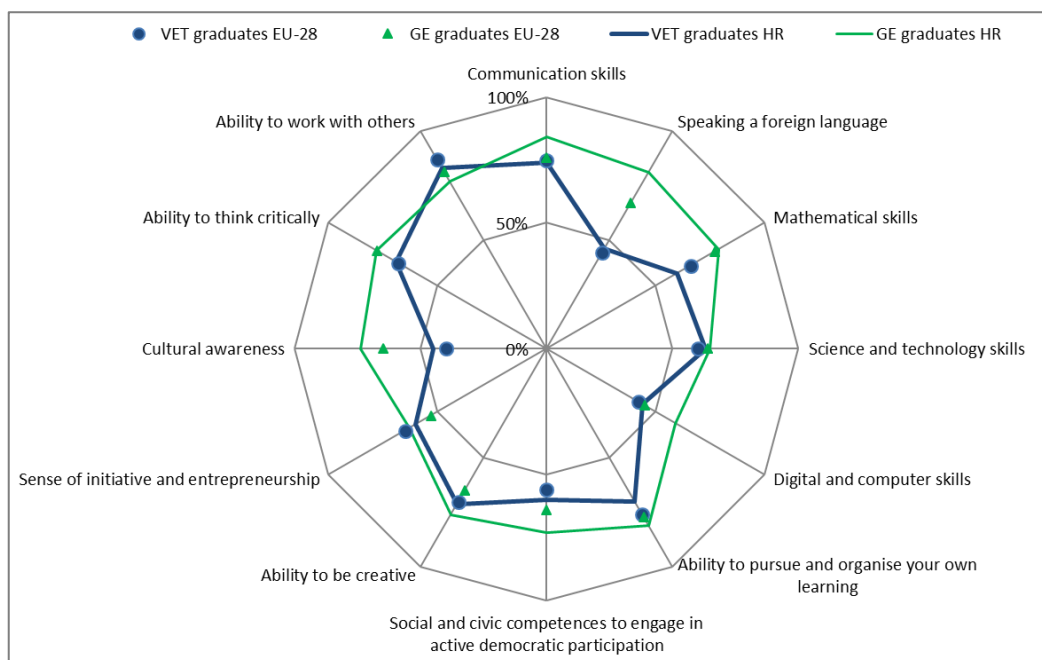
In 2013, the Croatian qualifications framework (CROQF) emphasised the role of key competences for lifelong learning ⁽³⁹⁾.

In 2014, the Strategy for Education, Science and Technology reiterated key competences as defined in the 2006 EU recommendation ⁽⁴⁰⁾.

A recent survey ⁽⁴¹⁾ showed that, compared with general education graduates, those who completed VET programmes felt they had stronger ability to work with others and weaker (ranged by priority):

- (a) foreign language speaking;
- (b) cultural awareness;
- (c) mathematical skills (Figure 2).

Figure 2. **Self-evaluation of acquired skills in general education and VET**



NB: GE stands for general education.

Respondents who attended upper secondary education. Interviewees were asked in summer 2016 about their overall experience in upper secondary education. Aggregated data do not take account of different types and sectors of VET and age groups of respondents.

Source: Cedefop, 2017c.

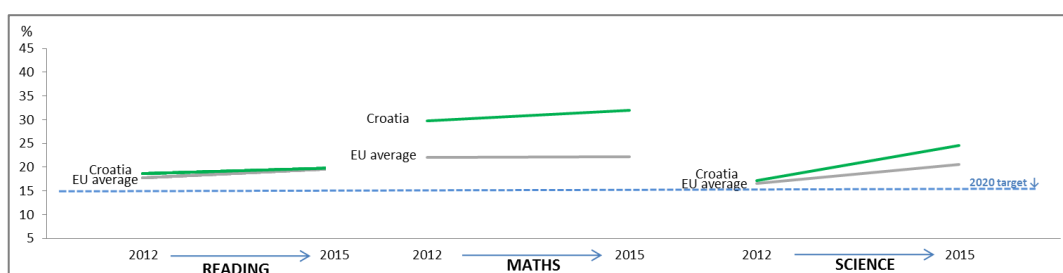
⁽³⁹⁾ For more information on key competences in VET see [Agency for Vocational Education and Training and Adult Education \(2016\). Key competences in vocational education and training – Croatia. Cedefop ReferNet thematic perspectives series.](#)

⁽⁴⁰⁾ For more information on key competences in VET see [Agency for Vocational Education and Training and Adult Education \(2016\). Key competences in vocational education and training – Croatia. Cedefop ReferNet thematic perspectives series.](#)

⁽⁴¹⁾ Cedefop (2017). *Cedefop European public opinion survey on vocational education and training*. Luxembourg: Publications Office. Cedefop research paper; No 62. <http://dx.doi.org/10.2801/264585>

The context of key competences in 2015 was mainly characterised by an increasing share of young low achievers in reading, maths and science compared with 2012 (Figure 3). The share of low achievers in Croatia was higher, especially in maths and science, than in the EU on average, where the trend is similar.

Figure 3. **Share of 15-year-olds with low achievement in reading, maths and science**



NB: Low achievement means failing level 2 on the PISA (programme for international student assessment) scale.

Source: OECD, 2014; OECD, 2016.

As VET enrolled 70% of all upper secondary learners in the country ⁽⁴²⁾, this trend was likely to be reflected in the key competences trained for in VET programmes. At the beginning of the reporting period, the main challenge was to develop comprehensive curricula based on learning outcomes which would help develop skills, creativity, innovation, critical thinking, aesthetic evaluation, sense of initiative, entrepreneurship and responsibility in VET learners ⁽⁴³⁾.

4.2. Key competences addressed in the reporting period

Table 2 outlines the key competences in initial and continuing VET that were addressed in the reporting period. A description of policies is provided in the following sections.

⁽⁴²⁾ Calculated from Eurostat, data for 2015.

⁽⁴³⁾ For more information on key competences in VET see [Agency for Vocational Education and Training and Adult Education \(2016\). Key competences in vocational education and training – Croatia. Cedefop ReferNet thematic perspectives series.](#)

Table 2. **Key competences addressed in 2015-19**

	IVET	CVET
Country language(s) and literacy		
Foreign languages	YES	
Digital competence	YES	
Maths	YES	
Science	YES	
Technology		
Social and civic competences		
Learning to learn		
Financial literacy		
Entrepreneurship competence		
Cultural awareness and expression		
Key competences as a package	YES	

NB: The list derives from the 2006 EU key competences framework for lifelong learning; it has been restructured and expanded with additional competences that can be considered key.

Source: Cedefop based on ReferNet input.

4.3. Key competences in initial VET

The country's priority in this area for 2016-20, as set by the Director General for Vocational Education and Training, is to improve key competences of teachers and in-company trainers and mentors.

In July 2018, the National curriculum for VET (Section 3.3.1.4) stipulated that vocational curricula for qualifications at CROQF levels 2-4.1 / EQF levels 2-4 should include up to 20-25% of general education content, whereas vocational curricula at CROQF level 4.2. / EQF level 4 (that is, 4-year programmes in IVET) should comprise up to 45% of general education content.

Following the 2016-20 VET system development programme, the national VET framework curriculum and curricula for seven study fields were developed:

- (a) technology and informatics;
- (b) physical and health education;
- (c) mathematics;
- (d) language and communication;
- (e) natural sciences;
- (f) arts;
- (g) social sciences and humanities.

Seven curricula for cross-curricular study fields in general education and VET were also drafted:

- (a) learning to learn;

- (b) entrepreneurship;
- (c) personal and social development;
- (d) health;
- (e) sustainable development;
- (f) use of information and communication technology (ICT);
- (g) civic education.

Accordingly, proposals for subject-specific curricula were developed. Several subject-specific curricula have undergone international expert review: the national curriculum for mathematics was reviewed by the National Education Institute Slovenia; the curriculum for French language by the Institut Français de Croatie; and the curriculum for technical science by the Finnish National Agency for Education. In addition, national expert and public consultations were held on the national curriculum for information science. Resources for the preparation, implementation and evaluation of the reform process were mobilised, including the European structural and investment funds, the State budget and the technical assistance of the European Commission.

In January 2019, in the wake of the public consultation on the Strategy for Education, Science and Technology (Section 3.3.1.1), 37 new curricula for general education subjects in primary and secondary schools were adopted. Curricula for history and physical education are undergoing public consultation in 2019. Curricula for several general education subjects in VET schools underwent public consultation from December 2018 to January 2019. These subjects included Croatian language, mathematics, English and German languages, and physical education for four-year programmes in VET at CROQF level 4.2 / EQF level 4.

The majority of *Erasmus+* VET budget in the years from 2015 to 2018 was used for mobility activities of learners in initial VET, which is considered as an important investment in key competence development; this is particularly so in communication in foreign languages, digital competences, entrepreneurship, and intercultural and social competences. Mobility projects focused on strengthening key competences of learners along with their professional skills and competences. The assessment of learners' competences before and after the mobility period at most VET schools indicates that international educational experience has a significant role in improving student competences. In 2018, the main objective of the approved mobility projects was to support VET staff in improving their professional skills and foreign language competences. Significant progress in the use of new technologies was also noted.

From 1 March 2015 to 31 August 2018, the Croatian Academic and Research Network (CARNET) carried out the pilot project *e-Schools: Establishing*

a system for developing digitally mature schools ⁽⁴⁴⁾. The project aims to design a strategic framework to integrate ICT in primary and secondary schools by 2022. It addresses improving ICT infrastructure in schools, raising the digital competences of teachers and students, introducing digital education contents in teaching and learning, and developing data management systems. During the project, IT infrastructure was improved in all participating schools, with five schools selected to serve as regional educational centres (including two VET schools) equipped with ICT tools for collaborative meetings and opened to the broader educational community. Training courses were developed and delivered to principals, teachers and the administrative staff. Digital education contents and teaching scenarios for creative ICT use were developed. Further activities included the development and the implementation of a digital content repository and massive online open courses (MOOCs). A community of practitioners was established for peer collaboration among teachers. An education management application (EMA) was developed as an online platform for the monitoring and handling of applications to the professional training opportunities offered by public institutions such as CARNET, the Agency for Vocational Education and Training and Adult Education and the Education and Teacher Training Agency. Ten percent of all Croatian schools took part in the pilot project from 2015 to 2018, including 29 VET schools. The final evaluation revealed that the majority of the 151 schools that participated in the e-Schools pilot project had raised their level of digital maturity: while 82% of schools were ranked among digital beginners (level 2 over 5) at the beginning of the project, 98% were assessed as digitally competent (level 3 over 5) in the end. Full-scale implementation will be carried out from 2019 to 2022.

4.4. Key competences in continuing VET

The country's priorities in this area for 2016-20, as set by the Director General for Vocational Education and Training, are to develop new curricula on key competences.

In 2015-17, within the framework of the EU Agenda for adult education, the Ministry of Science and Education was working on a proposal for a new curriculum for basic adult education based on key competences and the learning outcomes approach. The proposed curriculum focuses on digital, mathematical

⁽⁴⁴⁾ <https://www.e-skole.hr/en/e-schools/project-description/>

and reading literacy. A final project conference is planned for the presentation of the finalised curriculum.

In 2018, Croatia committed for the first time to participate in the OECD Programme for the international assessment of adult competencies (PIAAC). The Ministry of Science and Education designated the Agency for Vocational Education and Training and Adult Education (AVETAE) as the national body responsible for carrying out the PIAAC survey during 2018-23. Participation in the PIAAC survey will offer policy-makers, key stakeholders in education and experts better insight into the skills acquired through formal education, adult learning trends, and the impact of existing policy initiatives in adult education in the country. The survey results would serve as a valuable tool for evidence-based assessment and comparison of adult skills in the international perspective. They are expected to inform future policy initiatives, funding priorities and strategic orientation for the development of adult education in Croatia. The survey results would also be used to advance the quality of adult education in order to bridge the gap between workforce competences and labour market demands, and so contribute to lifelong learning and the employability of the Croatian workforce.

CHAPTER 5.

MTD 5 – Systematic initial and continuing professional development of VET teachers and trainers

5.1. Baseline 2015

The Strategy for Education, Science and Technology (2014) foresaw the modernisation of teacher education and training programmes along with the development of a continuing professional development (CPD) model and its monitoring through the evaluation of teacher competence standards. The main challenges that VET was facing at the time were about strengthening teacher competences and motivation for professional development; increasing the number of teachers who participate in in-service teacher training; quality assuring the in-service teacher training process; and improving the system for teacher progression.

Six main groups of teachers and trainers were at play in VET programmes:

- (a) teachers of general subjects;
- (b) teachers of professional-theoretical subjects;
- (c) teacher of practical lessons and exercise;
- (d) vocational trainers;
- (e) teaching associates in training; and
- (f) in-company trainers (craftsmen with a license for apprenticeship nationally referred to as in-company mentors).

Along with the Ministry of Science and Education, the Agency for VET and Adult Education (AVETAЕ) was playing an important role in in-service teacher training.

5.1.1. Access to VET school teaching: entry requirements and initial training

Teachers of general subjects had university education that included pedagogical and psychological subjects as well as training in teaching methods.

According to the 2009 VET Act, to become a teacher of professional-theoretical subjects, applicants had to have achieved corresponding higher education (a minimum of 180 ECTS points or higher); acquired a 60-ECTS pedagogical-psychological-didactical-methodical education (hereafter, pedagogical competences); and met all other criteria regulated by the

programme curriculum. Professional-theoretical courses were often taught by teachers who had achieved professional studies or secondary education programmes, as no higher education programme covered their area of expertise (e.g. hairdressing, pedicure, hospitality, tourism).

To become a teacher of practical lessons and exercise, applicants had to have completed a bachelor degree or professional studies (minimum three years) of corresponding type (180 ECTS points) and to have pedagogical competences.

Vocational trainers had to have the required level of education: at least secondary VET education of corresponding profile, pedagogical competences and a minimum of five-years' work experience in the profession/occupation. Vocational trainers used to teach practical lessons at school.

Teaching associates had to have completed corresponding secondary education (a four-year technical or three-year craft secondary education), pedagogical competences and at least five years of working experience (unless regulated differently by respective VET curricula). Teaching associates were usually working in pairs with vocational trainers and their role was to assist in practical classes in workshops or laboratories by preparing the equipment, machines and tools. They followed the work of learners, repaired damage, helped to ensure safety at work, but they did not teach courses.

Teachers of professional-theoretical lessons, vocational trainers and teaching associates in practical lessons had to undergo pedagogical-psychological and didactical methodological training during their first year in the teaching profession. Future teachers with no teaching experience had to undergo a one-year traineeship monitored by a school director, an expert associate and a (licensed) mentor. Trainees had to sign a volunteering contract. A regulation published by the Ministry of Science and Education (2003) described the conditions for the traineeship and for the qualifying exam, which verified competences in pedagogy, didactics and methodology and allowed trainees to obtain their licence and start working as teachers.

5.1.2. In-company trainers: entry requirements and initial training

Employers ⁽⁴⁵⁾ could deliver practical classes only if they had the required facilities and equipment and had assigned to each apprentice a mentor with adequate qualifications and pedagogical competences. According to the Crafts Act (Croatian Parliament, 2013b), apprenticeship mentors and instructors had to 'have passed the exam, which evaluated their basic knowledge on teaching

⁽⁴⁵⁾ According to Article 26 of the Vocational Education and Training Act (Croatian Parliament, 2009).

students and [have] at least three years of relevant working experience'. A special programme to acquire basic teaching skills and pedagogical competences had been designed by the Ministry of Science and Education. However, there was no specific competence profile for in-company mentors.

5.1.3. VET school teachers: main lines for CPD

The Primary and Secondary Education Act (Croatian Parliament, 2008-14) defined in-service teacher training, development, progression and licensing of teachers. Teachers in institutions had the right and obligation to in-service training through programmes approved by the Ministry of Science and Education. Continuous in-service teacher training included individual and organised training in pedagogy, didactics, educational psychology, methodology, ICT, counselling work, and management. CPD could be organised and implemented by institutions responsible for in-service teacher training, higher education institutions, civil society entities and schools. At the beginning of a school year, every teacher had to set up an individual in-service teacher training plan and to submit it to the professional-pedagogical service of his/her school. Competent authorities for in-service teacher training were the ministry and AVETAE. Data showed that from 2010 to 2015, AVETAE held 380 in-service teacher training events, in which 7 934 participants and 5 794 teachers of vocational subjects took part. Lecturers at these events were experts from industry, scientists, experts in pedagogy and teaching methods, teachers that had been elected for positions of mentor or advisor, and representatives of State and public institutions. Most of the training would last one or two days.

AVETAE also organised a range of other CPD activities for teachers, including support training for those involved in the pilot implementation of 22 VET curricula started in 2013/14, and training on teaching adults and entrepreneurship skills.

VET teacher CPD was also carried out through training events in companies, organised within the framework of cooperation and partnership agreements between the worlds of education and work.

Regular participation in in-service teacher training was one of the criteria for promotion, along with the number of years of work experience, grade, and number of points. An additional opportunity for promotion, also taking on board continuing training, existed in the form of accessing the titles of mentor and advisor, which acknowledged expertise and work quality as assessed through records of successful work with students, extracurricular expert work, and participation in in-service teacher training.

5.1.4. In-company trainers: main lines for CPD

CPD of in-company mentors was carried out through cooperation and partnership activities between the world of education and the world of work.

5.2. Initial training for teaching/training staff in VET schools 2015-19

The country's priority in this area for 2016-20, as set by the Director General for Vocational Education and Training, is to strengthen the current legal framework and programmes for teacher training.

The 2016-20 VET system development programme (Section 3.3.1.2) has measures related to entering the teaching profession, including developing occupational and qualification standards for VET teachers and introducing a (re)licensing system. Licensing and relicensing of VET teachers was already included in the Strategy for education, science and technology (2014) and the Primary and Secondary Education Act. The regulation on (re)licensing VET teachers is under development. A team of experts set up in 2015 by the National Education and Training Council developed a framework of national competence standards for teachers in primary and secondary schools, including VET. The framework was adopted in the form of a recommendation in 2016 and is intended to guide the revision of teacher education programmes and the development of the future teacher licensing system.

5.3. Initial training for trainers in enterprises 2015-19

For 2016-20, the country's priority in this area, as set by the Director General for Vocational Education and Training, is to develop a programme for the acquisition of pedagogical competences by in-company mentors.

In compliance with the 2016-20 VET system development programme (Section 3.3.1.2), the Croatian Parliament adopted, on 15 December 2016, the Act confirming the framework agreement between the Swiss Federal Council and the Government of the Republic of Croatia concerning the implementation of the Swiss-Croatian cooperation programme to reduce economic and social disparities within the enlarged European Union. Within this framework, the Ministry of Science and Education is leading the project Modernisation of vocational education and training programmes (Section 1.3.7), in cooperation with major VET stakeholders. The main task of this project is to develop a new programme in work-based training for in-company mentors.

5.4. CPD for teaching/training staff in VET schools 2015-19

The country's priority in this area for 2016-20, as set by the Director General for Vocational Education and Training, is to improve the current legal framework and programmes for teacher training.

The 2016-20 VET system development programme (Section 3.3.1.2) foresees measures for improving the VET teacher CPD system. This includes professional progression opportunities and subsidised CPD activities in companies. In 2018, 84 VET staff participated in *Erasmus+* mobility projects (compared to 74 participants in 2017). *Erasmus+* mobility projects for VET staff are aimed at developing teachers' professional knowledge and skills in the use of new technologies in vocational subjects. They are a key way to provide teachers with possibilities for professional development. Funding requirements include identification of staff development needs, selection of participants, preparation and follow-up measures. On completion of projects, the learning outcomes need to be properly recognised, disseminated and widely used within the sending organisation. Staff training activities usually take the form of a work placement or a job shadowing/observation period abroad in an enterprise or another VET institution.

The initiative *Modernisation of the system of CPD of VET school teachers* aims to propose an innovative, open and flexible model based on identified needs, relevant content, state-of-the-art training delivery methods, advanced IT tools and a broad network of experts. The project started in June 2017. In 2018, an analysis of international best practices and the current teacher training and professional development system in Croatia was carried out, based on market research of general, professional and sector-specific training needs of VET teachers. Guidelines for professional development of VET teachers were drafted, along with recommendations for appropriate monitoring and quality assurance mechanisms. A concept for a new model of CPD for VET school teachers was then developed. It features 13 general and 16 elective modules delivered through guided training, individual assignments and assessment activities. The concept foresees the delivery of 140 training events. Modules are directed at developing teaching competences, teaching talented students and students with disabilities, quality assurance, class management, innovative teaching methods, adult education, service-learning, as well as strengthening peer- and lifelong-learning, digital skills and project management competences. In 2018, ten training

workshops and two VET teacher days ⁽⁴⁶⁾ were held. A website and an awareness-raising campaign are planned. The project is driven by AVETAE. It is expected to advance the professional standards, competences and the reputation of VET school teachers in Croatia, increase the number of teachers participating in CPD, raise the quality, the availability and the relevance of teacher training content and materials, improve the awareness of training needs of teachers, define the CPD strategy of VET school teachers, set up mechanisms for advancing teaching competences and motivation for participating in CPD, and improve the system of professional advancement of teachers. Stakeholders are involved as the project engages employers, chambers and the academic community in different stages of project implementation. Project progress and results are regularly monitored and evaluated by the relevant national authorities in the management and control system of the European Structural and Investment Funds in Croatia.

In January 2019, public consultation was held on the draft regulation on career advancement and rewards to teachers, education professionals, educators and school directors in primary and secondary schools and student dormitories. The draft regulation restructures advanced professional titles, criteria for professional advancement, nomination and evaluation procedures for professional advancement, validity of advanced professional titles and their renewal, as well as the obligations of the holders of advanced professional titles. The assessment criteria for advancement are detailed, covering the organisation of, and participation or mentorship in, student competitions; the delivery of, or participation in, training (including online and international training); activities in professional associations; publications and production of teaching materials and education content; project management or implementation; and contributions to school (a mandatory criterion) and the education system. The holders of advanced professional titles are expected to deliver professional training, participate in online public consultations on legislative and regulatory proposals, participate in projects, publish digital education content or articles and mentor students or teachers entering the profession.

⁽⁴⁶⁾ The first and the second Vocational teachers' days were attended by over 1100 participants. Vocational teachers participated in professional development workshops and plenary lectures delivered by around 100 speakers who presented the latest developments in vocational education, including sector-specific updates, top policy priorities and international best practices.

5.5. CPD for trainers in enterprises 2015-19

For 2016-20, the country's priority in this area, as set by the Director General for Vocational Education and Training, is to support effective partnerships of all relevant stakeholders.

The 2016-20 VET system development programme (Section 3.3.1.2) includes measures related to in-company mentor CPD, through the design of a programme aimed at developing their pedagogical competences. A short programme (60 ECTS) for CPD is included in the Swiss-Croatia cooperation programme for the training of in-company trainers/mentors (Section 5.3).

Statistical overview: 2019 update

Table 3 updates the figures that were provided in Table 1. Although Table 1 may contain data for 2015, these are not systematically repeated here. In some cases, not repeating is due to breaks in time series, which prevent comparability. In other cases, values differ due to methodological changes.

Table 3. **Score on VET indicators in Croatia and in the EU: 2015, last available year and recent change**

Indicator label	2015				Last available year				Recent change			
	HR	f	EU	f	Yr	HR	f	EU	f	Range	HR	EU
Access, attractiveness and flexibility												
IVET students as % of all upper secondary students	70.4		47.3	ce	'17	69.6		47.8	ce	'15-'17	-0.8	0.5
IVET work-based students as % of all upper secondary IVET		z	28.3	ce	'17		z	27.9	ce	'15-'17		-0.5
IVET students with direct access to tertiary education as % of all upper secondary IVET	70		68.1	ce	'17	71.6		68.6	ce	'15-'17	1.6	0.4
Workers participating in CVT courses (%)	28.7		40.8		'15	28.7		40.8				
Workers participating in on-the-job training (%)	25		34		'15	25		34				
Adults in lifelong learning (%)	3.1		10.7		'18	2.9		11.1		'15-'18	-0.2	0.4
Enterprises providing training (%)	55.4		72.6		'15	55.4		72.6				
Female IVET students as % of all female upper secondary students	63.5		42	ce	'17	62.2		42.7	ce	'15-'17	-1.3	0.7
Employees of small firms participating in CVT courses (%)	16		30		'15	16		30				
Young VET graduates in further education and training (%)	31.1		33		'18	31.5		33		'15-'18	0.4	0
Older adults in lifelong learning (%)	0.3	u	6.9		'18	0.5	u	7.3		'15-'18	0.2	0.4
Low-educated adults in lifelong learning (%)		u	4.3		'18	0.5	u	4.3		'15-'18		0
Unemployed adults in lifelong learning (%)	2.5	u	9.5		'18	1.5	u	10.7		'15-'18	-1	1.2
Individuals who wanted to participate in training but did not (%)					'16	14.1		11.4				
Job-related non-formal education and training (%)					'16	87.3		79.4				

Indicator label	2015				Last available year				Recent change			
	HR	f	EU	f	Yr	HR	f	EU	f	Range	HR	EU
Skill development and labour market relevance												
IVET public expenditure (% of GDP)			0.5	ce	'16			0.5	ce	'15-'16		0
IVET public expenditure per student (1000 PPS units)			7.1	ce	'16			7.4	ce	'15-'16		0.3
Enterprise expenditure on CVT courses as % of total labour cost	0.6		0.9		'15	0.6		0.9				
Average number of foreign languages learned in IVET	1.3		1	ce	'17	1.2		1	ce	'15-'17	-0.1	0
STEM graduates from upper secondary IVET (% of total)	36.3		29.2	ce	'17	32.5		29.1	ce	'15-'17	-3.8	0
Short-cycle VET graduates as % of first time tertiary education graduates	0.1				'17	0.1		14.3	b ce	'15-'17	0	
Innovative enterprises with supportive training practices (%)					'16	58.3		37.7				
Employment rate for IVET graduates (20-34 year-olds)	69		77.2		'18	77.7		80.5		'15-'18	8.7	3.3
Employment premium for IVET graduates (over general stream)	2.5		5.4		'18	14.2		6.6		'15-'18	11.7	1.2
Employment premium for IVET graduates (over low-educated)	35.4		23.7		'18	34.7		23.3		'15-'18	-0.7	-0.4
Workers helped to improve their work by training (%)	87.3		83.7		'15	87.3		83.7				
Workers with skills matched to their duties (%)	61.4		57		'15	61.4		57				
Overall transitions and labour market trends												
Early leavers from education and training (%)	2.8	u	11		'18	3.3		10.6		'15-'18	0.5	-0.4
30-34 year-olds with tertiary attainment (%)	30.8		38.7		'18	34.1		40.7		'15-'18	3.3	2
NEET rate for 18-24 year-olds (%)	23.8		15.8		'18	17.6		13.7		'15-'18	-6.2	-2.1
Unemployment rate for 20-34 year-olds (%)	22.8		12.9		'18	12.8		9.4		'15-'18	-10	-3.5
Employment rate of recent graduates (%)	62.7		75.9		'18	70.8		80.6		'15-'18	8.1	4.7
Adults with lower level of educational attainment (%)	16.9		23.5		'18	14.9		21.9		'15-'18	-2	-1.6
Employment rate for 20-64 year-olds (%)	60.6		70		'18	65.2		73.1		'15-'18	4.6	3.1
Employment rate for 20-64 year-olds with lower level of educational attainment (%)	39.3		52.6		'18	37.2		56.1		'15-'18	-2.1	3.5
Medium/high-qualified employment in 2030 (% of total)					'18	95.5	D	85.8	D			

EU refers to EU-28, unless otherwise specified.
(D) Forecast made in 2018.
(ce) Cedefop estimate based on available country data
(b) Eurostat: 'break in time series'.

(u) Eurostat: 'low reliability'.
(z) Eurostat: 'not applicable'.
(e) Eurostat: 'estimated'.
(d) Eurostat: 'definition differs'.

Source: Cedefop, 2020.

In 2017, 69.6% of all upper secondary students in Croatia were enrolled in IVET. This percentage is 21.8 points above the EU average. However, the percentage of upper secondary students in IVET is lower by 0.8 points compared to the situation in the country in 2015.

In 2018, 2.9% of the adults participated in lifelong learning activities, which is slightly lower (0.2 points less) than in 2015. The EU average is 11.1%.

In 2018, the employment rate for IVET graduates (20-34 years old) was 77.7%. It appears that the employment rate for IVET graduates (20-34 years old) is substantially higher, by 8.7 points, compared to the situation in the country in 2015. The EU average is 80.5%.

Conclusion

Since 2015, Croatia has taken steps to reform and strengthen its work-based learning models and increase SME involvement, also relying on cooperation with international partners. Actions were carried out to improve quality assurance mechanisms and the information system which guides the development of VET. Initiatives have been taken to continue development of guidance mechanisms and ECVET. Key competences in initial and continuing VET are being supported. Progress is also being made towards developing the initial and continuing training of VET teachers and in-company trainers.

Many developments took place in 2017. In the area of work-based learning, a partnership for apprenticeships has been prepared, involving major stakeholders, to facilitate and steer policy dialogue towards the advancement of apprenticeships and encourage employers to engage in apprenticeship schemes (Section 1.3.3). Grants have been awarded to Croatian SMEs which offer apprenticeships to VET students in all craft and trade occupations (total budget EUR 673 854), while only a limited number of sectors benefitted from such measures in the past (Section 1.3.4). The comprehensive review of the apprenticeship system, already initiated in 2016 in cooperation with Cedefop, reached full scale implementation (Section 1.3.7).

On the quality-assurance side, Croatia worked on improving VET school self-assessment (Section 2.2) and developing continuous information and feedback loops in IVET and CVET through graduate tracking (Sections 2.3 and 2.4). A new initiative for the modernisation of the VET system was launched in November 2017, aiming to develop innovative and flexible curricula in VET in compliance with labour market needs (Section 2.2). In MTD3, a Strategic framework for the promotion of lifelong learning was set to determine the strategic orientation, priorities and specific communication plans for lifelong learning (Section 3.3.6.1). An initiative on Promoting student competences and VET through skills competitions and fairs was launched to modernise VET student skills competitions in Croatia and participation in national and international skills competitions, with aim to promote excellence (Section 3.3.6.2). In MTD5, steps were taken to modernise the system of continuing professional development of VET school teachers, aiming to set up an innovative, open and flexible model based on identified needs, relevant content, state-of-the-art training delivery methods, advanced IT tools and a broad network of experts (Section 5.4).

Compared to 2015-17, the main changes in 2018-19 have taken place in MTDs 1, 2 and 3. In MTD 1, dual VET (which had already been a feature in 1995-

2005) was reintroduced (Section 1.3.2). In MTD 2, a project targeted at developing quality assurance benchmarking in apprenticeships and work-based learning was launched (Section 2.2). The CROQF web portal was developed into a tool for the monitoring of school-to-work transition and the labour market, and the anticipation of skills and training needs (Section 2.3). In MTD 3, the piloting started of the curriculum reform School for life, in general and vocational education (Section 3.3.1.1).

The actions carried out show that the main lines of the Riga conclusions and the country's policy priorities for 2016-20 are being addressed. Yet, information currently available to Cedefop suggests that an issue which could warrant further consideration is that of more systematically using the EQAVET indicators to monitor VET development.

Abbreviations

AES	adult education survey
AVETAE	Agency for VET and Adult Education
CPD	continuing professional development
CROQF	Croatian qualifications framework
CVET	continuing vocational education and training
DGVT	Director General for Vocational Education and Training
ECTS	European credit transfer system
ECVET	European credit system for vocational education and training
EQAVET	European quality assurance in vocational education and training
Eurostat	statistical office of the European Union
GDP	gross domestic product
GE	general education
ICT	information and communication technology
ISCED	international standard classification of education
IVET	initial vocational education and training
LLCG forum	lifelong career guidance forum
NEET	not in education, employment, or training
OECD	Organisation for Economic Cooperation and Development
PISA	programme for international student assessment
PPS	purchasing power standards
QANRP	quality assurance national reference point
SMEs	small and medium-sized enterprises
STEM	science, technology, engineering and math programmes
UOE	UNESCO OECD Eurostat
VET	vocational education and training

Bibliography

[URLs accessed 20.11.2019]

Agency for Vocational Education and Training and Adult Education (2016). *Key competences in vocational education and training: Croatia*. Luxembourg: Publications Office. Cedefop ReferNet thematic perspectives series.

http://libserver.cedefop.europa.eu/vetelib/2016/ReferNet_HR_KC.pdf

Cedefop (2015). *Stronger VET for better lives: Cedefop's monitoring report on vocational education and training policies 2010-14*. Cedefop Reference series; No 98. <http://www.cedefop.europa.eu/el/publications-and-resources/publications/3067>

Cedefop (2017a). *On the way to 2020: data for vocational education and training policies: country statistical overviews: 2016 update*. Luxembourg: Publications Office. Cedefop research paper; No 61.

<http://www.cedefop.europa.eu/en/publications-and-resources/publications/5561>

Cedefop (2017b). *European inventory on national qualifications framework 2016: Croatia*. <http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/croatia-european-inventory-nqf-2016>

Cedefop (2017c). *European public opinion survey on vocational education and training*. Luxembourg: Publications Office. Cedefop research paper; No 62.

<http://www.cedefop.europa.eu/en/publications-and-resources/publications/5562>

Cedefop (2020). *On the way to 2020: data for vocational education and training policies – Indicator overviews: 2019 update*. Luxembourg: Publications Office. Cedefop research paper; No 76.

https://www.cedefop.europa.eu/files/5576_en.pdf

European Commission (2015). *Education and training monitor 2015: country analysis*. Luxembourg: Publications Office.

<https://op.europa.eu/en/publication-detail/-/publication/87b59c67-c3f8-11e5-8d08-01aa75ed71a1>

European Commission (2017). *Erasmus+ KA3 — Support to the activities of the European Quality Assurance in Vocational Education and Training (EQAVET) National Reference Points (NRP): Compendium 2016*.

https://eacea.ec.europa.eu/sites/eacea-site/files/compendium_eqavet_2016_for_website.pdf

European Commission (2018). *Erasmus+ KA3 — Support to the activities of the European Quality Assurance in Vocational Education and Training (EQAVET) National Reference Points (NRP): Compendium 2017*.

https://eacea.ec.europa.eu/sites/eacea-site/files/compendium_eqavet_2017.pdf

- EEPO (2015). *Country fiches on skills governance in the Member States – Croatia. Developed by the European Employment Policy Observatory for the European Commission*. Brussels: European Commission.
<http://ec.europa.eu/social/BlobServlet?langId=en&docId=15940&>
- EQAVET Secretariat (2014). *Supporting the implementation of the European quality assurance reference framework: results of EQAVET Secretariat survey 2013-14*.
[http://www.eqavet.eu/Equavet2017/media/Documents/Results-EQAVET-Secretariat-Survey-2013-2014-\(1\).pdf](http://www.eqavet.eu/Equavet2017/media/Documents/Results-EQAVET-Secretariat-Survey-2013-2014-(1).pdf)
- EQAVET Secretariat (2019). *Supporting the implementation of the European quality assurance reference framework: draft results of EQAVET Secretariat survey 2018*.
<https://www.eqavet.eu/getattachment/What-We-Do/Statistics/Progress-report-Results-EQAVET-Secretariat-Survey-2018.pdf.aspx?lang=en-IE>
- Eurostat. *Pupils enrolled in upper secondary education by programme orientation, sex, type of institution and intensity of participation* [database].
http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ_uae_enrs04&lang=en
- OECD (2014). *PISA 2012 results in focus: what 15-year-olds know and what they can do with what they know*. <https://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>
- OECD (2016). *PISA 2015: PISA results in focus*.
<https://www.oecd.org/pisa/pisa-2015-results-in-focus.pdf>
- Pavkov, M. (2016). Country report – Croatia: 2016 update to the European inventory on validation of non-formal and informal learning. In: Cedefop; European Commission; ICF (2017). *European inventory on validation of non-formal and informal learning – 2016 update: synthesis report*. Luxembourg: Publications Office.
https://cumulus.cedefop.europa.eu/files/vetelib/2016/2016_validate_HR.pdf