



European
Commission



Education and Training Monitor 2014

Croatia

1. Key indicators and benchmarks

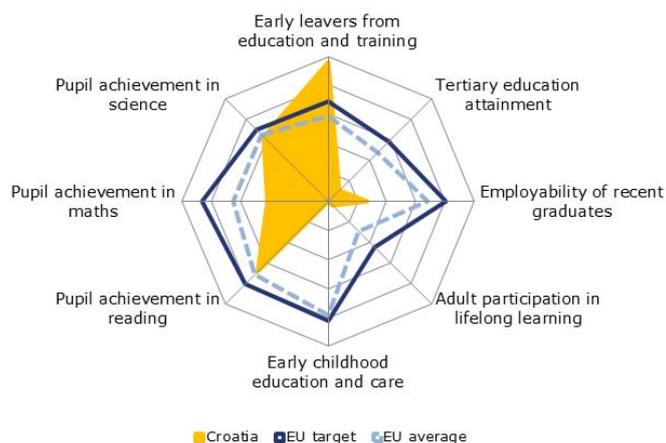
		Croatia		Trend	EU28 average		Europe 2020 target / Benchmark	
		2010	2013		2010	2013		
<i>Europe 2020 headline target</i>								
1. Early leavers from education and training (age 18-24)		3.7%	4.5%	▲	13.9%	12.0%	EU target: 10% National target: 4%	
2. Tertiary educational attainment (age 30-34)		24.3%	25.6%	▲	33.6%	36.9%	EU target: 40% National target: 35%	
<i>ET 2020 Benchmarks</i>								
3. Early childhood education and care (4-years-old until the starting age of compulsory education)		69.2% ⁰⁹	71.7% ¹²	▲	92.1% ⁰⁹	93.9% ¹²	95%	
4. Basic skills Low achievers (15 year-olds; Level 1 or lower in PISA study)	Reading	22.4% ⁰⁹	18.7% ¹²	▼	19.7% ⁰⁹	17.8% ¹²	15%	
	Mathematics	33.2% ⁰⁹	29.9% ¹²	▼	22.3% ⁰⁹	22.1% ¹²	15%	
	Science	18.5% ⁰⁹	17.3% ¹²	▼	17.8% ⁰⁹	16.6% ¹²	15%	
5. Learning mobility	Initial vocational training (IVET)	0.1%	0.4% ¹²	▲	0.6%	0.7% ¹²		
	Higher Education	a. Students participating in Leonardo da Vinci programmes as a share of vocational students at ISCED 3	-	0.2% ¹²	:	-	1.2% ¹²	
		b. Erasmus inbound students as % of student population in host country	0.5%	0.5% ¹²	=	6.0%	6.9% ¹²	
6. Employment rate of recent graduates (age 20-34) having left education 1-3 years before reference year	ISCED 3-6	70.3%	53.8%	▼	77.4%	75.5%	82%	
	ISCED 3-4	66.5%	50.8%	▼	72.1%	69.5%		
	ISCED 5-6	74.8%	56.4%	▼	82.7%	80.9%		
7. Adult participation in lifelong learning (age 25-64)		2.2%	2.9%	▲	9.1%	10.5% ^b	15%	
<i>Other ET 2020 Indicators</i>								
8. Investment in education and training	a. General government expenditure on education (% of GDP)	:	5.0% ¹²	:	5.5%	5.3% ¹²		
	b. Annual expenditure on public and private educational institutions per pupil/student in € PPS	ISCED 1-2	€ 3,259	€ 3,226 ¹¹	▼	€6,063.74 ^e	€6,297.16 ^{11, e}	
		ISCED 3-4	€ 3,458	€ 3,231 ¹¹	▼	€7,022.35 ^e	€6,650.87 ^{11, e}	
		ISCED 5-6	€ 5,191	€ 6,024 ¹¹	▲	€9,764.30 ^e	€9,474.80 ^{11, e}	
9. Transversal competences	Digital competences	a. Pupils in grade 4 (ISCED 1) using computers at school	:	26.8% ¹¹	:	60.7% ⁰⁷	64.7% ¹¹	
		b. Individuals aged 16-74 with high computer skills ¹	24.0% ⁰⁹	27.0% ¹²	▲	25.0% ⁰⁹	26.0% ¹²	
	Problem solving in technology rich environments	c. Low achievers (no or insuff. computer experience) ²	:	:	:	:	16.9% ^{12, EU17}	
		d. High achievers (PIAAC level 2 and above)	:	:	:	:	33.2% ^{12, EU13}	
	Entrepreneurial competences	e. Individuals aged 18-64 who believe to have the required skills and knowledge to start a business	:	47.0%	:	:	42.3% ^{a, EU18}	
	Foreign language skills	f. ISCED 2 students at proficiency level B1 or higher in first foreign language ³	:	47.0% ¹¹	:	:	43.5% ^{11, EU13}	
		g. ISCED 2 students learning two or more foreign languages	48.6%	51.8% ¹²	▲	60.6%	63.0% ¹¹	
10. Basic skills of adults	Literacy	Low achievers (< PIAAC proficiency level 2)	:	:	:	19.9% ^{12, EU17}		
		High achievers (PIAAC proficiency level 3 and >)	:	:	:	43.3% ^{12, EU17}		
	Numeracy	Low achievers (< PIAAC proficiency level 2)	:	:	:	:	23.6% ^{12, EU17}	
		High achievers (PIAAC proficiency level 3 and >)	:	:	:	:	40.9% ^{12, EU17}	
11. Skills for future labour market Projected change in employment 2010-2020 in %	High qualification	:	+12.2%	:	:	+12.4%		
	Medium qualification	:	+2.5%	:	:	+2.1%		
	Low qualification	:	-9.0%	:	:	-13.2%		
12. Teachers	a. Teachers aged >50 teaching in public and private at ISCED 2-3 - as % of total teachers teaching in ISCED 2-3 ⁴	:	:	:	:	:		
	b. Percentage of teachers who undertook some professional development activities in the previous 12 months	:	96.8%	:	:	84.6% ^{EU19}		
13. Vocational education and training		72.1%	71.3% ¹²	▼	50.1%	50.4% ¹²		

Source: Cedefop: 11 / EAC: 5ab / European Survey on Language Competences (ESLC): 9f / Eurostat (COFOG): 8a / Eurostat (ISS): 9b / Eurostat (LFS): 1, 2, 6, 7 / Eurostat (UOE): 3, 5, 8b, 9g, 12a, 13 / Global Entrepreneurship Monitor: 9e / IEA TIMSS: 9a / OECD (PIAAC): 9cd, 10 / OECD (PISA): 4 / OECD (TALIS): 12b

Notes: ⁰⁷ =2007, ⁰⁸ =2008, ⁰⁹ =2009, ¹⁰ =2010, ¹¹ =2011, ¹² =2012, a= unweighted average, b= break, e= estimate, p= provisional.

¹= having carried out 5-6 specific computer related activities. Caution is advised when interpreting comparability over time, due to developments in the implementation of questions related to computer skills, ²= results cover people who have no computer experience or failed the ICT test, ³= average of skills tested in reading, listening, writing, ⁴= in some Member States, ISCED 3 includes level 4 (CZ, EE, ES, IE, NL, FI, UK), while in others (IT, LU, NL) only public institutions figures are reported.

Figure: Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2013 and UOE 2012) and OECD (PISA 2012). Note: all scores are set between a maximum (the highest performers visualised by the outer ring) and a minimum (the lowest performers visualised by the centre of the chart).

2. Main challenges

The main strengths of Croatia's education and training system are low rates of early school leaving and high progression of secondary vocational school graduates onto higher education. Main challenges are in improving basic and transversal skills of primary and secondary school pupils, modernising initial vocational education curricula in line with the needs of the labour market and decreasing dropout from higher education. Stretched capacities and low participation of pre-school children in early childhood education and care remain an issue. The system of external evaluation and quality assurance of primary and secondary schools is not advanced enough to encourage improvements in learning outcomes. School-to-work transition is difficult for young people, due to shortcomings in career guidance provision and availability of work-based learning opportunities. At tertiary level, there is a functioning system of accreditation of higher education institutions, yet time to degree is long and completion rates are low. There is also a mismatch between subjects studied and the needs of the economy leading to underemployment among higher education graduates. Adult participation in lifelong learning is comparatively low.

The 2014 European Semester country-specific recommendation (CSR) on education and training focused on: (i) modernising the qualification systems; (ii) putting in place quality assurance mechanisms; (iii) and improving school-to-work transitions, in particular through strengthening vocational education and work-based learning.

3. Improving resource efficiency and effectiveness

3.1 Investment in education

General government expenditure on education as a proportion of GDP (5% in 2012) is slightly below the EU average. Annual expenditure per student was significantly below the EU average in 2011 and had decreased from 2010, with the exception of expenditure on tertiary education students, which increased. Croatia is one of the countries where education expenditure was cut following the economic crisis. However, work is being done to increase the efficiency of spending in higher education by introducing performance-based funding. New legislation was passed in 2013, paving the way for a comprehensive reform of higher education funding.¹ Three-year pilot agreements, covering 10% of public funding for higher education institutions, were signed for the academic years 2012/13 – 2014/15. They are results-focused, including development goals and indicators and ensuring multi-year planning, and are a first step towards introducing full funding agreements. Gains in efficiency and large savings in the higher education sector were made through new legislation on subsidising costs for student meals, which came into force in October 2013.²

¹ Act on Amendments to the Act on Scientific Activity and Higher Education, Official Gazette 139/13.

² Education and Training 2020 national report questionnaire – Croatia (2014).

3.2 A focus on teachers

The 2013 OECD Teaching and Learning International Survey (TALIS)³ provided the following main findings for Croatia:

- Participation in induction programmes and professional development is high. A large proportion of teachers took part in a formal induction programme during their first regular employment (68% compared with an EU average of 49%) and the proportion of teachers undertaking some professional development activities in the last 12 months is the highest in the EU (97%). Only 25% of teachers work in schools whose school leaders report a shortage of qualified staff (compared with an EU average of 36%).
- Appraisals and feedback are also widespread: only 3% of teachers (according to their school leaders) are never formally appraised and just 6% have never received feedback in their current school (compared to an EU average of 16% and 17%, respectively).
- However, teachers perceive their status as being very low: only 10% think the teaching profession is valued in society (compared with an EU average of 19%).

The quality of teacher training does not correspond with its widespread availability. The minimum length of in-school placement during initial teacher training is the lowest in the EU (20 hours).⁴ Also, unlike in most European countries, planning for teachers' continuous professional development is done solely by over-arching educational authorities, such as the Education and Teacher Training Agency. However, the ratio of teachers to students in primary education is around the EU average (1:14) and better than the EU average in secondary education (1:11). Contrary to the general EU trend, the number of teachers has been increasing in recent years.⁵

The Strategy for Education, Science and Technology, adopted by the Croatian Parliament on 17 October 2014⁶, envisages the development of national competency standards for teachers by 2015. These will be based on learning outcomes and in line with the Croatian qualifications framework. The strategy also sets out several long-term measures to improve initial and continuous teacher training programmes including quality assurance and professional development for teacher educators.

4. Increasing employability

4.1 Work-based learning, apprenticeships and adult learning

The level of participation in vocational education and training (VET) at upper secondary level is one of the highest in the EU (71.3% compared to an EU average of 50.4%). However, the employment rate for recent upper secondary graduates⁷ is significantly below the EU average (49% compared to 69.4%, in 2013). The difficult transition from school to the labour market comes as a result of outdated VET curricula and limited opportunities for work-based learning, leading to a skills mismatch. Fewer than half of VET graduates end up employed in a job that matches their field of study.⁸

The level of adult participation in education and training is one of the lowest in the EU. In 2013, only 2.9% of Croatian adults participated in education and training, compared to the EU average of 10.5%. Incentives for employers are in place, in the form of tax deductions of up to 50% of adult education and training costs (70% in the case of small and medium enterprises), but their uptake by companies is low, partly because of a lack of awareness and partly because of the complexity of the administrative procedures involved.⁹ According to a recent opinion poll, opportunities to acquire job-specific and specialised skills outside of formal education are perceived as very limited.¹⁰

³ <http://www.oecd.org/edu/school/talis.htm>.

⁴ Eurydice (2013) *Key Data on Teachers and School Leaders*, http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/151EN.pdf.

⁵ Državni zavod za statistiku (2013) *Statistički ljetopis Republike Hrvatske*, www.dzs.hr/Hrv_Eng/ljetopis/2013/sljh2013.pdf.

⁶ http://narodne-novine.nn.hr/clanci/sluzbeni/2014_10_124_2364.html

⁷ People aged 20-34 who have left education between one and three years before the reference year.

⁸ Matkovic (2009) UNDP and Croatian Ministry of Health and Social Welfare, *Youth between education and employment: is it worthwhile going to university?*

⁹ Rinaldi, S., Klenha, V., Feiler, L. and Petkova, E. (2012) *Croatia — Review of human resources development*.

¹⁰ Eurobarometer 417 (2014) *European area of skills and qualifications*, ec.europa.eu/public_opinion/archives/eb_special_419_400_en.htm#417.

Following the first ever sector skills analysis in Croatia, financed by the EU pre-accession funds, new VET curricula based on learning outcomes and competencies derived from 27 new occupational and qualifications standards are being piloted in 54 schools in 2013-14. In the next programming period, the European Social Fund (ESF) will support the development of additional VET curricula for priority sectors (tourism and catering, mechanical and electrical engineering, information and communications technologies (ICT), agriculture and healthcare), while a national VET curriculum will be developed using national funding. However, the state of the economy in Croatia is limiting opportunities for work-based learning. Early work on implementing the new Crafts Act (2013) has made employer involvement in apprenticeships more difficult, as it has reduced the role of the Chamber of Trades and Crafts in organising assessments. Employer engagement will have to be improved following recent organisational changes. In order to tackle the shortage of practical skills and to improve the transition from school to the labour market, targeted investment from the ESF will focus on setting up so called regional competence centres with the aim of providing VET students with relevant practical skills needed by the labour market.

Croatia presented its Youth Guarantee Implementation Plan in December 2013, updated in April 2014,¹¹ which sets out a wide range of reforms and measures to tackle the high youth unemployment rate. They include:

- curriculum and apprenticeships reform;
- capacity building in the Croatian employment service to provide high-quality career guidance; and
- setting up a unified system to track outcomes for people in school and after leaving school.

A set of additional smaller-scale interventions are envisaged, such as providing support to local stakeholders, employers, entrepreneurs, social partners and chamber organisations.

4.2 Modernising and internationalising higher education

Enrolment in tertiary education has continuously risen in Croatia, but tertiary education attainment (30-34 year-olds) began to level off in 2010. The attainment rate reached 25.6% in 2013, compared to the EU average of 36.9%. High drop-out rates, lengthy study periods and unequal access to higher education constitute the main barriers to tertiary education attainment, causing Croatia to remain well below its 2020 national target of 35%. Eurostudent surveys find Croatia to be one of the countries with the highest higher education drop-out rates (estimated to be above 40%). This may be for a variety of reasons, including a lack of motivation, a lack of career guidance and counselling and insufficient resources to study.¹²

Transition from higher education to the labour market is difficult for Croatian graduates. Over a working life, a tertiary degree clearly boosts employment prospects, but the employment rate for recent tertiary graduates¹³ is significantly lower than the EU average (56.5% compared to 80.7%). There is evidence of a mismatch with the labour market. Some 60% of all tertiary education enrolments are in the fields of social sciences and humanities, with economics students making up over 30% of all enrolments.¹⁴ The number of students graduating in technical and medical sciences continues to fall, however, and as many as 41% of science, technology, engineering and mathematics (STEM) students repeat their first year, reportedly due to insufficient knowledge of mathematics.¹⁵

In addition, 71% of first-year students surveyed in 2011 indicated that they were planning to enrol in a post-graduate course.¹⁶ This is a sign of a skewed implementation of the Bologna process and a lack of recognition of the Bachelor degree as a stand-alone qualification on the labour market, leading students to potentially be overqualified for their jobs after finishing university. A factor contributing to this tendency is the lack of academic advice and counselling services in higher education institutions.¹⁷ Croatia is the only country in the EU that does not carry out some form of outcome tracking for graduates from higher education institutions, although there are some good practice examples of small scale graduate tracking projects.¹⁸

¹¹ <http://www.mrms.hr/wp-content/uploads/2014/04/implementation-plan-yg.pdf>.

¹² Institute for the development of education (2011) *Higher education funding and the social dimension in Croatia: analysis and policy guidelines*.

¹³ People aged 20-34 who left education between one and three years before the reference year.

¹⁴ Source: Agency of science and higher education (AZVO).

¹⁵ Education and Training 2020 national report questionnaire — Croatia (2014).

¹⁶ Institute for the development of education (2011) *Socijalna i ekonomska slika studentskog života u Hrvatskoj: nacionalno izvješće istraživanja EUROSTUDENT za Hrvatsku*.

¹⁷ Eurydice (2014) *Modernisation of higher education in Europe: access, retention and employability*, p.24.

¹⁸ *Ibid.* p. 75

Recently, attempts have been made to widen access to higher education by doubling the budget allocation for state scholarships for students from lower socio-economic backgrounds.¹⁹ The first phase of a multiannual project to track graduate outcomes started in December 2013. It involves all non-university higher education institutions and aims to strengthen the evidence base for a qualitative analysis of the suitability of skills for the labour market. The number of students gaining work experience has increased following the Employment Promotion Act (2012), which introduced government-funded internships for higher education graduates without prior work experience, exempting employers from paying taxes and social security contributions for up to 12 months.

4.3 Transversal competences, skills relevance, learning mobility, new ways of teaching and new technologies

According to CEDEFOP, the demand for low qualification jobs is expected to fall nearly 30% faster than the EU average between now and 2020, while demand for high and medium qualification jobs will rise in the same time period. Less than 10% of students in Croatia are in digitally supportive primary schools. Students' confidence in using ICT safely, responsibly and operationally is slightly below the EU average, and is particularly low among students in vocational schools.²⁰ Croatia is one of the very few EU countries that do not begin ICT education at ISCED level 1.²¹ The average number of foreign languages learnt per pupil in secondary education matches the EU average of 1.5 per pupil.²² A particular challenge for language teaching and learning is the limited use of ICT in teaching foreign languages. Less than 0.3% of schools report having software for assessing and teaching languages and, based on ESLC research results for Croatia, ICT is used in 0.9% of the time spent teaching foreign languages.²³ Croatian 14 year-olds perform around the EU average in reading and listening in their first foreign language (English), however they fall behind in their English writing skills.²⁴ They are much less successful in their second foreign language skills when compared to their EU counterparts, with only 5% of pupils achieving a satisfactory reading level compared to 15% in the EU.²⁵

In 2013, the Act on Primary and Secondary Education was amended to prescribe the manner of adopting cross-subject and/or interdisciplinary content in teaching, and to create the conditions for introducing health and citizenship education. Implementation of a health education programme began in primary and secondary schools in the school year 2013/14. Its purpose is to support children and young people in developing into healthy, satisfied, successful, self-aware and responsible individuals.

Croatia has run a nationwide programme to include citizenship education at school as a cross-curricular theme for many years,²⁶ but new impetus has been achieved with the 2014 drafting of the citizenship education teaching plan and programme for primary and secondary schools. Based on the results of the experimental programme of citizenship education, implementation began in primary and secondary schools in the school-year 2014/2015 as a cross-curricular theme. Entrepreneurship has been added to the education system as a key cross-curricular competence, in line with the 2010-14 national strategy for entrepreneurship education.²⁷

Implementation of the Croatian qualifications framework, which began in 2014, is a long-term measure to close the skills gap between education and the labour market and stimulate lifelong learning. This new framework will act as a quality assurance mechanism, ensuring that study programmes are focused on learning outcomes and based on skills forecasts and sector skills analyses. To promote participation in lifelong learning, a system for recognition and validation of non-formal and informal learning will be developed, as part of the work being done to implement the qualifications framework.²⁸ The framework will ensure that learning outcomes are set in line with the competences and qualifications required by the labour market and will explore whether these can be acquired through non-formal and informal ways.

¹⁹ Education and Training 2020 national report questionnaire — Croatia (2014).

²⁰ European Schoolnet (2012) *Survey of schools: ICT in education — country profile Croatia*.

²¹ European Commission/EACEA/Eurydice, 2012. *Developing key competences at school in Europe: challenges and opportunities for policy*. Eurydice Report, p.21.

²² Eurostat, *tps00056*.

²³ European Commission (2011) *First European survey on language competences*.

²⁴ Around 26% of 8th grade pupils achieve a B2 level in reading in English compared to the EU average of 25%, 34% in listening compared to 29% in the EU and 10% in writing compared to the EU average of 13%.

²⁵ European Commission (2011) *First European Survey on Language Competences*

²⁶ European Commission/EACEA/Eurydice (2012) *Citizenship education in Europe*, Eurydice Report, p.24.

²⁷ Education and Training 2020 national report questionnaire — Croatia (2014).

²⁸ Ordinance on recognition and validation of formal and non-formal learning, which is being developed as secondary legislation following the law introducing the Croatian qualifications framework.

5. Tackling inequalities

5.1 Starting strong: improving early childhood education and care and tackling early school leaving

From a record low level of 3.7% in 2008 to 4.5% in 2013, the rate of early school leaving in Croatia has been continuously rising.²⁹ It is still far below the EU average of 12% in 2013, but it is no longer the lowest rate in the EU³⁰. Croatia has therefore met its national target of 4% and early school leaving is not considered a problem in Croatia.

The rate of participation in early childhood education and care has steadily increased over the last decade, but is still one of the lowest in the EU (71.7% compared to an EU average of 93.9%). Analysis of sub-indicators shows that this is correlated with Croatia's higher-than-average level of informal care.³¹

New legislation was adopted in 2013, prescribing a compulsory pre-school programme for all children in the year prior to enrolling in primary school, starting from the 2014/15 school year.³² In April 2013, legislation regulating home-based education provision was also passed.³³

5.2 Basic skills of students

PIRLS and TIMSS (2011) studies showed that reading and science skills of 10 year-olds match those of their EU counterparts. Mathematics skills, on the other hand, are much weaker. This was confirmed by the International Student Assessment (PISA)³⁴ of 15 year-olds, which found that 29.9% of pupils failed to achieve basic skills in the mathematics test compared to the EU25 average of 23%. In reading and science, Croatia is around the EU average, although there are striking gender differences in reading (27.6% of boys are low achievers, compared to 9.5% of girls). There is an incompatibility of the mathematics curriculum with the internationally tested mathematics skills.

Considerable variation in achievement across the three subjects is evident from the 2011 TIMSS & PIRLS study.³⁵ Croatian fourth grade students (10 year olds) achieved very good scores in reading, with more than half the students (54%) reaching the high achievement benchmark. In science, 30% reached the high achievement benchmark, but only 19% did in mathematics.

Quality assurance mechanisms in the Croatian education system are sporadic. There are self-assessment exercises for primary, secondary and secondary VET schools (run by different government agencies), but evaluation and quality assurance on a national level are not advanced. The state matura qualifies students for entry into most higher education institutions. Together with the new electronic application system for entry into the secondary and tertiary education, it offers a wealth of data collected electronically on the educational outcomes of pupils. This data has the potential to be used in quality assurance and to inform evidence-based policy making, but this potential is underused. Instruments for the external evaluation of education in primary schools exist for four subjects: mother language, English as foreign language, Physics and History.

The Strategy for Education, Science and Technology attempts to build national consensus on a quality culture in education and envisages an improved quality assurance system in the education sector. One of the long-term measures it proposes is extending the duration of primary school from 8 to 9 years, to consolidate the knowledge and skills acquired during primary education in Croatia.

²⁹ See additional contextual indicators at: <http://ec.europa.eu/education/monitor>.

³⁰ Slovenia had the lowest rate of early school leaving in the EU in 2013 (3.9%).

³¹ See additional contextual indicators at: <http://ec.europa.eu/education/monitor>.

³² The Act on Amendments to the Act on Pre-school Education, Official Gazette no. 94/2013.

³³ European Commission/EACEA/Eurydice (2014) *Key data on early childhood education and care in Europe*, p.173.

³⁴ <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>.

³⁵ International association for the evaluation of educational achievement (IEA), <http://timssandpirls.bc.edu/>.