



Education and Training Monitor 2015

Country analysis

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Luxembourg: Publications Office of the European Union, 2015

ISBN 978-92-79-50635-2
doi: 10.2766/120051

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Printed in Belgium

PRINTED ON ELEMENTAL CHLORINE-FREE BLEACHED PAPER (ECF)

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This publication is based on document SWD(2015)199. The Education and Training Monitor 2015 was prepared by the Directorate-General for Education and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL). DG EAC was assisted by the Eurostat, the Eurydice Network and the JRC's Centre for Research on Education and Lifelong Learning (CRELL) and Institute of Prospective Technological Studies (IPTS). The Members of the Standing Group on Indicators and Benchmarks (SGIB) were consulted during the drafting phase.

Manuscript completed in September 2015

Additional contextual data can be found online (ec.europa.eu/education/monitor)

Table of Contents

Table of Contents	3
Introduction.....	4
Austria	5
Belgium.....	15
Bulgaria	27
Croatia	37
Cyprus	48
Czech Republic.....	57
Denmark	66
Estonia.....	77
Finland.....	86
France.....	96
Germany	107
Greece	117
Hungary	127
Ireland	138
Italy.....	148
Latvia	158
Lithuania	166
Luxembourg	175
Malta	183
Netherlands	191
Poland.....	200
Portugal	209
Romania.....	220
Slovakia	230
Slovenia	240
Spain	250
Sweden.....	260
United Kingdom.....	271

Introduction

Volume 2 of the Education and Training Monitor 2015 includes twenty-eight individual country reports. It does not aim to provide a description of the national education and training systems, which can already be found in other existing sources. It rather builds on the most up-to-date quantitative and qualitative evidence to present and assess the main recent and ongoing policy measures in each EU Member State, with a focus on developments since mid-2014.

The structure of the country reports is as follows. Section 1 presents a statistical overview of the main education and training indicators. Section 2 briefly identifies the main strengths and challenges of the country's education and training system. Section 3 looks at expenditure on education. Section 4 focuses on early school leaving, early childhood education and care, and basic skills as important areas related to tackling inequalities. Section 5 deals with policies to modernise school education, covering, inter alia, the teaching profession, digital and language skills. Section 6 discusses measures to modernise higher education. Finally, section 7 covers vocational education and training, as well as adult learning.

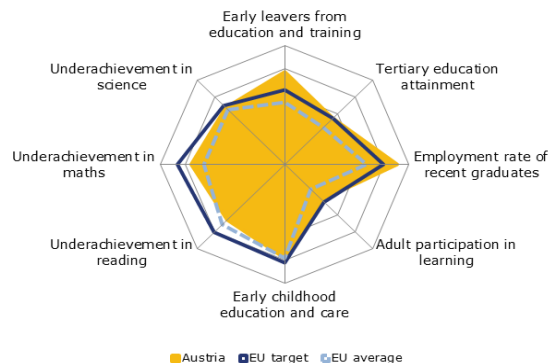
Austria

1. Key Indicators and Benchmarks

			Austria		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	●	:	19.5% ¹²	:	17.8% ¹²
	Maths	●	:	18.7% ¹²	:	22.1% ¹²
	Science	●	:	15.8% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		5.0%	5.0% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		9.8%	9.8% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		9.0%	7.6%	15.2%	12.7%
	Women		8.0%	6.5%	11.5%	9.5%
	Total	●	8.5%	7.0%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		22.8%	38.3%	31.0%	33.6%
	Women		24.3%	41.6%	38.7%	42.3%
	Total	●	23.6%	40.0%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		●	94.3%	93.9% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	: ¹³	:	84.6% ¹³
	Special needs education		:	: ¹³	:	32.4% ¹³
	Multicultural settings		:	: ¹³	:	13.2% ¹³
	ICT skills for teaching		:	: ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		9.4%	9.7% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			76.1%	70.2% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		90.4%	86.0%	71.3%	70.8%
	ISCED 5-8		90.6%	88.5%	82.5%	80.5%
	ISCED 3-8 (total)	●	90.5%	87.2%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	13.3% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	16.2% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	●	13.4%	14.2%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Austria's early school leaving rate is below the EU average. The country's vocational education and training system is well adapted to the labour market, a factor that has contributed to it having one of the lowest youth unemployment rates in the EU. Nonetheless, foreign-born students are three times as likely to leave school early as native-born students, and educational performance continues to be very dependent on parents' socio-economic status. Higher education lacks consistent strategic orientation and is underfunded. The drop-out rate from higher education remains high, and there is starting to be a lack of maths, science and technology graduates.

Box 1. The 2015 European Semester country-specific recommendation on education

The 2015 European Semester country-specific recommendations (CSRs) to Austria (Council of the European Union 2015) included a recommendation on education and training:

CSR 2: Take steps to improve the educational achievement of disadvantaged young people.

3. Investing in education and training

General government expenditure on education as a proportion of GDP has remained stable over 2011-13 at 5.0%, slightly above the EU average of 4.8% in 2013.¹ Expenditure on education as a percentage of overall government spending also remained broadly unchanged, at around 9.7-9.8% between 2010 and 2013 (compared to an EU average of 10.3% in 2013).

Austria plans to keep spending on education at 4.7% of GDP at least until 2030, with no increase expected before this date (Federal Ministry of Finance 2015). The government also intends to improve the country's complex funding system and make it more efficient. A high level reform commission set up to address this issue is expected to present its results by 17 November 2015.

4. Tackling inequalities

School education in Austria varies widely in its effectiveness. While average educational outcomes have improved, young people from low socioeconomic groups and/or with a migrant background continue to perform significantly worse in school than other students.

The early school leaving rate remains well below the EU average (7.0% compared to 11.1% in 2014) and below the Europe 2020 national target of 9.5%. The rate has been falling continuously over recent years, from 10% in 2006. The early school leaving rate remains lower for girls (6.5%) than boys (7.6%). The early school leaving rate among foreign-born students has also improved, falling by almost half from 27.8% in 2007 to 14.9% in 2014, and is also below the EU average (20.1%). Foreign-born students are, however, still three times more likely to leave school early than are native-born students (14.9% compared to 5.7% in 2014).

In 2013, only around a third (34%) of the adult working population with non-Austrian citizenship had completed an apprenticeship or a lower secondary vocational school qualification. Around 28% of migrants in the 25 to 64 age group had completed no more than compulsory schooling. In the 2011-2012 school year, 12% of foreign-born students did not continue their education after finishing their eighth year of school at a lower secondary school i.e. the school year normally attended by students of about 13-14 years of age (BMEIA 2014).

The participation of children aged four and above in early childhood education and care (ECEC) has risen continuously, from 86% in 2001 to 93.9% in 2013. Rates continue to vary widely across regions, however, ranging from 99.5% in Burgenland to 79.6% in Carinthia (in 2012).

¹ Source: Eurostat, General government expenditure by function (COFOG) database.

Participation of 0-2 year olds in ECEC is low in most provinces. Only Vienna is currently meeting the Barcelona target with a participation rate of 40.3% (compared to 11.9% in Styria). Participation rates are higher for 3 and 4 year olds, and rise to 97.2% for 5 year olds, education being compulsory from this age (Statistik Austria 2015b).

Students' performance in basic skills was shown to have improved in the 2012 OECD Programme for International Student Assessment (PISA). Performance in reading remains somewhat below the EU average, however, with 19.5% of students performing poorly on this test compared to 17.5% in the EU as a whole. In mathematics and science, the proportion of low achievers is below the EU average (18.7% and 15.8%, respectively, in Austria, compared with EU averages of 22.1% and 16.6%). Students from migrant backgrounds (migrants and the children of migrants), who constitute a large and growing proportion of students, score less well. Austria is one of the few countries that have not seen an improvement in the performance of second-generation migrants (OECD 2013).

A number of measures have been introduced to tackle early school leaving and low achievement of particular groups that have become visible in tests such as PISA. These relate, in particular, to teaching of German from an early age and improvements to the transition between stages of education, especially the transition from ECEC to primary school. In addition, more advice is now being given to students to help them choose the appropriate type of education and training (Federal Chancellery 2015, p.12) and a pilot programme for extending compulsory education until the age of 18 (*AusBildung bis 18*) has been launched.²

The government has increased funding for ECEC, including for German language lessons for this age group. The new measures introduced are designed to increase the participation of foreign-born children, in particular, in language learning. Some of the measures announced in the government programme are yet to be implemented, such as the national quality framework for ECEC,³ and the introduction of an additional compulsory year in ECEC. Teacher training of ECEC teachers has not yet been discussed within the reform of the teaching profession. A new approach to managing the transitional phase between early childhood education and primary school is currently being tested (see Box 2 for details). The number of places offered in all-day schools (as opposed to traditional schools that are open in the morning only) has also continued to rise, and the government announced that a total of EUR 800 million will be invested over the period to 2018/19 in increasing the number of all-day school places and in measures to improve the quality of afternoon provision in all-day schools.

The evaluation of the new secondary school system (*Neue Mittelschule*) published in March 2015 showed its introduction to have had mixed results. Whilst the school environment has improved overall, the level of educational achievement was not better than in the *Hauptschule*, the type of school being replaced. In particular, the new school system did not improve the levels of achievement of disadvantaged groups, which had been one of the main objectives. This was primarily due to the fact that the planned changes were only partly implemented. Recent statistics for 2013/14, however, showed the transfer rates from the *Neue Mittelschule* into upper secondary education to be better than those for the *Hauptschule* (Statistik Austria 2015a, p.50).

² https://www.sozialministerium.at/site/Arbeit/News/Auftaktveranstaltung_AusBildung_bis_18.

³ In April 2015, the Minister of Family and Youth announced a year-long study to analyse the future of Austrian ECEC, which will lead eventually to the development of quality guidelines (*Qualitätskompass*) for ECEC. The study is to be carried out in cooperation with the Chamber of Commerce.

Box 2. Structured transition from early childhood education to primary school

The Austrian government's work programme for 2013-2018 includes a number of measures designed to improve early childhood education and care (ECEC). In particular, the policies introduce an assessment of language ability at the age of four, designed to help identify appropriate support measures for individual children and to make the transition to school easier.

There is particular emphasis on improving the transition process, including the transfer of information on individual children from the pre-school or nursery to the primary school. The final year of ECEC, which is compulsory, and the first two years of primary school will form a new 'joint school-entry phase'. Representatives from 35 pilot projects met at the Education Ministry at the start of the 2014/15 school year to launch the test phase of the programme. A range of actors involved in the projects were invited, and the event was also designed as an opportunity for them to build networks, and thus allow ideas to be shared between the different initiatives. The projects are located across the country and will be implemented during two school years (2014 to 2016) in all regions. Their objective is to develop local approaches, to improve the individual support given to each child by taking a more holistic approach to each child's needs, and thus to allow each child to develop their skills to their full potential during the transition to primary school. Particular focus is given to language ability in German.

The idea behind this initiative is that it is only by giving every child high-quality support from the start of their education that their chances of success later in their educational career can be improved. The new three-year transition phase creates a structure for cooperation between pre-school and primary school, and will ensure that important knowledge gained in ECEC is not lost, but is used to allow better integration in primary school. Defining specific educational objectives will facilitate teaching across age groups, ensuring that each child is progressing at their own individual pace.

The current testing phase is designed to encourage closer cooperation between ECEC and primary school teaching staff. It is being used to develop experience and to identify best practices. The specific aims of the testing phase are:

- (1) to develop the syllabus for the transition phase, placing a clear emphasis on the teaching of basic skills;
- (2) to identify children who may need language support. Compulsory targeted intensive language training should allow each child to successfully complete the school-entry phase;
- (3) to involve parents in order to ensure that all children make progress with their learning.

This new approach should help children to feel more secure and confident at school, and should stimulate their curiosity to learn. The transition phase also involves a system of alternative performance assessment. This will help to keep parents better informed about and more involved in their child's education. Under the new transition structure, ECEC staff will play a bigger role in shaping children's development and will also gain a general insight into primary school life. Primary school teachers will, in turn, develop a better understanding of ECEC. Information on individual children will be passed from the pre-school to the primary school, to give primary school teachers a better understanding of each child's potential. Data protection issues related to the sharing of information must of course be considered. Adapting teaching to the needs of each child is expected to improve children's achievement, and also to help the school win parents' trust more easily. Most importantly of all, this measure could particularly benefit children from a disadvantaged socioeconomic and/or migrant background. An evaluation is scheduled for 2015, the results of which will be used to plan the full roll-out of the programme in 2016-2017.

5. Modernising school education

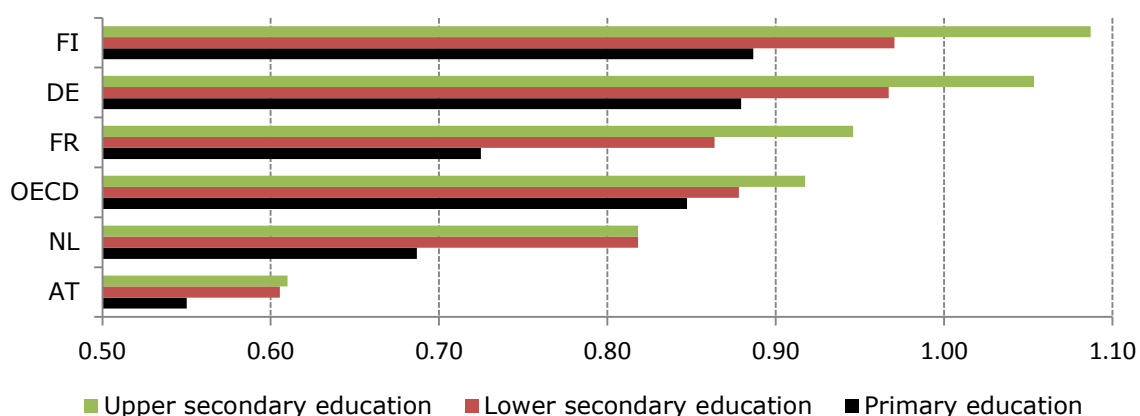
In the 2013/14 school year, Austria devoted the third most hours a week in primary education to reading, writing and literature (29.8 hours), behind only France and Hungary. It ranks ninth, however, for the teaching time allocated to mathematics (17.0 hrs compared to 27.0 hrs in Denmark). An average of 12.8 hours are devoted to natural sciences, the second longest among EU countries, after Dutch-speaking Belgium where 17.6 hours a week are spent on this subject.

In contrast, the 2.1 hours a week devoted to languages put Austria in lowest place in the EU ranking. In secondary education, the teaching time spent on different subjects is closer to the EU average, with the exception of languages, where Austria ranks in the last third with 12.5 hours (European Commission 2014, p.7).

The ratio of students to teaching staff in Austria was below the EU and OECD averages in both primary and secondary education in 2012.⁴ The difference is particularly marked in upper secondary education, where Austria ranks 34th out of the 37 OECD countries studied (OECD 2014a).

Austrian teachers' statutory salary levels are higher than the EU/OECD average at every stage of their careers. Their earnings are, however, only around 55-60% of those of comparable full-time workers with tertiary education (Figure 2). These last numbers have to be interpreted with care, however, since international comparison of statutory remunerations does not fully reflect actual payments. What is more, as the tertiary attainment rate in Austria has until recently been lower than in other countries (see section 6), income data of this group represented top earnings in the population.

Figure 2. Ratio of teachers' salaries to average earnings for full-time workers with tertiary education (2012)



Source: OECD (2014a)

Austria has introduced a new scheme for teacher training that standardises educational requirements and reorganises and standardises the teacher training programmes offered. New curricula have been developed for teacher training for all levels of education, and training programmes for upper secondary teachers will now benefit from greater cooperation between teacher training providers and universities. The new training schemes will start in 2015/16 for primary school teachers and in 2016/17 for secondary school teachers.⁵ These changes to training have been introduced alongside changes to teachers' contracts and conditions (introduced in 2013), which increased entry salaries and offer the potential for a steeper earnings curve during the first 15 years of service, after which point salaries flatten out considerably. These changes have been made with the aim of encouraging young people to become teachers, Austria having one of the oldest teacher populations in Europe, according to Eurostat figures.

Austrian teachers are burdened with a significant amount of administrative work⁶ and are not receiving sufficient ongoing training. Almost half of all teachers feel that they need better

⁴ The EU average refers to the 21 EU Member States included in the study.

⁵ Federal Ministry of Education and Women, information folder on *PädagogInnen Neu*.

⁶ In December 2014, the Austrian Court of Audit criticised the administration of general education in Austria (Rechnungshof 2014).

professional training, especially to be able to manage students with disciplinary and behavioural problems and those with special learning needs more effectively. The other main areas where teachers in Austria express a wish for more training are ICT teaching skills and pedagogy. The OECD Teaching and Learning International Survey (TALIS) found that Austrian teachers are given relatively little continuing education and training and also benefit from less support in the form of induction and mentoring than teachers in many other countries. On average, teachers had received 10.5 days of training during the last 18 months (OECD 2014b).

In 2015, Austria introduced a centralised assessment (*Zentralmatura*) for the upper secondary leaving certificate. This measure makes certificates from this level of education more comparable across the country. An expert group established in March 2015 has been asked to examine whether changes are needed to respond to improve the organisation of the assessment as well as its content.

6. Modernising higher education

Austria's tertiary education attainment rate among 30-34 year-olds has increased continuously in recent years. It achieved 40% in 2014, surpassing the Europe 2020 national target of 38%. This was, however, in part due to a reclassification of qualifications stemming from higher technical and vocational colleges introduced in ISCED 2011⁷, which has made it more difficult to assess the real level of progress. The tertiary education attainment rate among foreign-born people is close to the EU average (35% compared to 35.6%), but still significantly lower than for the native-born Austrian population, for which it is slightly above the EU average (41.8% compared with 38.6%). The percentage of foreign-born students in Austria is relatively high, at 24%.

Overall, 40.8% of university students drop out within the first three semesters. At universities of applied sciences, however, this is only 18.1% (Statistik Austria 2015a). Students who drop out are very often those that work whilst studying and single mothers. While drop-out is a concern, data on this pattern is very imprecise, however. Around half of the registered drop outs actually either change study program, or university, or they change into a different type of higher education (e.g. from a university to a university of applied sciences or a university college for teacher education). The figures also do not take account of the fact that some students were enrolled on multiple courses at once (Thaler and Unger 2014).

Finding a job has become more difficult even for the high-skilled due to deteriorating economic conditions. The employment rate among recent tertiary graduates⁸ began to fall in 2013, to 93%, and has continued to decline, reaching 88.5% in 2014. The negative trend in employment of recent tertiary graduates seen in Austria is starting from a very high level, but is more pronounced than in the EU overall, with the rate dropping by 4.5 percentage points between 2013 and 2014, compared to only 0.4 percentage points for the EU (Figure 3).

Austria's higher education institutions continue to face increasing student numbers, and universities are generally considered to be underfunded (Österreichischer Wissenschaftsrat 2013). The current trend of increasing student numbers is projected to continue at least until 2017, when it may start to slow (Statistik Austria 2014).

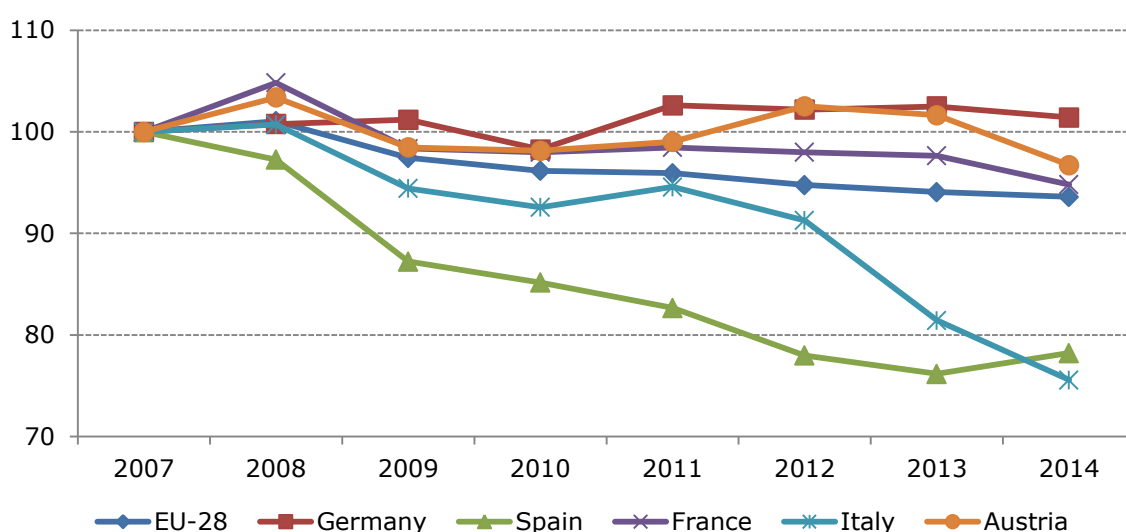
The total budget allocation for higher education institutions increased from EUR 6.2 billion over the period 2007-09 to EUR 8 billion for the period 2013-15. At the same time student numbers increased from 261 000 in 2007 to 376 500 in 2012. Thus, while funding increased by 29%,

⁷ The new International Standard Classification of Education (ISCED 2011), implemented in the EU Labour Force Survey for the first time in its 2014 annual data, causes a break in series for data on Austria's tertiary education attainment (ISCED 2011 levels 5 to 8). The qualification acquired upon successful completion of higher technical and vocational colleges is now allocated to ISCED level 5 (tertiary level). Under ISCED 1997, the same qualification was reported as ISCED level 4 (post-secondary non-tertiary level).

⁸ People aged 20-34 who left education between one and three years before the reference year.

student numbers went up by 44.3%. In 2002, Austria introduced reforms giving higher education institutions greater independence. Subsequent reforms then allowed institutions to develop a more individualised profile and encouraged cooperation with the private sector. Performance-based funding was introduced in 2006, as a way of incentivising universities to make use of these freedoms. The funding is allocated on the basis of three-year agreements between the education authorities and the higher education institutions. Evidence collected to date shows that the changes have had a generally positive effect on the positioning of institutions and have helped to strengthen internal and external governance (Österreichischer Wissenschaftsrat 2013). Austria is also planning to introduce capacity-based financing. The pilot phase provided for in the legislation ended in 2014, however, and the results are currently being evaluated. Funding for a general roll-out of this type of system (Bundeskanzleramt 2013) has not yet been obtained, making the original schedule less realistic.

Figure 3. Employment rates of recent tertiary graduates (index 2007 = 100)



Source: European Commission calculations based on Eurostat data

Students in Austria are not always satisfied with the quality of teaching (Larcher and Schönherr 2012). The Higher Education Advisory Board, established in 2012, advises on a variety of issues including the quality of teaching. In March 2015, the Austrian Higher Education Conference presented a recommendation on improvements to the quality of higher education teaching (*Qualität der Lehre*). It addressed issues including the ability of individual teachers, the courses offered by universities, the organisation of learning and teaching and the efficiency of the higher education system. Although these recommendations are not binding, the government plans to use them as a reference for future performance agreements.

7. Modernising vocational education and training and promoting adult learning

Austria has a very well developed vocational education and training system, offering a wide range of courses. In 2013, 70.2% of upper secondary students (ISCED 3) were following vocational education and training (VET) programmes. This is one of the highest rates in Europe, well above the EU average of 48.9%. A total of 120 579 young people were enrolled in initial dual VET courses at the end of 2013.⁹ The high rate of participation in VET and the quality of the courses offered are two of the main factors explaining Austria's employment rate for recent

⁹ In 1980, the number of apprentices reached a peak of 194 000, but then dropped steadily until 1996, when it started to fluctuate around 120 000. It peaked again in 2008 at around 130 000.

upper secondary graduates,¹⁰ which is one of the highest in the EU (88.7% compared with an EU average of 75.6%). The proportion of young people between 15 and 29 years old not in education, employment or training (NEET rate) was also one of the lowest in the EU, at 8.7%, around half the EU average of 17%.

Adult participation in lifelong learning has remained at around 13-14% over the last five years (in 2014, it stood at 14.2%, above the EU average of 10.7%). The participation rate of foreign-born individuals has been catching up and was only 0.5 percentage points lower than the overall figure in 2013. People between the ages of 24 and 35 are twice as likely to take part in training than those in the 45-64 age group.¹¹ Low-skilled adults are, however, six times less likely than those with a higher skill level to follow a job-related training course (compared with a likelihood of five times less in the EU overall). Austrian adults score well above the EU average in the Survey of Adult Skills (PIAAC) numeracy proficiency tests and slightly above the EU average in literacy. The gap in literacy proficiency between foreign- and native-born individuals is close to the EU average and the proportion of people with low literacy or numeracy skills (level 1 or below) is significantly below the EU average.

Austria has continued to modernise and upgrade vocational education and training. VET courses offered in upper secondary school will be modularised (structured in semester modules) as of 2015/16, as is the case for general education. Work experience requirements now apply across a wider range of courses.¹² Standardised competence-based upper secondary leaving exams (*Reife- und Diplomprüfung* and *Matura*) have been piloted in the VET sector and will be introduced in all upper secondary schools in 2016.

The updated curricula for the school-based part of around 200 types of apprenticeship now include the new approach based on 'learning outcomes'. This approach has been introduced as part of the quality initiative (Cedefop 2015, p.26).

The most recent amendment to the vocational training act (*Berufsausbildungsgesetz*) introduced quality objectives for apprenticeships and provided for the introduction of standardised programmes and curricula that will allow students to obtain partial qualifications as part of the inclusive VET initiative. It also makes it easier for education institutions to pilot innovative approaches. In order to encourage companies and other education providers to modernise the training they offer, a specific fund was set up in 2014 to subsidise improvements to training methods, assessment and documentation. The scheme whereby students can complete an apprenticeship at the same time as studying for the upper secondary school leaving qualifications that give access to higher education (at *Lehre mit Matura* universities and universities of applied sciences and on post-secondary programmes) has been extended to 2018.

The government announced in 2015 that it will be extending the *Initiative Erwachsenenbildung* until 2017. This is a joint federal and regional initiative co-funded by the European Social Fund that supports schemes that offer courses leading to the compulsory school leaving certificate for adults who did not obtain this when they were at school.

¹⁰ People aged 20-34 who left education between one and three years before the reference year.

¹¹ Austria has maintained a high rate of participation among the younger age group (24-35 years), at 22.5% compared with an EU average of 15.2%. The outperformance compared to the EU average is proportionally even greater for the middle age range (35-44 years), at 13.9% compared with 9.1%, but lower for the older age group (45-64 years), at 11.5% compared with 8.7%.

¹² VET programmes preparing students for jobs in the business sector (e.g. business administration) now also include mandatory work experience, in the same way as the programmes for, e.g. engineering and tourism.

References

- BMEIA (2014), Zahlen, Daten, Fakten zu Migration 2014, http://www.bmeia.gv.at/fileadmin/user_upload/Zentrale/Integration/Integrationsbericht_2014/Statistische_Daten.pdf
- Bundeskanzleramt (2013), Arbeitsprogramm der österreichischen Bundesregierung 2013-2018, <https://www.bka.gv.at/DocView.axd?CobId=53264>
- Cedefop (2015), Stronger VET for better lives. Cedefop's monitoring report on vocational education and training policies 2010-14, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3067>
- Federal Chancellery (2015), Austrian National Reform Programme 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_austria_en.pdf
- Federal Ministry of Finance (2015) Austrian Stability Programme. Update for the period 2014 to 2019, http://ec.europa.eu/europe2020/pdf/csr2015/sp2015_austria_en.pdf
- European Commission (2014), Comparative Overview on Instruction in Full-time Compulsory Education in Europe 2013/14, http://eacea.ec.europa.eu/EDUCATION/EURYDICE/documents/facts_and_figures/IT_Comparative_analysis_2013_14.pdf
- OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>
- OECD (2014a), Education at a Glance 2014. OECD indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>
- OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing
- Österreichischer Wissenschaftsrat (2013), Analyse der Leistungsvereinbarungen 2013-2015 und Stellungnahme, http://www.wissenschaftsrat.ac.at/news/LV_2013_2015_Endversion.pdf
- Larcher, E. and Schönherr, D. (2012), Qualität der Lehre, SORA, http://www.oeh.ac.at/fileadmin/user_upload/pdf/Presse/Anhang1_Qualitaet_der_Lehre_SORA-Studie.pdf
- Rechnungshof (2014) Bericht des Rechnungshofes: Standortkonzepte im Bereich der Bundesschulen. 2014/15
- Statistik Austria (2015a), Bildung in Zahlen 2013/14, <https://www.bmbf.gv.at/ministerium/vp/2015/20150422a.pdf?4ut4xd>
- Statistik Austria, Hochschulprognose 2014, http://statistik.at/wcm/idc/idcplg?IdcService=GET_PDF_FILE&RevisionSelectionMethod=LatestReleased&dDocName=063538
- Statistik Austria (2015b), Kinderbetreuungsquoten nach Einzeljahren 2013, http://www.statistik.at/web_de/statistiken/bildung_und_kultur/formales_bildungswesen/kindertagesheime_kinderbetreuung/021658.html
- Thaler B., Unger M. (2014), Dropouts ≠ Dropouts, Wege nach dem Abgang aus der Universität, Studie im Auftrag der Österreichischen Universitätenkonferenz

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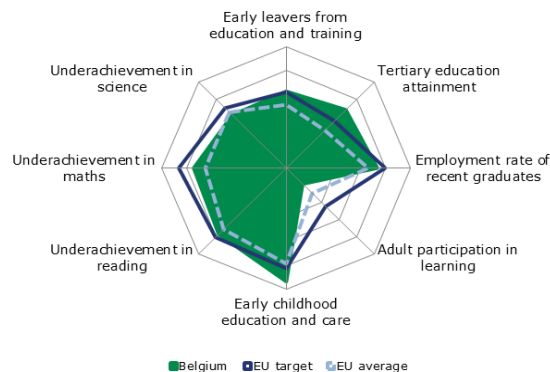
Belgium

1. Key Indicators and Benchmarks

			Belgium		EU average			
			2011	2014	2011	2014		
Educational poverty and spending cuts: challenges for the education sector								
Share of 15 year-olds with underachievement in:	Reading	•	:	16.1% ¹²	:	17.8% ¹²		
	Maths	•	:	19.0% ¹²	:	22.1% ¹²		
	Science	•	:	17.7% ¹²	:	16.6% ¹²		
Education investment	Public expenditure on education as a percentage of GDP		6.3%	6.4% ¹³	5.1%	5.0% ¹³		
	Public expenditure on education as a share of total public expenditure		11.7%	11.8% ¹³	10.5%	10.3% ¹³		
Education attainment levels of young people across Europe								
Early leavers from education and training (age 18-24)	Men		14.9%	11.8%	15.2%	12.7%		
	Women		9.7%	7.7%	11.5%	9.5%		
	Total	•	12.3%	9.8%	13.4%	11.1%		
Tertiary education attainment (age 30-34)	Men		37.1%	37.4% ^u	31.0%	33.6%		
	Women		48.1%	50.2% ^u	38.7%	42.3%		
	Total	•	42.6%	43.8% ^u	34.8%	37.9%		
Policy levers for inclusiveness, quality and relevance								
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	98.1%	98.1% ¹³	93.2%	93.9% ¹³		
Teachers' participation in training	Any topic (total)		:	88.2% ^{13, FL}	:	84.6% ¹³		
	Special needs education		:	23.1% ^{13, FL}	:	32.4% ¹³		
	Multicultural settings		:	8.3% ^{13, FL}	:	13.2% ¹³		
	ICT skills for teaching		:	37.2% ^{13, FL}	:	51.0% ¹³		
Foreign language learning			Share of ISCED 2 students learning two or more foreign languages	26.4%	26.3% ¹²	63.0%	:	12
Share of ISCED 3 students in vocational education and training (VET)					72.8%	60.2% ^{13, b}	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4			73.5%	67.4%	71.3%	70.8%	
	ISCED 5-8			86.0%	86.2%	82.5%	80.5%	
	ISCED 3-8 (total)	•		80.8%	79.0%	77.1%	76.1%	
Learning mobility	Inbound graduates mobility (bachelor)		:	6.4% ¹³	:	:	:	13
	Inbound graduates mobility (master)		:	16.1% ¹³	:	:	:	13
Adult participation in lifelong learning (age 25-64)		•	7.1%	7.1%	8.9%	10.7%		

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, nl= Flemish Community, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The Belgian education system is still performing well on average. Participation in early childhood education and care is almost universal for children over the age of three and the early school leaving rate is on a downward trend. The rate of public expenditure on education is among the highest in the EU and all three language communities (the Flemish Community – BE nl; the French Community – BE fr; the German-speaking Community – BE de) are conducting major school reforms. There is however high educational inequality related to socio-economic and immigrant background and wide gaps in performance between schools. There are also marked differences in basic skills performance and in early school leaving rates between the communities and regions. The academic performance of pupils enrolled in vocational education and training (VET) is poor. The most disadvantaged schools lack experienced teachers and head teachers, and there are capacity and quality problems in the education infrastructure. The transition from school to work is very difficult for young people with lower secondary education qualifications at most. Implementing the reforms will require major efforts from a wide array of actors.

3. Investing in education and training

In 2013, general government expenditure on education as a proportion of GDP remains among the highest in the EU (6.4% in 2013 compared to the EU average of 5%).¹³ The proportion of public expenditure on educational infrastructure is among the lowest in the OECD countries (OECD 2013a; European Commission 2013). The different government agreements (2014-19) make reference to the need to speed up investment in infrastructure.¹⁴

All three communities are looking at ways of spending more efficiently,¹⁵ in particular to cope with an increasing school population. The possible adjustment of BE nl school funding system will be fed by the audit of the Belgian Court of Audit (2015), the evaluation of the 2008 reform of operational budgets in school education (Groenez et al. 2015) and the findings of the ongoing OECD School Resources review. The results of the evaluation of the funding of higher education (Flemish Ministry of Education 2015) are currently analysed. BE fr reform process of compulsory education is, amongst others, also analysing efficiency of spending, and first results are already available (Pacte pour un enseignement d'Excellence 2015).

The initial BE nl and BE fr 2015 budgets¹⁶ include a modest nominal annual increase (respectively of EUR 72.6 million and EUR 39.5 million) in education expenditure. The Flemish budget reshuffling protects elementary education and infrastructure. However, the increase of the operational budget for higher education will be at a slower pace than initially planned by not immediately taking into account the increase in student numbers (Flemish government, 2015). Higher tuition fees will be introduced in higher education as of 2015-16 as well as for adult and part-time art education. BE fr budget introduces increased flexibility to finance educational staff with operational expenditure.

¹³ Source: Eurostat, General government expenditure by function (COFOG) database.

¹⁴ Measures encompasses namely the ongoing 'Schools of tomorrow' plan and the underdevelopment 'Infrastructure Masterplan' (Flemish Community) and the 2010 plan to renovate and build new school buildings and the 2013 emergency plan to speed up implementation in BE fr.

¹⁵ For example: reduction of the high number of pupils repeating a year in compulsory and higher education, rationalisation of the initial vocational and training (IVET) and higher education (HE) offer, more efficient management of operational costs of schools and greater synergy between education and training providers (in particular in BE fr).

¹⁶ Adjustments have been made to the initial budget of both communities in the meantime.

4. Tackling inequalities

Belgium's early school leaving rate¹⁷ (ESL) continued to fall in 2014 (9.8% in 2014 compared with 11% in 2013), remaining below the EU average. This hides persistent disparities between population sub-groups, regions and sub-regions. In 2013 the early school leaving rate was 7.5% in the Flemish Region, 14.7% in the Walloon Region and at 17.7% in the Brussels Capital Region. The early school leaving rate among foreign-born people is twice higher than the rate of those born in Belgium (17.5% in comparison to 8.7%). The rate is also higher among men (11.8% compared with 7.7%) and pupils on VET courses and apprenticeships.

BE nl own ESL-indicator, based on administrative data for Flemish schools and monitoring the share of young people leaving education with at most lower secondary education, shows a decrease from 12.9% in 2010 to 11.7%¹⁸ in 2013 (Cabinet of Flemish Minister of Education 2015). There is a strong correlation with the area in which the pupil lives,¹⁹ the language spoken at home and the mother's level of education. Based on BE fr indicators, the rate of young people leaving education with at most lower secondary education is estimated to be above 20% in BE fr and rose by 3.5% in 2002-12 (Lambert 2014). In both communities there is concern about the proportion of pupils in special needs education, and the overrepresentation of disadvantaged pupils (Hirtt et al. 2013).

Participation in quality early childhood education and care (ECEC) may be helping to prevent early school leaving. Although participation is almost universal in Belgium for children from 3 years onwards, lower participation rates and less regular attendance of specific target groups are observed. There is also variation in the quality of provision (European Commission 2014c). Participation of children under three in childcare remains limited²⁰ and the social gradient in the uptake of care services is the third highest in the EU (European Commission 2015a). A lack of places²¹ may also hamper participation.

The 2012 OECD Programme for International Student Assessment (PISA) confirms that Belgium is one of the countries with the highest levels of educational disparity in basic skills performance linked to socioeconomic factors (OECD 2013b). It highlights significant performance gaps between schools. The proportion of low achievers has fallen in reading and stagnated in maths and science over the last decade. It is below (BE nl), close (BE de) or above (BE fr) the OECD average for the different communities. However, compared to 2009 there is an increase of low achievers in the three tested subjects in BE nl.²² In BE fr, a slight improvement is observed despite a worrying percentage in science. The performance of pupils with an immigrant background is a particular challenge as they make up a significantly higher proportion of the pupils population than the OECD average (15.1% compared with an OECD average of 12% in 2012) and their proportion increased faster during the last decade.^{23,24} In spite of an overall improvement, Belgium still has one of the largest performance gaps between pupils born in the country, first- and second-generation immigrants²⁵ after taking account of their socio-economic background. Reports confirm the unequal distribution of immigrant children between schools, a

¹⁷ EU and national indicators pursue different objectives and are complementary. The EU indicator on ESL (18-24 years old) allows monitoring the ESL rate across Europe in a comparative way. National indicators are not standardised and do not always exist. They are however a prerequisite to develop and monitor an evidence-based strategy against ESL.

¹⁸ At 6.5 pp from the 5.2% Flemish target for 2020.

¹⁹ Concerning the living area, the highest rates are found in cities: Antwerp (24.6%), Ghent (20.6%), the Brussels Capital Region (19.6% for schools depending of the Flemish Community) and Genk (19.4%).

²⁰ In Flanders, the proportion of children in formal childcare amounts to 48.8% in 2013, with great variations across the different provinces. Access to (paying provisions for) childcare for disadvantaged families is still limited.

²¹ In Flanders, the authorities plan to create 17 500 places by 2020; in Brussels and Wallonia measures are also planned to overcome shortages.

²² This has been accompanied by a decrease of the proportion of top achievers in maths.

²³ 11.8% in 2003 vs. 9% OECD average.

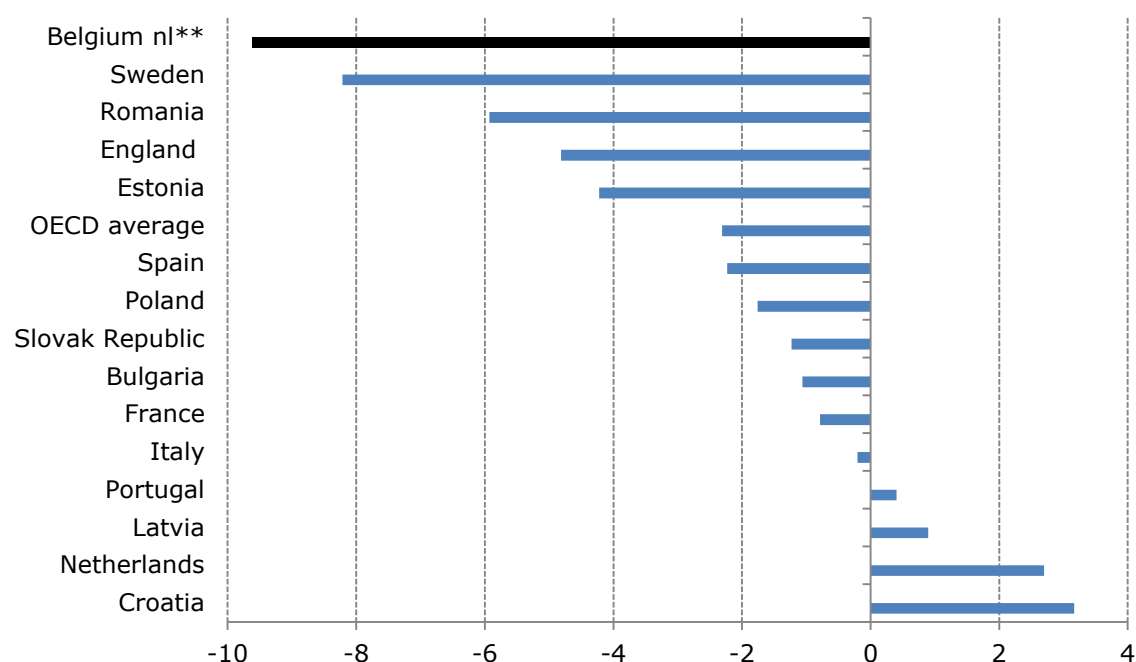
²⁴ The proportion of students with an immigrant background is higher in schools in BE fr than the Belgian average (18% in 2009).

²⁵ First-generation immigrant pupils are pupils born outside Belgium whose parents were also born outside the country; second general immigrants are pupils born in Belgium, but whose parents were born outside.

high concentration in densely populated areas, and a more difficult transition from education to work.

The most disadvantaged schools lack experienced teachers and head teachers. According to the 2013 Teaching and Learning International Survey (TALIS), BE nl (other communities did not participate) results are amongst the lowest when it comes to employing the most experienced teachers in the most 'challenging' schools (Figure 2). Recent research shows that the situation in BE fr is similar (Pacte pour un enseignement d'Excellence 2015).

Figure 2: Difference in the proportion of more experienced teachers working in more and in less challenging schools*



* Categorisation of more challenging schools is based on principals' estimates of the broad percentage in the schools of (a) students from socioeconomically disadvantaged homes, (b) students with special needs, and (c) students whose first language is different from the language of instruction.

** Flemish Community

Source: OECD (2014)

All three communities have announced or taken measures (that differ in terms of approach and scope) to fight early school leaving, revise their longstanding priority education policy and enrolment decrees, improve basic skills for all, reduce school failure and address radicalisation in education. Moreover, all communities are engaged in major school reforms aimed at improving quality and reducing educational inequalities (see section 5). There are also continuing efforts to improve VET with a focus on combining learning with education and remedial actions for early school leavers (see section 7). Finally, also the recent decision to request young people up to the age of 21 to complete upper secondary education before qualifying for the integration allowance is an attempt to prevent young people from dropping out of education.

The Flemish government is developing a comprehensive policy on study entitlement, truancy and school drop-out that will replace the existing early school leaving and truancy action plans (Belgian Government 2015). A consultation on a concept note and action plan approved by the government was launched in June 2015. No decision has been made on the budgetary allocation. At the same time, recent measures to tackle early school leaving and earmarked

subsidies for 'accompanying measures' have been cancelled.²⁶ A recent survey recommends pupils have access to the best teachers as early as possible in their educational pathway and highlights the financial returns of early investment in tackling ESL (De Witte 2014). BE de focuses in particular on promoting the mental and physical health of children. Whilst there is no comprehensive strategy in BE fr, the fight against ESL is supported by two decrees that are being gradually implemented from the 2014/15 academic year onwards. They relate to the welfare of young people, the school drop-out, preventing violence and providing guidance, and improving cooperation between the education and the youth sectors. More attention is being paid to absenteeism.²⁷ In the Brussels Capital Region, which faces specific governance and quality issue, the Brussels government has strengthened its cooperation with both communities to develop early intervention plans, corrective measures and address insufficient language competences.²⁸ Moreover, the exchange of data related to pupils in the Brussels Capital Region between BE fr and BE nl will be improved from October 2015 and will also be extended to early childhood education. Measures to increase participation in early childhood education are planned (BE nl with a focus on three-year-olds). In September 2015, a set of measures aimed at improving the quality of early childhood education including a reduction of the repetition rate as well as reducing the proportion of children oriented towards special needs education have been launched (BE fr; Milquet 2015).

With regard to compulsory education, BE nl is continuing to focus on mastery of the instruction language (see Box 1) and more inclusive education. The 'M- decree' enters into force in September 2015: every child, including those with special needs, will have the right to enroll in a mainstream school, provided this is possible with reasonable adaptations (European Commission 2015b). Other measures aim to improve the quality of teaching and the support provided to schools such as: the 'Inspection 2.0' initiative that aims to increase the supporting role of the schools inspection services by 2017, increasing use of existing teaching support by the low-achieving schools; and providing better data to help inform school governance and teachers (Crevits 2015). In September 2014, BE fr began a reform of the first year of its secondary education system. This includes developing an action plan at school level (and possibly at individual student level), to tackle low achievement. The development of inclusive education for students with special needs is still at a very early stage of implementation in BE fr.

5. Modernising school education

With regard to teaching practices in lower secondary education, TALIS 2013 indicated that in BE nl,²⁹ the proportion of teachers that had participated in professional development activities in the previous 12 months is slightly above the EU average (88.2% compared to 84.7%). However, participation in ICT training (at 37.2%) is below the EU average. At the same time, only 27% of teachers use ICT for students' projects or class work (compared with an EU average of 34%). Collaborative teaching is not well developed (Figure 3) and the proportion of teachers assigning different work to students based on their individual needs is below the EU average (27.9% compared with 46%). The amount of time spent on administrative work ranks

²⁶ For instance, subsidies granted to municipalities that were earmarked for tackling ESL (*flankerend beleid*) are now part of their global budget. At the same time, local authorities now have an increased responsibility to tackle ESL. This might result either in a decrease or in an increase of local budget for ESL. Some projects and measures have been abandoned such as the discontinuation of the PIEO project, a pilot project that provided counselling to underperforming disadvantaged schools. The sending of notification letters to parents to inform them about school truancy (*spijbelbrief*) was stopped as part of the 'TARRA operation' launched in March 2015. This operation aims to reduce the administrative burden on schools.

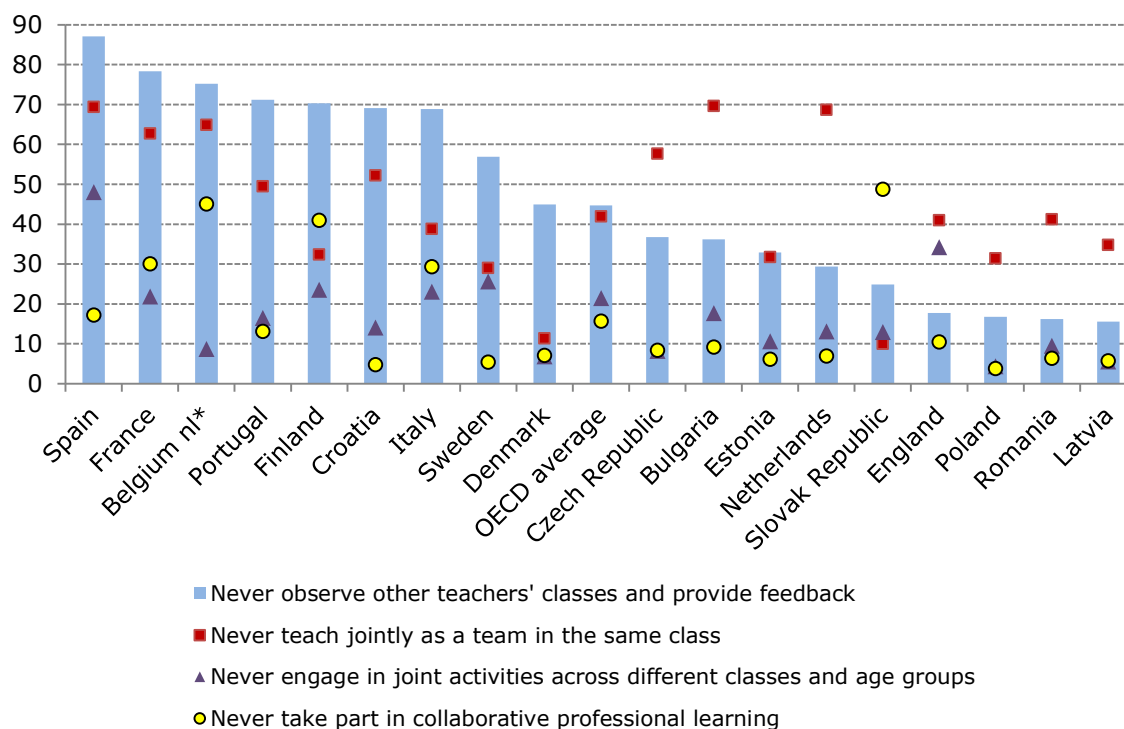
²⁷ Levels of unauthorised absences are to be reduced at secondary level from 2015/16 and the rules on school exclusion for absenteeism may be changed to encourage schools to address the problem

²⁸ The objectives are to make it easier to facilitate the exchange of teachers between communities, networks and schools; to develop language immersion in at least one of the national languages from primary school onwards – or even earlier – and take specific measures to encourage the learning of English; change the rules on and improve the funding of second language learning as soon as possible; create at least one school for training bilingual teachers. Measures have been taken to make teachers' mobility between the three communities possible from September 2015; <http://www.teachersmobility.be>

²⁹ TALIS covers the Flemish Community, so all schools in the Flemish Region plus those in the Brussels Capital Region who have Dutch as their main instruction language.

among the highest of the OECD countries both for heads and teachers. With regard to ICT for education, other sources point to the need to help teachers from all communities to make better use of the ICT tools available.³⁰

Figure 3: Percentage of lower secondary education teachers who report never doing the following activities



* Flemish Community
Source: OECD (2014)

All communities are carrying out reforms of either their compulsory education (Be fr) or their secondary education system (BE de, BE nl). The different government agreements (2014-19) recognise the central role of heads and teachers as well as the need for new teaching approaches namely to cater for the needs of an increasingly diverse school population. In order to tackle the teacher shortages, to reduce the high proportion of teachers who abandon the profession and to attract the best candidates, there are plans to make the career more attractive, reform teacher's training, improve support to the schools with greater autonomy and responsibility for quality monitoring at school level and reduce the administrative burden. A large-scale operation to lower the administrative burden on schools (*Tarra*) was launched in BE nl.

In 2015, BE fr launched a major reform of its compulsory education system.³¹ The preparatory stage 2015-16 focuses on in-depth analysis and stakeholder consultation, which indicates a willingness to develop a transparent and evidence-based policy. The first phase culminated in reports being published in July 2015 providing both a prospective view and a detailed analysis of the current situation. Those reports will be used by 12 working groups launched in September 2015 which will establish the key components of the reform in 2015-16 in line with the key objectives defined by the government. The reform aims to fight educational inequality, raise the average performance and adapt education to the 21st century by increasing the quality of: 1) guidance on and the consistency of the students' pathway; 2) training, support and guidance for

³⁰ See European Commission (2014b) for more details.

³¹ Pacte pour un enseignement d'excellence : <http://www.pactedexcellence.be>.

teachers and other staff involved in education; 3) the education and training provision; 4) education governance and efficiency. The reform will be implemented gradually between 2016 and 2025. However, new measures have already been taken or launched (Milquet 2015). In parallel, the draft decree on initial teacher training reform is planned by autumn 2015.

The reform of secondary education currently being prepared by BE de aims to revise the organisational structure of the school and improve differentiated support for pupils based on early detection of problems and inclusive approach. The box provides details on BE nl reform.

Box 1. The modernisation of secondary education (BE nl)

On 4 June 2013, the Flemish Government adopted a master plan for a 10-year reform of its secondary education system, accompanied by a roadmap comprising 55 measures. The government agreement 2014-19 foresees to implement the master plan. The reform aims to address early school leaving and 'school fatigue', the large impact of socioeconomic and cultural origin on a child's educational outcomes and study pathways, the issue of pupils being trapped in VET with limited opportunities for upward progression between secondary tracks.³² It will also look at facilitating transition at each stage.

Main points and measures:

- Stronger basic competences in primary education and easier transition to secondary education: the curriculum for the instruction language, sciences and technology will be strengthened. This includes the introduction (in 2014/15) of language tests at the beginning of primary (and secondary) education and of 'sciences and technique' and 'human and society' as distinct subject areas (2015/16). A differentiated approach is planned for stronger and for weaker pupils with the emphasis on gaining a qualification. Changes will be introduced to ease the transition to secondary education.
- Fields of study: introduction of a classification of fields of study according to five 'areas of interest'³³ instead of general, technical and vocational tracks. Each 'area of interest' would include three fields of study that lead to tertiary education, 'open-ended' fields and fields preparing for direct transition into the labour market. The new grouping aims to introduce more flexible pathways with students moving between fields of study within their area of interest.
- Stages within secondary education: the three stages will be reorganised. A more comprehensive first stage (years 1-2) aim at better orientation and reducing the number of unqualified pupils following a specific track. In the first year, the curriculum will include subjects covering all areas of interest. In the second year, students will be able to give a greater weight to two areas. From the third year onwards, pupils will stay within one single area. For the second (years 3-4) and third stages (years 5-6) the study offer will be simplified resulting in fewer study programmes.
- Curriculum reform, strengthening of science, technology, engineering and mathematics (STEM) and foreign languages, relevance to the labour market: learning outcomes will be simplified with clearer distinction between knowledge, skills and attitudes and clear levels of achievements. Attention will be paid to work-based learning in the third grade and to the relevance of the professionally-oriented programmes.
- Support, guidance for pupils and transition after secondary education: creation of a personal file for each pupil from primary education onwards; measures to ensure a good mastery of the instruction language; in each grade, the introduction of 5-7 weekly hours for a differentiated approach³⁴ and of a non-binding school guidance test at the end of secondary education to help pupils make a more informed choice with a better insight into future opportunities. Guidance centers (CLB) may be reformed based on the findings of an ongoing audit.

³² The 'waterfall' system: general education is considered to be better than technical education, technical better than vocational and full-time vocational education better than part-time vocational education.

³³ Five areas of interest have been identified: science and technology; society and well-being; economy and organisation; language and culture; arts and creation.

³⁴ Stronger students will be able to take more advanced courses, weaker students will be able to use this time to catch up or exercise. Others will select optional courses to try out subjects to help them for their orientation in the future.

- **Staff, governance and funding:** measures include a revision of the funding system to encourage schools to engage in partnerships within school communities enabling for professional management of larger entities; support for head teachers including professional training and improved continuing professional development for teachers; the introduction of a master in education and of a non-binding evaluation test for students at the entrance (under debate) of HE programme for teachers; improvement of the School Advisory Services following on from the findings of the February 2014 evaluation. A career pact initiative is (re)launched and expected by 2016, with the aim of offering better working conditions to young talented teachers.

State of play:

The 10 year reform is being implemented gradually. Many decisions are still to be taken, namely the fundamental decision (European Commission 2015a) on the overall structure of the school system, initially planned by 2016 (Flemish government 2014). Preparatory work is ongoing.³⁵ The areas under discussion include diverging interpretations about the 'comprehensive first stage' and the implementation of the weekly 'differentiation' hours. These could be devoted either to individual differentiation (remediation, extension or intensification), or imply differentiated 'blocks' of hours to extend the present tracking system. Schools and their umbrella organisations are anticipating the upcoming reform. Many schools are negotiating partnerships with complementary schools, as the new study provisions require larger units and a reallocation of buildings and equipment. Although the potential benefits seem great, the reform is still at an early stage.

6. Modernising higher education

Belgium's tertiary education attainment rate for 30-34 year-olds is above the EU average (43.8 % compared with 37.9% in 2014). However, the rate is still below its 2010 level and the Europe 2020 national target of 47%. The gap between the attainment of men (37.4% in 2014) and women (50.2 %) remains significant as well as the lower attainment rate of foreign-born people compared to native-born (35.2% versus 46.2% in 2014). The employment rate of recent tertiary graduates³⁶ is above the EU average (86.2% in comparison to 80.5% in 2014). National data confirm that higher education participation is linked to socio-economic and cultural background and also highlight other explanatory factors such as family structures. Inequalities are the highest in the master cycle (Statistics Belgium 2015).

A recent survey (Lambert 2014) suggests that an increase in the participation rate in BE fr is compromised by the increasing proportion of young people leaving education without completing upper secondary education. Ongoing reforms of compulsory education are therefore seen as fundamental to address educational inequalities at an early stage. Other surveys³⁷ lead to similar conclusions for BE nl.

Greater efficiency is needed to cope with the challenges of massification, quality and equity and budget constraints. Both Communities have taken or plan measures on quality assurance and accreditation, a possible revision of their funding system³⁸ and a rationalisation of the number and variety of courses.

Despite an increase in tuition fees for Flemish students³⁹ in 2015-16, Belgium remains in the group of higher education systems with relatively low tuition fees. Whilst different in nature and

³⁵ The matrix related to the new structure and study offer is expected to be ready by mid-2016, and the findings of an in-depth screening of all 256 fields of study in the second and third stages from an 'outcome-based' perspective has been completed.

³⁶ People aged 20-34 who left education between one and three years before the reference year.

³⁷ For the different sources, refer to the BE country report of the Education and Training monitor, 2014.

³⁸ In the BE nl, the reform will be feed by the evaluation (Flemish Ministry of Education, 2015) of the 2008 funding reform. The government of the French community plans a revision of the universities funding system taking into account the increasing number of students.

³⁹ Tuition fees remain means-tested. The change brings them close for a full academic year to the level existing in BE fr.

scope, all Communities pursue their efforts to widen access with a focus on under-represented groups (European Commission 2014), reduce drop-out rates and completion time and improve completion rates. Whilst access to higher education is open, key measures include the introduction, as a pilot experience in 2015/16, of non-binding evaluation tests specific for higher education study programmes for STEM (BE nl) or medicine (BE fr), early reorientation mechanisms during the first year as well as the possibility for institutions to strengthen the conditions for repeating a year (BE nl). The (partial) reform of higher education in BE fr which began in 2014/15, is being implemented gradually. The main features include: 1) introduction of a credits-based system making the progression more flexible and independent of the academic year; 2) the (controversial) lowering of the marks required to succeed.

Other measures are aimed at increasing employability. BE nl is developing a system-level graduate tracking system and pursuing its efforts to strengthen professionally-oriented higher education with a recent decree to improve its short cycle programmes with mandatory work placement (*HBO5*) and with more professionally-oriented bachelor programmes with work-based elements. In BE fr, the government agreement foresees extending the provision of programmes with a strong work-based element (*en alternance*) building on the positive experience acquired in five pilot fields.

7. Modernising vocational education and training and promoting adult learning

Nationwide, the participation of upper secondary students in vocational education and training remains above the EU average (60.2% compared to 48.9% in 2013).⁴⁰ Despite the high proportion of vocational students, only 4.3% combine school and work-based learning. The employment rate of recent upper secondary graduates⁴¹ fell by 3.7 percentage points compared with 2013, being slightly below the EU average (67.4% compared to the EU average of 70.8% in 2014). Adult participation in lifelong learning is below the EU average (7.1% compared to 10.7% in 2014). About 700.000 adults living in BE fr have low basic skills. Adult education policies are increasingly focused on specific goals only, such as employability, integration of immigrants and acquisition of the national identity. Data shows that modular types of training have seen an increase in the number of participants while the linear types of education experienced a strong decrease.

Early school leavers are overrepresented in VET. Many measures to fight early school leaving include measures specific to VET and remedial measures namely in the framework of the 'Youth Guarantee' (see below). The various government agreements make reference to the need for stronger links to address the skills mismatch, improve linguistic training, improve and rationalise the vocational and educational training offer and develop alternative training for pupils and the unemployed. BE nl plans to include vocational elements in compulsory education (see Box 1) as it is already the case in BE fr and BE de (Cedefop 2015). BE fr has begun reorganising the vocational and educational training provision in 10 (geographical) areas. In July 2015, BE nl published its concept note on dual learning. The system will be considered as equivalent to all other forms of secondary education. By the start of the 2015/16 school year, BE fr will implement a single statute for dual learning and a single contract. To address horizontal skills mismatches, BE nl is continuing to implement its STEM Action Plan (Box 1) and to develop academies covering these fields. In the beginning of 2015 the EFP (SME VET provider in BE fr) organised its first 'Semaine Entreprendre – Week of entrepreneurship' in collaboration with many partners.

⁴⁰ For 2013 data, in BE nl, some programmes have been reclassified from ISCED level 3 to 2 or 4, or from vocational to general education.

⁴¹ People aged 20-34 who left education between one and three years before the reference year.

All Authorities committed to implement the recommendation on the 'Youth Guarantee' which led to an increase in the offer of traineeships with a focus on reaching the unregistered young people not in education, employment or training (NEETs), by cooperating with youth organisations and using social media. From the point of view of education and training, greater involvement of the education sector would help ensure greater coherence between prevention and compensation measures for early school leavers.

Work-place learning will be a structural component of the Flemish labour market-driven courses. Since 1 September 2014 work placement is compulsory in more than 140 courses and this obligation will be extended in adult education in the coming years. BE nl is working with the social partners on a new integrated training incentive making it possible for workers to attend refresher or retraining courses, while the Walloon Region has launched its 'Pact for Employment and Training'.

In January 2015 BE fr adopted its guidance on further education and distance learning aiming to promote lifelong training for all. In February 2015 it published guidelines (*Note d'orientation*) to strongly develop Continuing Education and Training and E-learning, for personal development and to commit to the global social and economic dynamics of the Regions. The guidelines are split into three 3 main parts (15 projects): 1) guaranteeing education to everybody; 2) wide education choices; 3) steering the dynamics of offer and visibility.

There is a continued focus on formal certification of acquired competencies. There are validation mechanisms/systems of non-formal and informal learning in both BE fr and BE nl. In BE de, a skills validation system is currently being developed.

Three (BE fr, BE nl and BE de) of the four Operational Programmes under the European Social Fund (ESF) allocate about EUR 287 million in total to measures aimed at providing adults with additional qualifications or recognising skills they have already acquired, and at reducing the early school leaving rate (mainly remedial measures). Calls for projects have been launched. In addition to the ESF measures on training, the European Regional Development Fund (ERDF) is providing EUR 70 million to equip centres of expertise (*centres de compétences*) in BE fr.

References

Belgian Court of Audit (2015) Werkingsmiddelen van het gewoon basis- en secundair onderwijs. Toekenning en aanwending. Verslag van het Rekenhof aan het Vlaams Parlement, Brussels, June 2015, https://www.ccrek.be/docs/2015_22_Werkingsbudgetten.pdf

Belgian Government (2015), National Reform Programme 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_belgium_en.pdf

Cabinet of Flemish Minister of Education (2015), Press release on early school leaving of 12 March 2015

Cedefop (2015), Stronger VET for better lives. Cedefop's monitoring report on vocational education and training policies 2010-2014, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3067>

Crevits, H. (2015), Press release, Samen met het onderwijs veld aanbevelingen onderwijs inspectie aanpakken, 1 April 2015

De Witte K. (2014), Beleid rond vroegtijdig schoolverlaten is de investering waard, KUL, Leuvense economische standpunten, 2014/143, November 2014

European Commission (2013), Funding of Education in Europe. The Impact of the Economic Crisis, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/147EN.pdf

European Commission (2014a), Facts and Figures, National sheets on education budgets in Europe, http://eacea.ec.europa.eu/EDUCATION/EURYDICE/documents/facts_and_figures/National_Budgets.pdf

European Commission (2014b), Education and Training Monitor 2014, http://ec.europa.eu/education/library/publications/monitor14_en.pdf

European Commission (2014c) Study on the effective use of early childhood education and care in preventing early school leaving, <http://bookshop.europa.eu/en/study-on-the-effective-use-of-early-childhood-education-and-care-ecec-in-preventing-early-school-leaving-esl--pbNC0414322/>

European Commission (2015a), Country report Belgium 2015, SWD(2015) 21 final/2, http://ec.europa.eu/europe2020/pdf/csr2015/cr2015_belgium_en.pdf

European Commission (2015b), Parliamentary act on pupils with specific educational needs, https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Belgium-Flemish-Community:National_Reforms_in_School_Education#Parliamentary_act_on_pupils_with_specific_educational_needs

Flemish Ministry of Education (2015), Evaluatie van een aantal aspecten van het financieringsmechanisme in het hoger onderwijs, <http://www.ond.vlaanderen.be/hogeronderwijs/publicaties/Evaluatie-financiering-Hoger-Onderwijs.pdf>

Groenez S., Juchtmans G. and Stevens C. (2015) Analyse van het nieuwe financieringsmechanisme voor de werkmiddelen van de Scholen. Evaluatie van het financieringsdecreet van 2008: eindrapport, http://www.ond.vlaanderen.be/obpwo/rapporten/Analyse_nieuwe_financieringsmechanisme_werkingsmidde len_scholen_DEFINITIEF_RAPPORT_HIVA.pdf

Flemish Government (2014), Draaiboek uitrol masterplan hervorming SO (Vlaamse Regering 17.01.2014), <http://www.hervormingsecundair.be/pdf/draaiboek.pdf>

Hirtt N., Nicaise I. and De Zutter D. (2013), De school van de ongelijkheid, Berchem: EPO

Lambert J.P. (2014), Stratégie de Lisbonne et niveau de formation. Pourquoi l'ascenseur social ne fonctionne plus en Fédération Wallonie-Bruxelles, *Reflets perspectives de la vie économique*, De Boeck Supérieur

Milquet, J. (2015), Press release – 'Pacte pour un Enseignement d'excellence les premières réalisations et nouveautés de la rentrée scolaire', 31 August 2015

OECD (2013a), Education at a glance, [http://www.oecd.org/edu/eag2013%20\(eng\)--FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf)

OECD (2013b), PISA 2012 Results, <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>

OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

OECD, European Commission (2015) Indicators of immigration integration 2015

Pacte pour un enseignement d'Excellence (2015), <http://www.pactedexcellence.be/documents-a-telecharger>

Statistics Belgium (2015), Census 2011: l'obtention d'un diplôme de l'enseignement supérieur: quelles inégalités socio-démographiques?, http://census2011.fgov.be/index_fr.html

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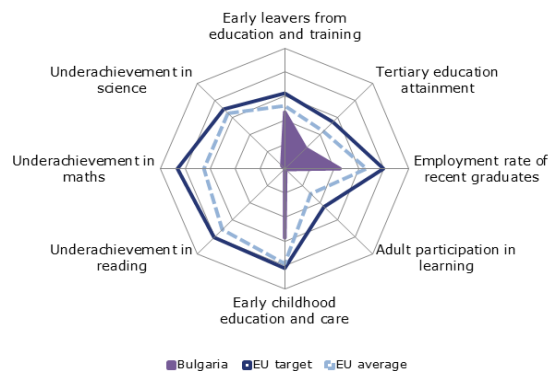
Bulgaria

1. Key Indicators and Benchmarks

		Bulgaria		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	•	: 39.4% ¹²	:	17.8% ¹²
	Maths	•	: 43.8% ¹²	:	22.1% ¹²
	Science	•	: 36.9% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		3.5% 3.8% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		10.0% 9.8% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men		11.2% 12.8%	15.2%	12.7%
	Women		12.6% 12.9%	11.5%	9.5%
	Total	•	11.8% 12.9%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		20.9% 23.4% ^u	31.0%	33.6%
	Women		34.2% 39.0% ^u	38.7%	42.3%
	Total	•	27.3% 30.9% ^u	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	86.6% 87.8% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		: 85.2% ¹³	:	84.6% ¹³
	Special needs education		: 25.7% ¹³	:	32.4% ¹³
	Multicultural settings		: 20.5% ¹³	:	13.2% ¹³
	ICT skills for teaching		: 55.6% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		19.4% 18.2% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			52.2% 52.4% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		49.7% 52.6%	71.3%	70.8%
	ISCED 5-8		74.0% 74.5%	82.5%	80.5%
	ISCED 3-8 (total)	•	59.2% 65.4%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		: 3.9% ¹³	:	: ¹³
	Inbound graduates mobility (master)		: 2.7% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	1.3% 1.8%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Bulgaria has recently improved its performance as regards basic skills and tertiary education attainment. However, it still needs to improve the overall quality and efficiency of its school education system and the capacity of higher education to respond to labour market needs. Bulgaria has still not adopted its school education act, which will provide a framework for implementing the comprehensive reforms needed in the school system, including modernising curricula and improving teacher training. Access to education for disadvantaged children, in particular Roma, is an ongoing challenge: the enrolment of Roma children in early childhood education is low and almost a quarter of Roma children aged 7-15 are not in education. The quality of vocational education and training in Bulgaria is insufficient, including in terms of its integration in the general education system. The rate of adult participation in lifelong learning is among the lowest in the EU.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Bulgaria (Council of the European Union 2015) included a recommendation on education and training:

CSR 4: Adopt the reform of the School Education Act, and increase the participation in education of disadvantaged children, in particular Roma, by improving access to good-quality early schooling.

3. Investing in education and training

General government expenditure on education as a share of GDP (3.8% in 2013) has slightly increased over recent years but remains well below the EU average of 5.0% and is the second lowest in the EU-28.⁴² Bulgaria has taken action to ensure that the allocation of funding contributes to improving educational programmes. Of particular importance was the allocation in 2014 of EUR 50 million for structural measures and national programmes. The aims are:

- improving school facilities;
- preventing student drop-out;
- introducing ICT in schools;
- evaluating the quality of education and matching it with labour market needs;
- improving management systems for higher education institutions;
- increasing the cost allocation per student in teacher training, engineering and natural sciences.

Bulgaria has introduced performance-based funding in higher education. This involves linking the public funds provided to state universities to their actual performance, using the Bulgarian universities rating system (BURS) and other indicators.

4. Tackling inequalities

The early school leaving rate reached 12.9% in 2014 and has been slowly increasing since 2012. This is in contrast with previous years, when the rate had been on the decrease. There are substantial regional differences in Bulgaria's early school leaving rate. In the South West region, which includes the capital city Sofia, the percentage of early school leavers is 5.9%. In the other five regions, the percentage is above the country average:

- 13% in the South Central region;
- 15.6% in the North Central region;

⁴² Source: Eurostat, General government expenditure by function (COFOG) database.

- 16.8% in the South East region;
- 17.9% in the North East region;
- 20.8% in the North West region.

Bulgaria's national Europe 2020 target of 11% remains within reach, but progress needs to be achieved to reverse the recent negative trend. In this context, data from the National Statistical Institute⁴³ is cause for concern: in 2014/15 there was a decrease in enrolment rates in all levels of education except higher education.

The proportion of Roma children of compulsory school age not attending school was 12% in 2010/11, while 9% of Roma aged 16 and above had never been to school. More than 25% of Roma children attend de facto segregated school classes (European Union Agency for Fundamental Rights 2014).

Although participation in early childhood education has been slowly increasing in recent years, it remains below the EU average (87.8% compared to 93.1% in 2013). According to recent data from the National Statistical Institute, the enrolment rate in pre-school education (children aged 3 to 6) decreased from 83.6% in 2013/14 to 82.9% in 2014/15. Survey and census data suggest that only about 42% of Roma children aged 4-7 are enrolled in pre-school or kindergarten and 23.2% of Roma children aged 7-15 are completely outside the educational system.

On basic skills, 15-year-olds' performance in the 2012 OECD Programme for International Student Assessment (PISA) in reading, mathematics and science improved compared to 2009 (OECD 2013). However, Bulgaria had the highest percentages out of the EU 28 Member States of low achievers in reading (Figure 2) and mathematics (39.4% and 43.8% respectively) and the third highest percentage in science (36.9%). The influence of socioeconomic factors, different schools and place of residence on student performance is higher than the EU average: while students from specialised secondary schools and those from large cities perform significantly above the national average, students from smaller towns and villages and from secondary comprehensive schools without specialised classes lag behind the national average.

Bulgaria's national strategy on diminishing the number of early school leavers 2013-2020 (Ministry of Education and Science 2013) focuses on ensuring equal access to pre-school and school education and support for personal development in the system. The strategy aims to stimulate cross-sectoral partnerships in implementing integrated policy and to ensure open access to education. The strategy is comprehensive and includes all the main policies and measures related to early leaving (Eurydice 2015). Specific targeted measures for groups at risk are focused on students from socially disadvantaged and minority/Roma backgrounds, as well as students with special educational needs.

Bulgaria has drafted a 2014-15 action plan to accompany its national strategy. The plan focuses on three areas: prevention (overcoming the reasons for early school leaving); intervention (creating conditions for limiting the phenomenon); compensation (support for reintegration). The plan's success will depend to a large degree on whether well-functioning mechanisms and procedures are in place for information management to register movements by children and students. These will make it possible to track each case of a child or student at risk of early school leaving.

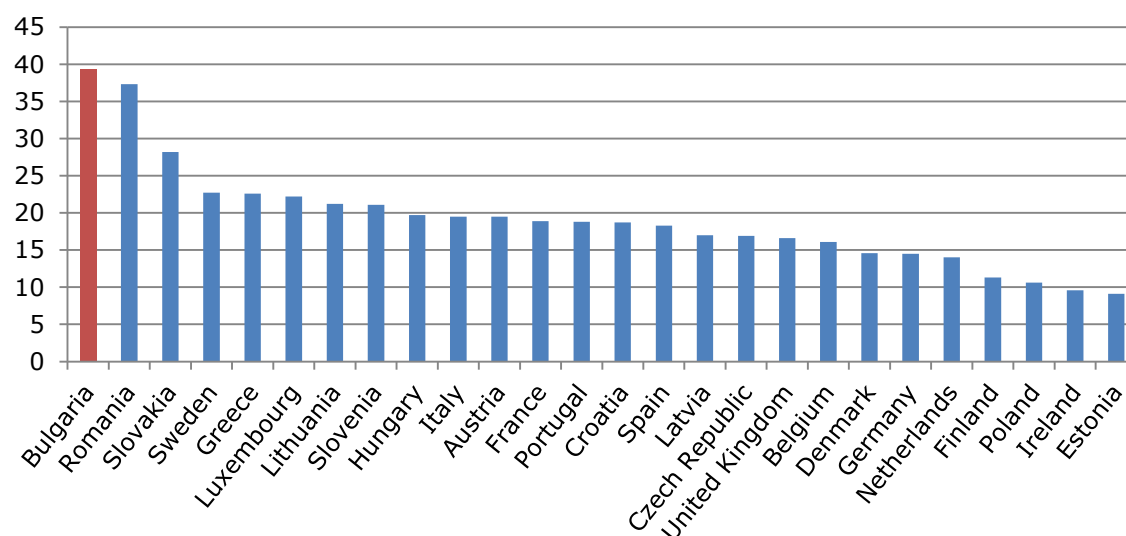
Other measures that could complement the strategy are as follows:

- introducing financial incentives for schools (for example, early school leaving could be one of the criteria when allocating state subsidies to schools);

⁴³ <http://www.nsi.bg/>.

- the early identification of learning difficulties, combined with targeted support;
- cooperation between the different stakeholders involved in student support activities.

Figure 2. Share of 15-year-old pupils in 2012 who are at level 1 or below of the PISA combined reading literacy scale



Source: OECD (2013)

Expanding the scope and improving the quality of pre-school education have been identified as areas for intervention in Bulgaria's 2014-2020 national strategy for lifelong learning. Several activities have been included in the action plan to implement this strategy. These include updating curricula for pre-school education and raising the qualifications of teaching staff.

The 2014-2020 national strategy for promoting and improving literacy introduces the concept of language literacy on the basis of reading literacy (skills for reading and writing). The components of initial literacy are the ability to read, the ability to write and the ability to understand the sense of reading and writing. These are skills that should be acquired in the first year of school, in accordance with the planned national curriculum requirements.

Measures have been carried out under a number of different projects to improve facilities in kindergartens. A social inclusion project contributed to the renovation and modernisation of equipment in centres for integrated early childhood development services for children aged under 3. By the end of January 2014, crèche and kindergarten groups had been opened in 17 municipalities. Measures to improve the learning outcomes for students include a piloted project for introduction of new model of full-time organisation of the education process and the above-mentioned national strategy for the development of teaching staff. During the 2013-2014 school year, 3 363 children from preparatory groups in kindergartens and schools, 4 181 primary school students and 6 251 pre-high-school level students were provided with supplementary training.

A series of extracurricular and curricular activities connected with the educational integration of children and students from ethnic minorities, in particular from the Roma community, were carried out under the 'Educational integration of children and students from ethnic minorities' and 'Reintegration of early school leavers' projects and through activities by the Centre for Educational Integration of Children and Students from the Ethnic Minorities. The projects, which were funded from the state budget and the European Social Fund, aimed at early detection of children at risk, their inclusion in the pre-school and school education and successful socialisation. The projects also aimed to further develop integrated education and integrate students with special educational needs into the educational system. In 2014, 7 692 students were covered by activities to prevent early school leaving.

5. Modernising school education

Bulgaria's results in the 2013 OECD Teaching and Learning International Survey (TALIS) were close to the EU average (OECD 2014). The proportion of teachers who took part in some professional development activity in the last 12 months was in line with the EU average (85%), as was the proportion of teachers using ICT for students' projects or class work (55.6%). The perceived status of the profession is also similar to the EU average: 20% of teachers think that their profession is valued in society (compared to 19% in the EU on average). The proportion of teachers who feel that they can motivate students who show low interest in school work is slightly below the EU average (68% compared to the EU average of 71%).

In May 2014, Bulgaria adopted its 2014-2020 national strategy for the development of teaching staff. The strategy aims to improve the quality of education by:

- (i) putting in place a system for continuing education and training for teaching staff;
- (ii) updating the curricula of universities training students to obtain a professional qualification as a teacher;
- (iii) providing financial incentives to motivate, attract and retain young teachers;
- (iv) introducing a unified system for checking levels of preparation and system for quality control of labour.

The strategy also provides for a set of measures to upgrade mechanisms for the evaluation and self-assessment of teachers' work.

In 2014, Bulgaria adopted its 2014-2020 strategy for the effective implementation of ICT in education and science. The first phase of the strategy (e-learning) was launched in May 2015. The strategy aims to create a unified system for ICT use in schools, higher education and science.

Box 2. Reform of the pre-school and school education system in Bulgaria

A reform of the pre-school and school education system in Bulgaria is considered necessary by all relevant stakeholders. The reasons for this are as follows:

- the low quality of school education, as measured by the performance results of Bulgarian students in international surveys such as PISA, PIRLS (Progress in International Reading Literacy Study) and TIMMS (Trends in International Mathematics and Science Study);
- the need to ensure equal access to education for all children;
- the high drop-out and early school leaving rates;
- the inadequate educational structure, outdated curricula and unsatisfactory quality of textbooks;
- the lack of an efficient system for the qualification and career development of teachers.

The new School Education Act is expected to be adopted by the last quarter of 2015. The Act will reform a large number of areas including:

- drawing up new national educational standards;
- giving more freedom to schools to decide on the teaching process and curriculum development;
- making provision for the validation of non-formal and informal learning;
- introducing the national qualification framework and its correspondence to competences;
- introducing all-day education (longer school days covering afternoons) for all students in 5th to 7th years of school;
- banning the creation of separate classes for children with special educational needs or according to ethnicity;
- introducing new types of schools such as 'innovative schools' and 'schools of national significance';
- bringing in detailed rules on the professional development of teaching staff based on the

- constant upgrading of qualifications of teaching staff and systematic evaluation;
- setting up a national inspectorate to carry out external assessments of schools;
- involving different stakeholders in education and the management of schools;
- setting up public councils of schools and kindergartens.

Under the draft law, basic education will be completed once students have completed the seventh grade. This measure is being proposed to rectify the current situation where children in language schools finish basic education either after the eighth year or in the middle or the second half of the ninth year. Under the proposed new structure, Bulgaria will be the only country in the EU where basic education is completed after the first seven years of schooling; in almost all other EU Member States, basic education is completed after nine years of schooling. Therefore, if Bulgaria wants to harmonise the structure of its education system with the European dimension for basic education, Bulgarian students will only have seven years to accumulate the knowledge, skills and key competencies acquired by children in other Member States in eight to ten years.

In addition, public debates and discussions in Bulgaria's National Assembly show that there are other issues that need attention, including:

- the provision of state subsidies to private schools;
- the school funding model and the need for changes in the model for delegated budgets;
- the existence of an independent form of education;
- the social integration of Roma children through education;
- the number of textbooks which can be approved by the Ministry of Education for each school subject.

The adoption of the new law on pre-school and school education is of vital importance for the reform of school education in Bulgaria. If approved, it will modernise secondary education in Bulgaria by providing the legal framework for improving the quality of education, having better qualified teachers and encouraging different stakeholders to get involved in the education process. However, the success of the reforms depends heavily on:

- ensuring sufficient financial support to implement the law;
- drawing up the national educational standards in good time;
- the quality of the new curricula, syllabuses and textbooks;
- further elaboration of the principle for delegated budget needs;
- raising capacity at national, regional and institutional levels;
- drawing up a clear risk management strategy and carrying out impact analyses of the reform and its main measures.

6. Modernising higher education

Bulgaria's tertiary education attainment among 30-34 year-olds has been steadily increasing over the past two years. The figure reached 30.9% in 2014 and is on track to reach the national Europe 2020 target of 36%. Women strongly outperform men, with a tertiary education attainment rate in 2014 of 39% compared to 23.4% for men. Due to adverse demographic developments, recently there has been a decrease in the number of students enrolling in higher education: after a peak in the 2009/10 academic year, when there were 283 236 students, in 2013/14 the number decreased to 277 239.⁴⁴

Data from the Bulgarian University Ranking System (BURS) show that approximately half of all students study in six out of a total of 52 professional fields. These were: economics, administration and management, law, communications and computer technology, teacher training and tourism. The employment rate of recent tertiary graduates⁴⁵ decreased in 2014 to 74.5% and is under the EU-28 average of 80.5%. Bulgaria is among the EU Member States with the highest percentage of 20 to 34 year-olds with tertiary education attainment who have jobs that would not traditionally require this level of qualification (European Commission 2012).

⁴⁴ <http://www.nsi.bg/>.

⁴⁵ People aged 20-34 who left education between one and three years before the reference year.

In February 2015, Bulgaria's National Assembly approved the strategy for the development of higher education and accompanying action plan. The strategy identifies specific problematic areas relating to the quality and compatibility of the Bulgarian higher education with other European higher education systems. The strategy provides a SWOT analysis of the Bulgarian higher education system and flags up a number of shortcomings, which include:

- an imbalance between university autonomy and state control;
- outdated syllabuses and curricula;
- a 'supply and demand' mismatch between higher education and labour market needs;
- a low level of research output in some universities;
- insufficient outgoing and poor incoming mobility of students and university teachers.

In May 2015, the Ministry of Education and Science published a draft amendment of the Higher Education Act, proposing a number of changes including the identification of priority professional fields and protected specialisations (i.e. specialisations which are important for socioeconomic development but not very attractive for applicants).

The draft amendment also provides for state funding for higher education institutions based on quality and performance-based indicators. The proportion of state funding awarded on the basis of such criteria should be no less than 30% during the 2016/17 academic year and will gradually increase to no less than 60% for the 2019/20 academic year. In addition, members of the academic staff will be allowed to take part in the accreditation process of only one higher education institution.

The development of the Bulgarian University Ranking System is a very positive step towards increasing the transparency of the higher education system. BURS collects and publishes data on different aspects of higher education offered by various institutions, on educational outcomes and on graduate employment. The fourth edition of BURS was launched on 1 December 2014. The fifth edition is currently being compiled and its results will be announced in October 2015. A centralised pilot system to provide practical training for students was successfully implemented between 2012 and 2014. In this period, more than 60 000 places for practical training were offered by more than 14 000 Bulgarian employers.

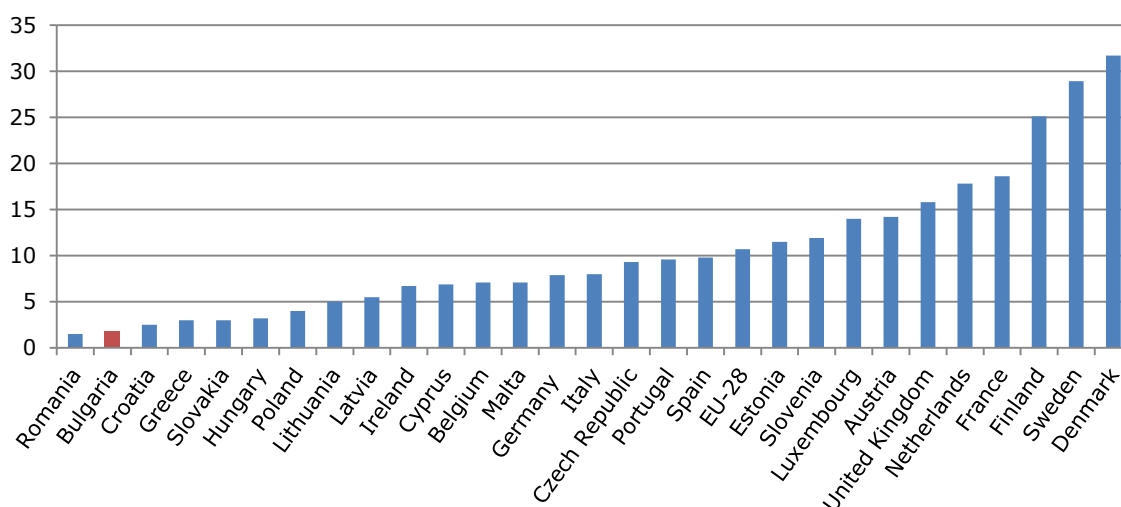
Bulgaria has implemented a number of projects using funding from the European Social Fund (Human Resource Development Operational Programme). These include:

- the 'System for qualification and career development of the academic staff in higher education institutions' project, aimed at further development of the existing system for the qualification and career development of academic staff, providing continuing education in key fields like foreign language and using information and communication technology in the training process;
- the 'Updating higher education curricula in compliance with labour market requirements' project. 36 out of 51 higher education institutions have been implementing joint projects with employers. The project aimed to create a direct link between higher education institutions on the one hand and employers' organisations, large companies and key experts on the other hand so that they can work together on updating curricula. 31 higher education institutions have already introduced new curricula.

7. Modernising vocational education and training and promoting adult learning

The participation of upper secondary students in vocational education and training (VET) is somewhat above the EU average (52.4% in 2013, compared to the EU average of 48.9%). However, Bulgaria has one of the highest proportions of young people aged 15-24 not in employment, education nor training (20.2% in 2014). The employment rate of recent upper secondary graduates⁴⁶ is also well below the EU average. Adult participation in lifelong learning is the second lowest in the EU (Figure 3), with a significant gap compared to the EU average (1.8% in 2014, compared to the EU average of 10.7%).

Figure 3. Rate of adult (aged 25 to 64) participation in lifelong learning in 2014



Source: Eurostat

Bulgaria is making changes to its VET legislation and bringing in further implementing legislation. By doing so, it aims to achieve the following:

- ensure the quality and effectiveness of vocational education and training;
- make it easier to access VET, especially for people with special needs, while also targeting early school leavers and ensuring quick responses to current labour market needs;
- introduce a system on the validation of professional knowledge, skills and competences acquired through non-formal and informal learning and credit transfer and accumulation in the VET system;
- introduce a format for work-based learning ('training through work'), which will be applied both in initial and continuing education and training;
- adapt VET curricula to labour market needs, and involve the business community.

The main challenges are:

- to implement the legislative amendments in the VET system;
- to increase the quality and attractiveness of VET provision (through quality assurance mechanisms, including modernising infrastructure and training methods and training trainers for the new work-based learning format);
- to align VET delivery with the increased demand for medium and high-degree specialists in particular fields (e.g. ICT and engineering).

⁴⁶ People aged 20-34 who left education between one and three years before the reference year.

A variety of policy activities and concrete measures are planned in order to increase the low adult participation to 7% by 2020 and to focus provision on groups in need as part of the 2014-2020 integrated lifelong learning strategy and 2015 action plan. The aims are to develop:

- mechanisms for labour market intelligence and feedback mechanisms to inform VET provision;
- integrated information system and monitoring mechanisms for measuring progress in lifelong learning.

The success of the reforms depends on the concrete follow-up to the strategy. This will involve ensuring reliable information on demand for labour market skills, providing apprenticeships and internships, introducing lifelong guidance and cooperating with business and social partners.

References

Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Bulgaria and delivering a Council opinion on the 2015 Convergence Programme of Bulgaria, 2015/C 272/08, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_bulgaria_en.pdf

European Commission (2012), EU Youth Report 2012, http://ec.europa.eu/youth/library/reports/eu-youth-report-2012_en.pdf

Eurydice (2015), Tackling Early Leaving from Education and Training in Europe: Strategies, Policies and Measures, https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Publications:Tackling_Early_Leaving_from_Education_and_Training_in_Europe:_Strategies,_Policies_and_Measures

European Union Agency for Fundamental Rights (2014), Report on education 2014: The situation of Roma in 11 EU Member States, http://fra.europa.eu/sites/default/files/fra-2014_roma-survey_education_tk0113748enc.pdf

Ministry of Education and Science (2013), National Strategy on Diminishing the Number of Early School Leavers 2013-2020, http://www.mon.bg/opencms/export/sites/mon/left_menu/strategies/documents/strategy_napusnali_obr_sistema_2013-2020.pdf

OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

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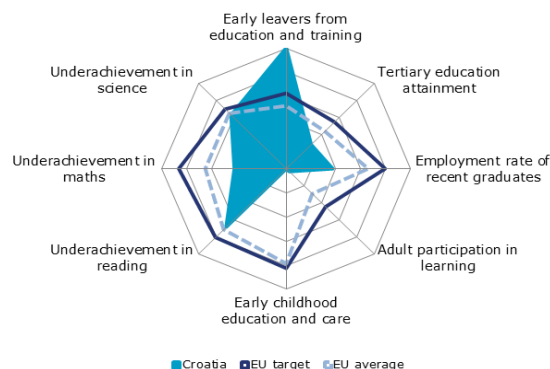
Croatia

1. Key Indicators and Benchmarks

		Croatia		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	:	18.7% ¹²	:	17.8% ¹²
	Maths	:	29.9% ¹²	:	22.1% ¹²
	Science	:	17.3% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP	4.9%	5.1% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure	10.5%	11.2% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men	5.9%	3.1% ^u	15.2%	12.7%
	Women	4.0%	2.3% ^u	11.5%	9.5%
	Total	5.0%	2.7% ^u	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men	19.5%	25.6%	31.0%	33.6%
	Women	28.5%	39.0%	38.7%	42.3%
	Total	23.9%	32.2%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		71.0%	71.4% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)	:	96.8% ¹³	:	84.6% ¹³
	Special needs education	:	46.1% ¹³	:	32.4% ¹³
	Multicultural settings	:	9.1% ¹³	:	13.2% ¹³
	ICT skills for teaching	:	58.2% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages	50.0%	51.8% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)		71.5%	71.1% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4	56.8%	47.3%	71.3%	70.8%
	ISCED 5-8	68.5%	72.2%	82.5%	80.5%
	ISCED 3-8 (total)	62.7%	62.0%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)	:	: ¹³	:	: ¹³
	Inbound graduates mobility (master)	:	: ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	2.6%	2.5%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The main strengths of Croatia's education and training system are a low early school leaving rate and a high proportion of secondary vocational school graduates going onto higher education. Positive developments in the country include the adoption of a comprehensive Strategy for Education, Science and Technology, which will be the main driver of reform in the coming years. The strategy assesses the state of the Croatian education system in depth and sets an ambitious agenda for improving educational outcomes in all educational sectors.

At the same time, the Croatian education system faces a significant number of challenges. These include: improving educational outcomes in mathematics in primary and secondary schools; modernising initial vocational education curricula in line with the needs of the labour market; increasing access to higher education and reducing drop-out rates. Further issues arise before and after compulsory education, with low participation in early childhood education and care and in lifelong learning alike. Croatia also faces significant structural problems in the form of stretched capacities in pre-school establishments and an under-regulated and underfunded adult learning system.

3. Investing in education and training

Croatia's GDP has fallen by 12.5% since the beginning of the economic crisis in 2008. Although general government expenditure on education as a proportion of GDP rose incrementally from 4.7% of GDP in 2007 to 5.1% in 2013, slightly above the EU average in 2013 of 5.0%, absolute expenditure has been falling.⁴⁷ The last five years have witnessed a 5-10% contraction in the absolute amount of public funding for higher education (PL4SD 2014, p.28).

In 2014, the European Commission launched the procedure to end Croatia's excessive government deficit, putting it under more pressure to cut back its deficit and make public spending more efficient. In the context of these budgetary saving programmes, European structural funds account for a significant proportion of Croatia's investment in education. Croatia is set to receive financial assistance from the EU to support educational reform during the 2014-20 period, with around EUR 450 million coming from the European Social Fund and EUR 270 million from the European Regional Development Fund. By way of comparison, Croatia's overall expenditure on education in 2011 was approximately EUR 2.7 billion.

Progress has been made on achieving greater efficiency in higher education spending, with the signing of three-year pilot performance-based agreements with higher education institutions. These cover 10% of public funding until the end of the 2014/15 academic year. In 2014, joint committees of university and ministry staff carried out a first round of monitoring of performance-based agreements. The results of the monitoring will be used as a basis for assessing each higher education institution's readiness for the launch of full funding agreements in the 2015/16 academic year.

4. Tackling inequalities

Croatia has the lowest early school leaving rate in the EU (2.7% in 2014, compared to the EU average of 11.1%) and has therefore met its Europe 2020 national target of 4%. However, this rate needs to be interpreted with caution, as challenges over the inclusiveness and quality of primary and secondary education continue to affect many students' educational performance and later labour market outcomes. A recent study found that due to the early division (i.e. at the age of 14/15) of education into vocational and general pathways, some groups of students have limited opportunities to progress to higher education. This includes students from low socio-economic backgrounds and male students in general (PL4SD 2014). Girls make up almost two thirds of those enrolled in the general education (*gymnasia*) track, which leads directly to

⁴⁷ Source: Eurostat, General government expenditure by function (COFOG) database.

universities, whereas boys are more likely to attend vocational schools, which have a more direct link to non-university tertiary programmes (PL4SD 2014).

The 2012 OECD Programme for International Student Assessment of 15-year-olds found that 29.9% of students in Croatia failed to achieve basic skills in the mathematics test compared to the EU-25 average of 22.1% (OECD 2013b). 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). This confirms earlier findings from the 2011 PIRLS (Progress in International Reading Literacy) and TIMSS (Trends in International Mathematics and Science) studies, which showed that while reading and science skills of 10-year-olds in Croatia matched those of their counterparts in other EU Member States, their mathematics skills were much weaker.

The proportion of qualified teachers in socio-economically-advantaged schools (99.2%) in Croatia is much higher than the proportion of qualified teachers in disadvantaged schools (89.2%, OECD 2013a). Only 9.1% of teachers have received training on how to teach in a multicultural or multilingual setting. This reflects the homogeneity of classrooms but also a lack of awareness of the current pedagogical trends. As regards teaching of students with special educational needs, the situation is reversed, with just under half of all primary school teachers in Croatia having been trained (46%). This is more than in any other researched EU country except for Poland (56%).

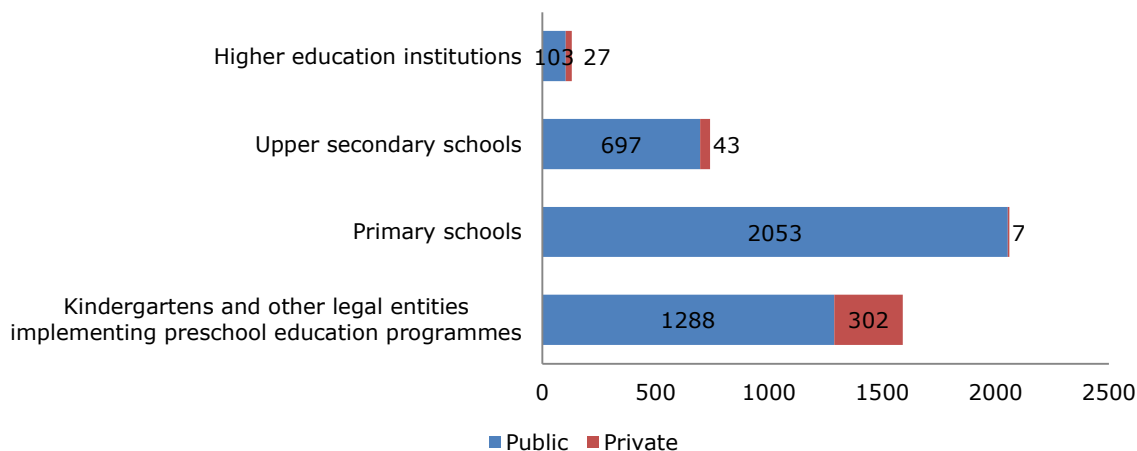
The participation rate in early childhood education and care has steadily increased over the last decade, but is still one of the lowest in the EU (71.4% compared to the EU average of 93.1% in 2013). Analysis of sub-indicators shows that this is due to Croatia's higher-than-average level of informal care.⁴⁸ An additional factor is the insufficient number of kindergarten places in cities and smaller villages, which hinders access. Lack of state provision has in places been substituted by private provision (Figure 2). Due to the governance structure, kindergartens and pre-school institutions have different levels of technical, financial and human resources and there is a lack of profound analysis of the 'state-of-the-art' of those institutions. On the other hand, Croatia has taken steps to raise and harmonise the quality of pre-school education by issuing a national curriculum for early childhood education and care. The curriculum, the first of its kind in Croatia, will be implemented starting from the 2015/16 school year (Croatian Official Gazette No 5/2015). This decision follows the entry into force in the 2014/15 school year of an earlier piece of legislation laying down a compulsory pre-school programme to be followed by all children in the year prior to enrolling in primary school (Croatian Official Gazette No 107/2014).

A comprehensive reform of the structure and curriculum of primary and lower secondary education system, as announced by the strategy for education, science and technology, will see a gradual transition from the current eight-year system to a nine-year single structure system.⁴⁹ In February 2015, an expert working group, aided by a wide range of stakeholders, began work on general curricular reform for early and pre-school education. The work on subject curricula should begin in autumn 2015. The plan is to run the new curricula on an experimental basis in the 2016/17 school year, before fully implementing them in the 2017/18 school year. The changes should make parents more involved in their children's education and in school life, and will provide clearly-stated expectations, more objective assessment and evaluation and more meaningful and more frequent feedback for parents on their children's achievements. Teachers and education staff expect the reform to strengthen their role and usher in a higher level of professionalism, as well as allowing them more autonomy and creativity in their work.

⁴⁸ Author's calculations based on Eurostat tables on: Formal childcare by age group and duration -% over the population of each age group (code: ilc_caindformal) and Children cared only by their parents by age group -% over the population of each age group (code: ilc_caparents).

⁴⁹ A system where the primary and lower secondary cycles are integrated into one continuous 8-year long school programme and typically taught within a single establishment.

Figure 2. Private provision across education sectors



Source: Croatian Bureau of Statistics; Agency for Science and Higher Education

5. Modernising school education

In terms of transversal skills such as digital skills, foreign language skills, entrepreneurship and others, Croatia is around the EU average, although it lags behind on the digitalisation of teaching practices. Less than 10% of students in Croatia are in primary schools that are classified as 'digitally-supportive' and on average there are 26 students for every computer in Croatian schools, compared to Slovenia, for instance, where the ratio is 10/1. Students' confidence in using ICT safely, responsibly and operationally is just below the EU average, and is particularly low among students in vocational schools (European Schoolnet 2012). Croatia is one of the very few EU countries that do not begin ICT education at ISCED (International Standard Classification of Education) level 1 (European Commission 2012).

The average number of foreign languages learnt per student in secondary education matches the EU average of 1.5 per student. The share of ISCED 2 students learning more than 2 languages is also satisfactory with 51.8% in 2012. Croatian 14-year-olds perform around the EU average in reading and listening in their first foreign language (English), but lag behind in their English writing skills. They are much less successful in their second foreign language skills when compared to their counterparts in other EU countries, with only 5% of students achieving a satisfactory reading level, compared to 15% in the EU as a whole (European Commission 2011).

The feedback given by teachers about their professional development and ICT use in classrooms was positive on the whole, although there is room for improvement. According to the 2013 OECD Teaching and Learning International Survey (TALIS), 96.8% of teachers in lower secondary schools (upper years of so-called basic schools), compared to 84.6% in the EU, report having been trained within the last year (OECD 2014). Also, 58.2% have specifically been trained in ICT, putting Croatia at the top end of participating EU countries. However, the proportion of teachers who report frequently using ICT in lessons is less encouraging (23.5%, compared to the EU average of 34%). On the other hand, the proportion of teachers assigning different work to students based on their individual needs is above the EU average (51.2%, compared with 46%).

Recent developments in quality assurance included a revision of the Act on education in primary and secondary schools, which created the basis for developing licensing schemes for teachers and head teachers. These schemes will ensure that schools commit themselves to providing regular professional development and are an important part of quality assurance in schools. The implementation of this measure is pending.

Croatia began to implement citizenship education in the 2014/15 school year as a cross-curricular and interdisciplinary topic in primary and secondary schools and as an experimental optional subject for eighth graders (14/15-year-olds) in 34 schools. Its approach was based on the results of the experimental implementation over two years of citizenship education in 12 schools and a public consultation on the draft curriculum in 2014. A gradual roll-out of citizenship education is expected in the coming years.

Box 1. E-Schools

eSchools is a ground-breaking initiative for the comprehensive digitalisation of infrastructure, teaching and administration processes in schools in Croatia. The project's strategic vision is to create digitally mature schools for the 21st century. The objectives of the project are to:

- fully equip schools for ICT;
- train teachers in how to make the most of ICT in education;
- enable school staff to use computers to make administration more efficient;
- create critically-minded, creative and digitally-educated students ready to meet the demands of the labour market.

The project is due to run from 2014 to 2022. It has a total value of EUR 180 million, with 85% of funding coming from EU funds and 15% from national and local budgets. The project's dual goal of improving infrastructure and skills is reflected in the EU financing, which comes partly from the European Regional Development Fund and partly from the European Social Fund. The project will run in two phases: the pilot project phase lasts from April 2015 to December 2017 and the main project phase will run from 2019 to 2022.

The first public call for expressions of interest was launched in December 2014 and attracted 705 school applications. Out of these, 150 schools (around 10% of schools in Croatia) were chosen to participate in the three-year pilot phase due to start in autumn 2015. The pilot project will be continuously monitored and a final evaluation will be carried out in order to prepare the ground for a smooth implementation of the main project from 2019 to 2022. The main expected results of the pilot project are as follows:

- a 'digital maturity system' developed, tested and recommended to all schools;
- transparent processes in the 'school cloud' with main services deployed and tested;
- developed digital educational resources for science, technology, mathematics and engineering (STEM) subjects in chosen classes;
- integration of modern technologies, educational resources, methods and tools into teaching and learning in STEM subjects in chosen classes;
- creating a 'community of practice', i.e. networks of teachers and schools to share best practices
- sufficient level of digital competence of teachers, headmasters, expert and administrative staff;
- sufficient level of ICT infrastructure.

The pilot project will start with an empirical survey of the level of digital maturity that schools in Croatia are currently at. The scale used for measuring digital maturity comprises four levels of development:

1. basic (zero) — no vision or planning for ICT in schools;
2. initial — internet used only in the offices of the school management, ICT is understood as equipment;
3. e-Enabled — ICT used for administration, elements of ICT in teaching and learning, support service for teachers, ICT is understood as more than an equipment issue;
4. e-Confident — ICT is integrated into the school's vision, both in administration and in teaching and learning, ICT infrastructure is available at all levels, active participation in continuous professional development in this area;
5. e-Mature — ICT is fully integrated in the school's vision, school acts as a community centre using the potential of ICT, school is active in international collaboration projects using ICT.

The ultimate target is to increase the level of 'digital maturity' in 60% of Croatian primary and secondary schools by at least one level by 2022.

The strength of this large undertaking is its recognition of the fact that infrastructure (equipment, high speed internet, school cloud, electronic applications, digital learning content, digital and interactive textbooks) goes hand in hand with the development of digital skills (disposing of paper in school administration, using ICT for communication with parents and partners, integrating ICT in classroom practices and curricula, becoming confident in using internet and ICT in learning). A large reform like this is entirely dependent on the cooperation of teachers and education staff as well as students and parents and the readiness of national and local authorities to provide sufficient support in the transition process. This will be a crucial determinant of success of this ambitious project.

6. Modernising higher education

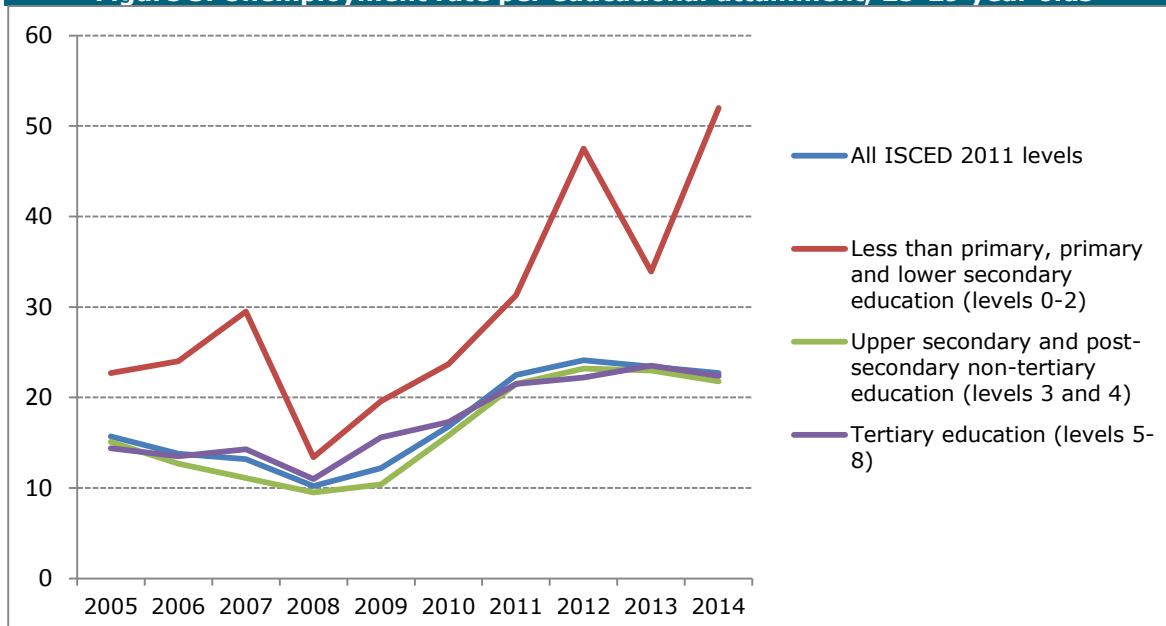
The proportion of 30-34 year-olds with tertiary education in Croatia significantly increased in 2014. From being at the very tail in 2013 with 25.6% (the third worst percentage after Romania and Italy), Croatia jumped to 32.2%, which is closer to its Europe 2020 national target of 35% but still significantly below the EU average of 37.9%. This unusual surge in the percentage of people with tertiary education can be explained by the large expansion of tertiary education admissions in late 1990s and early 2000s (Matkovic 2009a). Nevertheless, looking at the entire working-age population, the ratio of tertiary graduates is still one of the lowest in the EU (18.5%, compared to the EU average of 26% and compared to the best achievers in the EU, which have passed 35%). High drop-out rates are part of the problem, and these are especially acute in traditionally underrepresented subjects such as STEM. Research has found that the high drop-out rates also result from a lack of necessary entry competences, limited academic and career counselling and lack of financial means (IRO 2011).

The employment outcomes of tertiary graduates are a challenge in Croatia. Only 72.2% of recent tertiary graduates⁵⁰ find employment within one to three years of graduation (the EU average being 80.5%), contributing to one of the highest rates of youth unemployment in the EU. A very high share of Bachelor graduates continue their studies at Master's level (more than 75%), which can be an indication of poor recognition of Bachelor's degrees on the labour market. Croatia is one of only six EU Member States that exhibit such a high share of continuation in a second-cycle programme (European Commission 2015). Consequently, the number of tertiary graduates in jobs for which they are overqualified reportedly rose significantly between 2010 and 2013 (European Commission 2015). At the same time, the higher education degree could not provide a safeguard for young people against the impacts of the crisis in Croatia (Figure 3). Besides low economic growth and the weak absorption of the labour market, there are also structural problems in the education system contributing to high youth unemployment.

One of the problems is the weakness of the quality assurance mechanism in higher education. The current system of reaccreditation of study programmes is effective, but does not go beyond institutional quality criteria. There is, therefore, a lack of reliable data on the quality of teaching and learning outcomes of students.

Another challenge is the mismatch between the knowledge and skills students acquire during their studies and those required by employers on 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% (Agency for Science and Higher Education 2014). Croatia has also a disproportionately high number of higher education institutions compared to the size of its student population.

⁵⁰ People aged 20-34 who left education between one and three years before the reference year.

Figure 3. Unemployment rate per educational attainment, 25-29 year olds


Source: Eurostat

In addition, higher education participation in Croatia has a strong social dimension. The division between academic and professional degrees divides students largely along socio-economic lines, although this actually starts earlier when students opt for either general or vocational tracks in secondary school. The system of tuition fees penalises students on professionally-oriented programmes, as half of them study part-time and are therefore not entitled to government subsidies for tuition fees, accommodation and transport. Not only are such students more likely to be from lower socio-economic backgrounds in the first place, but they are also academically weaker, having come from vocational schools and due to their part-time employment. As a result, they are more likely to pay penalties for every European credit transfer and accumulation system (ECTS) point they have not acquired during the year. This is a specific feature of the Croatian higher education financing system.

Recognising the difficulties faced by tertiary graduates in entering the labour market, since December 2013 the Croatian Government has been running a pilot graduate careers tracking scheme in all polytechnics and schools of professional higher education, linking data on students from universities with the employment database. This scheme will make it possible in future to:

- compare institutions against the best performers on graduate employability;
- determine whether the competences obtained are suitable for the labour market;
- determine whether employers are satisfied with graduate employees' skills;
- determine what salaries graduates can expect to achieve.

An exercise to map the distribution of work-based learning across all higher education programmes was commissioned by the Croatian Ministry of Education in order to inform policy developments in this area and integrate this criterion into the future quality assurance criteria for higher education institutions. Finally, enrolment quotas for students over 25 have been increased, contributing to widening access to higher education. State scholarships will also be offered to prospective and current students of STEM subjects to encourage enrolment in and completion of degrees in those subjects.

The implementation of the Croatian qualifications framework is ongoing. The framework is intended to modernise higher education and secondary vocational education and training (VET)

curricula by bringing them into line with labour market needs. In the long run, the aim is also to reduce the skills mismatch by bringing study choices into line with occupations needed in the economy. The reduction in the skills mismatch is to be achieved by mapping sectors and occupations and subsequently aligning qualification standards and education programmes with them. Until the end of June 2015, 6 out of 25 sector skills councils have been formed for that purpose. The whole project is coordinated by the National Council for Human Resources Development, which was designated in June 2014 and which has started elaborating recommendations on effective human resources management to relevant stakeholders.

7. Modernising vocational education and training and promoting adult learning

The level of participation in VET at upper secondary level in Croatia is one of the highest in the EU (71.1%, compared to the EU average of 48.9% in 2013). However, the employment rate for recent upper secondary graduates⁵¹ is significantly below the EU average (47.3% in 2014, compared to the EU average of 70.8%) and is the third lowest percentage in Europe after Italy and Greece. The employment gap between youth with upper secondary and tertiary education is more significant than in other EU countries, especially 1-3 years after gaining a qualification. National studies have so far shown that transition to employment for 3-year vocational programmes was slightly better than for 4-year vocational programmes both in terms of job match and employment outcomes. However, fewer than half of VET graduates end up employed in a job that matches their field of study (Matkovic 2009b). Therefore, overall, 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.

Adult education in Croatia suffers from weak governance. In 2014, only 2.5% of Croatian adults participated in education and training, compared to the EU average of 10.7%, and the percentage has been decreasing for the last two years. Incentives for employers to offer training have been increased in 2014. Employers can now claim tax deductions of up to 60% of general adult education costs and 25% of specialised training costs. Small and medium-sized enterprises benefit from up to 80% tax deductions (Croatian Parliament 2014a). However, the uptake by companies is low, partly because of a lack of awareness and partly because of the complexity of the administrative procedures involved (Rinaldi et al. 2012).

The Strategy for Education, Science and Technology was adopted in 2014 (Croatian Parliament 2014b). It puts the emphasis on the importance of linking education and training more closely to the labour market, and on improving learning outcomes and skills. Its guiding principles are:

- flexible VET through modular programmes;
- delaying specialisation to the final grades to increase flexibility of the future workforce;
- providing general education and key competences as a basis for further education and lifelong learning;
- gradually introducing work-based learning;
- preparing and implementing a forecasting model based on needs, plans and trends in VET sectors at county, regional and national levels;
- easing the transition from upper secondary VET to various forms of higher education through additional educational programmes.

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

⁵¹ People aged 20-34 who left education between one and three years before the reference year.

In addition, the Croatian Ministry of Science, Education and Sports is currently drafting a Programme for the Development of Vocational Education and Training, to be adopted by the end of 2015. The Programme will be the first step in initiating a systematic vocational education and training reform, in line with the Croatian qualifications framework methodology. At the same time, pilot VET curricula continue to run in 54 schools in 2014/15. The pilot curricula are based on learning outcomes and competences recommended by 27 occupational and qualifications standards set by sector skills councils. The funding of VET in Croatia is organised according to a traditional model, with the private sector playing a minor role. As a result, the sustainability of VET reform is highly dependent on funding from the European Social Fund and the capacity of human resources in schools. In the 2014-20 programming period, the European Social Fund 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), and a national VET curriculum will be developed using national funding.

References

Agency for Science and Higher Education (2014), Broj studenata po područjima od akademske godine 2008/09 do 2012/13, <https://www.azvo.hr/hr/statistike/broj-studenata-po-raznim-kriterijima/44-statistike/559-broj-studenata-po-podrucjima-i-poljima-u-akademskoj-godini-20092010>

Croatian Parliament (2014a), Odluka o proglašenju zakona o izmjenama i dopuni zakona o drzavnoj potpori za obrazovanje I izobrazbu, http://narodne-novine.nn.hr/clanci/sluzbeni/2014_02_14_288.html

Croatian Parliament (2014b), Strategy for Education, Science and Technology, http://narodne-novine.nn.hr/clanci/sluzbeni/2014_10_124_2364.html

European Commission (2011), First European Survey on Language Competences, http://ec.europa.eu/languages/policy/strategic-framework/documents/language-survey-final-report_en.pdf

European Commission (2012), Developing key competences at school in Europe: challenges and opportunities for policy, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/145en.pdf

European Commission (2015), The European Higher Education Area in 2015: Bologna Process Implementation Report, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf

European Schoolnet (2012), Survey of schools: ICT in education — country profile Croatia, <https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Croatia%20country%20profile.pdf>

IRO (2011), Higher education funding and the social dimension in Croatia: analysis and policy guidelines

Matkovic T. (2009a), Pregled statističkih pokazatelja participacije, prolaznosti i režima plaćanja studija u Republici Hrvatskoj 1991-2007, *Revija za Socijalnu Politiku*, Vol. 16, Issue 2, pp.239-250, <http://hrcak.srce.hr/39487>

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

OECD (2013a) PISA 2012 results: Excellence through Equity: Giving Every Student the Chance to Succeed (Volume II), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-II.pdf>

OECD (2013b) PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

PL4SD (2014), Peer learning for the Social Dimension, Country Review on the Social Dimension in higher education in Croatia, Background Report, http://www.pl4sd.eu/images/Country_Reviews/CR_Background_Report_Croatia.pdf

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

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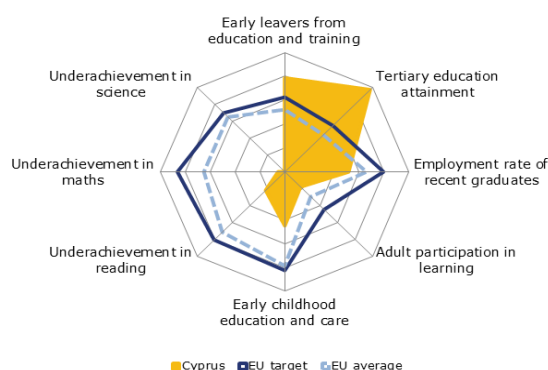
Cyprus

1. Key Indicators and Benchmarks

			Cyprus		EU average		
			2011	2014	2011	2014	
Educational poverty and spending cuts: challenges for the education sector							
Share of 15 year-olds with underachievement in:	Reading	•	:	32.8% ¹²	:	17.8% ¹²	
	Maths	•	:	42.0% ¹²	:	22.1% ¹²	
	Science	•	:	38.0% ¹²	:	16.6% ¹²	
Education investment	Public expenditure on education as a percentage of GDP		6.6%	6.5% ¹³	5.1%	5.0% ¹³	
	Public expenditure on education as a share of total public expenditure		15.4%	15.7% ¹³	10.5%	10.3% ¹³	
Education attainment levels of young people across Europe							
Early leavers from education and training (age 18-24)	Men		15.1%	11.2%	15.2%	12.7%	
	Women		8.1%	2.9%	11.5%	9.5%	
	Total	•	11.3%	6.8%	13.4%	11.1%	
Tertiary education attainment (age 30-34)	Men		39.7%	46.0%	31.0%	33.6%	
	Women		52.0%	58.2%	38.7%	42.3%	
	Total	•	46.2%	52.5%	34.8%	37.9%	
Policy levers for inclusiveness, quality and relevance							
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	85.0%	84.3% ¹³	93.2%	93.9% ¹³	
Teachers' participation in training	Any topic (total)		:	89.1% ¹³	:	84.6% ¹³	
	Special needs education		:	24.1% ¹³	:	32.4% ¹³	
	Multicultural settings		:	25.9% ¹³	:	13.2% ¹³	
	ICT skills for teaching		:	53.8% ¹³	:	51.0% ¹³	
Foreign language learning			92.4%	92.9% ¹²	63.0%	: ¹²	
Share of ISCED 3 students in vocational education and training (VET)				12.7%	13.6% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		57.2%	54.6%	71.3%	70.8%	
	ISCED 5-8		76.3%	72.4%	82.5%	80.5%	
	ISCED 3-8 (total)	•	72.5%	68.7%	77.1%	76.1%	
Learning mobility	Inbound graduates mobility (bachelor)		:	14.6% ¹³	:	: ¹³	
	Inbound graduates mobility (master)		:	4.6% ¹³	:	: ¹³	
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	7.5%	6.9%	8.9%	10.7%	

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Early school leaving has declined steadily in Cyprus in recent years, but this phenomenon masks a lack of efficiency in public spending and the relatively low quality of educational outcomes. The tertiary education attainment rate is one of the highest in the EU, but at the same time Cyprus faces one of the lowest employability rates of recent graduates in the EU and unsatisfactory performance in basic skills by students and young adults alike. The country also features one of the lowest participation rates in vocational education and training (VET) in the EU, but recent reforms and new initiatives in this area include a gradually expanding VET offer.

3. Investing in education and training

In 2013, only three other EU Member States invested more public funds in education than Cyprus, as measured by the share of GDP (6.5% compared to a 5.0% EU average).⁵² Public expenditure on education however has decreased in recent years, in particular after the onset of the economic crisis. In 2012 Cyprus was one of six European countries which reduced their public investment in education by more than 5%. This reduction continued in 2013 for the second year in a row and public spending decreased, particularly for the tertiary sector.

Cyprus is currently implementing measures aimed at increasing the efficiency and the effectiveness of the education and training sector, in line with the provisions of the Memorandum of Understanding (MoU) under the Macroeconomic Adjustment Programme. Accordingly, Cyprus undertook a functional review of the Ministry of Education and Culture (MoEC) and of the teaching workforce. In July 2014, it adopted an action plan for upgrading the educational system, based on the recommendations made in the two reports of the World Bank in May 2014. Not only does the action plan include the review, revision and redefinition of the education strategy of the Ministry but it also addresses important policy domains. These include modernising the recruitment system in public education, upgrading teacher's professional development and teacher training, and modernising the evaluation system for teachers. As yet, it is too early to assess the impact of the action plan's measures. The authorities are also due to present a proposal to consolidate the student grant system and the student social package into one scheme, with a view to implementing a single arrangement for the academic year 2015-2016.

All in all, Cyprus continues to face issues of efficiency and quality in education and training. At the same time expenditure on education remains high, including a still costly teaching force, and learning outcomes levels that remain fairly low, especially in basic skills.

4. Tackling inequalities

Participation in early childhood education and care (ECEC) is well below the EU average, at 84.3%, compared to 93.1% in 2013. However, there has been a significant increase of more than 12 percentage points in pre-school attendance for pre-primary age children within the last decade. However, according to Cypriot authorities, the economic crisis had a negative impact on the participation and more specifically affordability of ECEC.

As regards early school leaving, Cyprus has already reached the Europe 2020 national target, while still continuing to make significant progress in tackling this phenomenon. In 2014, the early school leaving rate was 6.8% (compared to an EU-28 average of 11.1%), down from 12.7% in 2010.

However this improvement masks a number of disparities:

- In Cyprus young men are almost four times more likely to leave school prematurely (11.2%) than young women (2.9%), and the gender gap is widening.

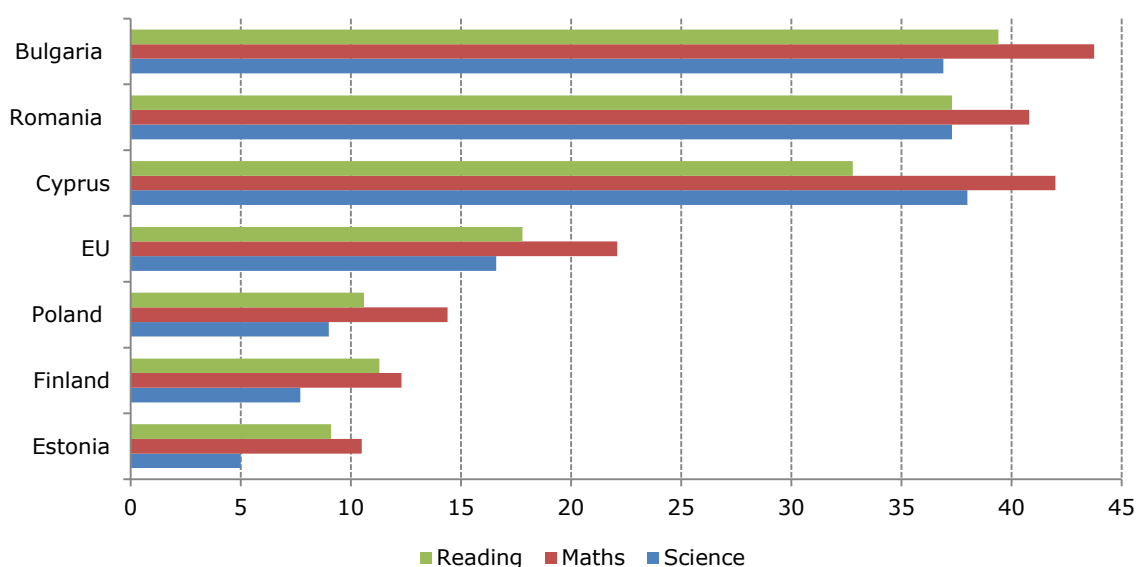
⁵² Source: Eurostat, General government expenditure by function (COFOG) database.

- Foreign-born students have a much higher risk of dropping out from education (19.5%) compared with students born in Cyprus (4.6%).
- Cyprus still has a relatively high proportion of youth who are not in employment, education or training (NEETs); the rate among 15-24 year olds in 2014 was 17.0%, compared with the EU-28 average of 12.4%.

The decrease in early school leaving might also be due to the fact that a significant number of economic immigrants, who are traditionally more prone to school drop-out, have relocated abroad on account of the economic crisis and the lack of job opportunities in Cyprus. Young people may also return to education or training due to high unemployment on the one hand and the introduction of compensation schemes on the other.

The country showed poor performance in basic skills in mathematics, reading, and science in the 2012 OECD Programme for International Student Assessment (PISA), despite high levels of public spending, in both absolute and relative terms. Cyprus had the weakest results in the EU for science, the second worst for mathematics and the third worst for reading (Figure 2). Underperformance mainly concerns boys with an immigrant background (OECD 2013b).

Figure 2. Percentage of low-achievers in basic skills (2012)



Source: OECD (2013b)

There have been several recent reforms of primary and secondary education. The 'Actions for social and school inclusion' project is one example. It builds on the 'zones of educational priority' (ZEP) project by providing more flexible networks of schools of educational priority. The project will expand the scope of ZEP by including individual schools wishing to participate in the programme. Another reform is the New Modern Apprenticeship programme, which provides a learning pathway for young people, including those who have dropped out of the formal education system. However, apprenticeships are currently perceived as an unattractive second-chance education option. These measures will continue to be financed by the European Social Fund (ESF) for the 2014-20 period.

Also, the Council of Ministers decided in May 2014 to keep all existing public kindergarten classes open, both for pupils of compulsory pre-primary education and non-compulsory education. This decision means that classes for pre-primary age pupils with available capacity will be supplemented by younger children, instead of having to suspend their operations. The measure aims to give pre-school aged children from low-income families the chance to access public kindergartens and pre-primary school teachers the opportunity to retain their jobs.

There have also been coordinated efforts to make the school environment more inclusive by modernising curricula and implementing specific programmes. To achieve this, the following two measures are being implemented:

- Establishing the Task Force on School Violence ('Observatory for Violence in Schools') which aims to address issues relating to truancy and bullying. A related programme has been running since September 2012 in secondary schools, and since 2013 in elementary schools, with more than 30% of schools opting to participate in the programme in the past two years.
- Implementing the new socially-oriented education curriculum, which is a methodological framework encouraging teachers, parents and pupils to collaborate and promote social measures, healthy lifestyle choices, intercultural dialogue and active citizenship.

Finally, the MoEC recently presented a proposal for a new timetable for primary and secondary schools, aimed at correcting existing deficiencies. It emphasises the need to improve pupils' language and numerical skills at all levels of school education. There is also a provision on 'specialised schools', such as the 'music school', the 'athletics school' and the 'arts school'. The proposal includes an intensive programme of Greek language, lasting at least one year, for foreign pupils at any level of entry to the educational system. All in all, the results of the efforts aimed at improving learning outcomes are expected to become visible in the next few years.

5. Modernising school education

The 2013 OECD TALIS survey provides a mixed picture for teachers in Cyprus (OECD 2014). It shows that 89.1% of lower secondary level teachers in Cyprus had undertaken some form of professional development, which is slightly above the EU-average of 84.7%. At the same time 53.8% of teachers from Cyprus reported having participated in ICT training during the same period. In Cyprus 46.4% of teachers use ICT for projects or class work with students compared with an EU average of 34.0%. Only 35.5% of them assign different work to students who have difficulties learning and/or to those who can advance faster, compared with 46% for the EU on average. It is also worth noting that only 16.8% of teachers report providing students with career guidance and counselling. On a positive note, in Cyprus the proportion of students at ISCED 2 level learning two or more foreign languages in 2012 remained very high at 82.9%, compared to the EU-28 average of 63.0%.

As regards the teaching profession itself, this career choice remains a very attractive employment option in Cyprus. Minimum annual statutory salary levels for primary and lower secondary education are much higher than GDP per capita (126% for ISCED levels 1, 2, and 3). In addition, the maximum statutory salary for teachers at all education levels is the highest of all the EU countries (European Commission 2014) in 2013/14 (306% of GDP per capita for ISCED 1, 2, and 3). It should be noted however that a 10% salary reduction was imposed in 2013 in Cyprus and that, due to budgetary restrictions, the authorities no longer provide any allowances to teachers.

The MoEC's objective is to introduce ICT at all levels of education and the most significant measures in this area are the following:

- Cyprus has given ICT a prominent position in its new curricula for primary and secondary education (MoEC 2014).
- The MoEC has set up a web portal which offers resources and training to teachers for developing their ICT skills.
- The MoEC has created the Cyprus School Net which is an educational portal and content management system, addressing schools, teachers, students and parents;
- Teachers have had the opportunity to become more familiar with ICT by participating in relevant training programmes, run by the Pedagogical Institute and co-funded by the EU.

- Many Cypriot higher education institutions (HEIs) have developed distance learning and eLearning options.

6. Modernising higher education

As regards higher education, Cyprus has the second highest tertiary education attainment rate in the EU with 52.5%, compared to the European average of 37.9% in 2014. It also largely outperforms its Europe 2020 national target of 46%. There is however a clear gender imbalance in favour of women (58.3% versus 46% for men). At the same time, the tertiary education attainment rate is much higher for students born in Cyprus than for foreign-born students (58.3% versus 39.4% in 2014). In Cyprus the proportion of science and technology students is fairly low, i.e. in 2011 the proportion of mathematics, science and technology graduates among 20-29 year-olds was 5.1% compared with an EU average of 14.4%.

Employability prospects for recent tertiary education graduates⁵³ (ISCED 5-8) in Cyprus have been relatively poor but are improving with a rate of 72.4% in 2014 compared to the EU-28 average of 80.5%. However, the transition from education to labour market is still difficult, something that also affects highly skilled young people. Between 2008 and 2013, the highest growth in the EU in unemployment among highly educated young people was in Cyprus (with a 36.2% increase). There are many young people in Cyprus working in jobs which do not necessarily require their level of qualifications, particularly among women, regardless of the method used to measure it. According to available data (European Commission 2015) the country with the highest rate in the EU was Cyprus (39.7 % in 2013). Also, according to a study by the International Labour Organisation (ILO 2014) and measured according to the ISCO methods, in 2012 as much as 29.5% of young women experienced this phenomenon, as opposed to 23.9% of young men. Finally, according to the OECD Adult Skills Survey, the literacy and numeracy skills of recent tertiary education graduates are close to or even lower than those of recent upper secondary graduates in the best performing EU countries (OECD 2013a).

As regards learning mobility, Cyprus presents a relatively high inbound rate (9.1% in 2011/12) but also a particularly high outgoing rate (14.4% in 2011/12), with almost as many Cypriot students studying abroad as in their own country. This phenomenon may be explained by limited local provision of programmes for highly specialised fields of study and the small size of the country.

The slow responsiveness of the higher education system to the changing economic structure and its adaptation to future skills needs are still major concerns for Cyprus. The main reform in higher education has been the setting up of the competent authority for internal and external quality assurance in higher education. The authority will hold both private and public universities accountable by requiring them to submit self-evaluations every 2-3 years. The creation of the new Quality Assurance and Accreditation Agency for Higher Education has been approved by the Parliament and this entity is expected to start its operations in October 2015. However, it is not yet clear when the quality assurance mechanism will start operating in practice.

An action plan has been developed to help steer higher education students towards STEM fields. It aims to increase the proportion of students in STEM programmes to 20-22 % by 2020. In addition, counselling services in secondary education will be improved in order to offer more targeted guidance to students. A project supported by the European Social Fund will contribute significantly towards this end. At the same time, there is the widespread acknowledgement of the need to create high value-added jobs to absorb the high number of university graduates. Therefore higher education institutions have been encouraged to offer tertiary vocational programmes, especially in areas where there is strong demand. Another measure in this area is to improve cooperation between universities and enterprises. In order to better link academia

⁵³ People aged 20-34 who left education between one and three years before the reference year.

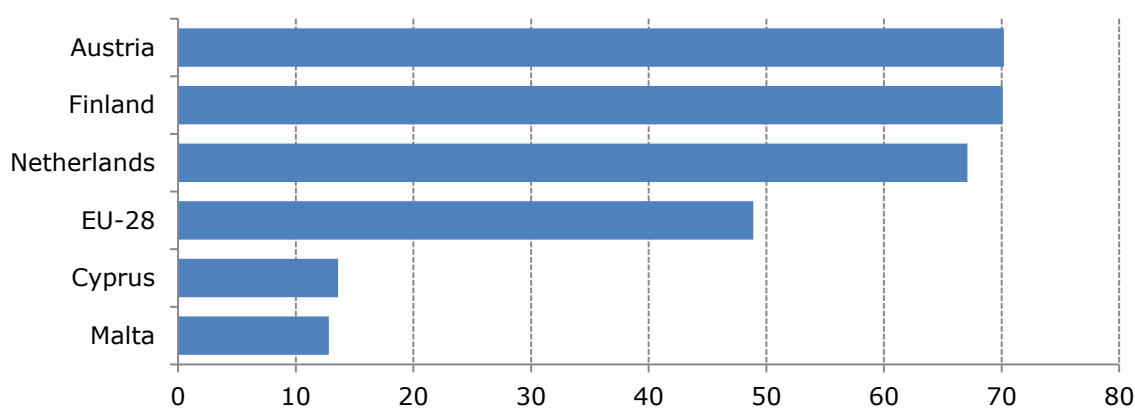
and the business sector, seven Industry Liaison Offices (ILOs) have been set up, three in public universities and four in private universities. Thus far, 36 agreements have been signed between universities and companies. The ILOs have succeeded in placing 1 980 students in companies in 2014 (up from 937 in 2013). Finally, the Council of Ministers approved the draft laws prepared by the MoEC in 2015, which allows public universities to offer, under certain conditions, programmes of study in foreign languages. The proposals have been submitted to Parliament for further discussion and approval. The measure is expected to contribute to attracting foreign students and further promoting the internationalisation of higher education.

7. Modernising vocational education and training and promoting adult learning

Cyprus had one of the lowest participation rates in upper secondary VET in the EU with 13.6%, compared to the EU average of 48.9% in 2013, with general education clearly predominating as a result. However, national sources report an important increase to 19% in 2014 (Cyprus Government 2015). In addition, Cyprus has a relatively low employability rate for recent upper secondary graduates⁵⁴ (ISCED 3-4 levels), with 54.6% compared with the EU-28 average of 70.8% in 2014.

Adult participation in lifelong learning in Cyprus is below the EU average and stagnating (6.9% in 2014 compared to 10.7% for the EU-28). In addition, low-skilled people (with educational attainment at ISCED levels 0-2) in Cyprus are more than five times less likely than the general population to participate in job-related learning (compared with almost three times less likely in the EU). As regards the skills levels of adults aged 16-65, Cyprus scores slightly below the EU average in literacy and numeracy proficiency tests according to OECD (2013a). All in all, Cyprus faces the challenge of fostering fully inclusive lifelong learning.

Figure 2. Percentage of vocational education and training students at ISCED 3 level (2013)



Source: Eurostat

As regards VET, the lack of employer engagement in the education of students is reflected in the weak component of work-based learning in schools. The economy predominantly consists of small and medium-sized enterprises and micro-enterprises, for which providing work-based learning and apprenticeships to students of post-secondary VET programmes is a challenge. However, the vocational education offer is gradually being expanded, including the restructuring of upper secondary and secondary technical and vocational education to increase their attractiveness.

⁵⁴ People aged 20-34 who left education between one and three years before the reference year.

In order to support and accelerate the process of reforming and upgrading secondary technical and vocational education, a dedicated committee was appointed by the MoEC in February 2015 and the Strategic VET Plan for 2015-20 was approved by the Council of Ministers in May 2015. The New Modern Apprenticeship programme provides another learning pathway for young people, including early school leavers from the formal education system, but tends to be regarded as a second-chance option. The post-secondary non-tertiary institutes of vocational education and training (*MIEEK*, see Box 1 below) continue to provide highly attractive demand-driven opportunities.

Also a National Action Plan for Youth Employment was approved in December 2014 and includes work experience schemes that ease the transition of young graduates to the world of work. VET relevance and quality are pursued also through an increased emphasis on key competences, career management skills and entrepreneurship which are now included in most curricula. There is an ongoing reform of curricula based on a learning outcomes approach. A National Coalition for Digital Jobs was formed, composed of relevant stakeholders, including ICT companies, education and training providers, public authorities in order to formulate and start implementing an Action Plan and a roadmap.

All in all, the VET reform will need to target a broader group of young people and require a substantial increase in work-based learning provision, both at secondary and tertiary levels.

The new National Strategy for Lifelong Learning (2014-2020), adopted in June 2014, recognises the need to address the impact of the economic crisis through education and training, adapt to the new economic structure, improve the level of basic and ICT skills, increase the transparency of qualifications and improve learning mobility. It sets out four priority axes aimed at: increasing access and participation in lifelong learning; improving the quality and efficiency of educational outcomes; promoting research and development of skills forecasting tools; promoting the employability of disadvantaged groups. Other efforts include fostering of lifelong learning among low skilled adults and those from disadvantaged social groups, as well the development of mechanisms for the validation of non-formal and informal learning.

The transparency of vocational qualifications and competences is gradually being improved. Vocationally trained people are able to certify their competences via a system of vocational qualifications, instigated and continuously expanded by the Human Resources Development Agency (HRDA). By early 2015, 72 standards of vocational qualifications have been developed in priority occupations at various levels and opportunities for access are provided to the employed, unemployed and economically inactive persons. It is foreseen that during the programming period 2014-20, 80 new standards will be developed and around 10 000 persons will be assessed to get their qualifications recognised. Finally, the work on linking the national qualification levels to the European Qualifications Framework (EQF) is on-going to include also the apprenticeship scheme and the HRDA vocational qualifications subsystem in the National Qualifications Framework/EQF.

Box 1. Establishing and operating post-secondary non-tertiary VET institutes (*MIEEK*)

VET in Cyprus has never been an attractive career path for young people. According to CEDEFOP, there is a *'strong cultural trend among the Cypriot population in favour of general secondary education followed by higher education'* (Cedefop 2012). For instance, about 82% of students completing upper secondary education seek to enrol in universities.

Developing VET has therefore been a significant priority of the educational policy in Cyprus in recent years. One of the aims of the MoEC is to improve the post-secondary sector of VET. Thus, in February 2012, the MoEC announced the establishment of post-secondary institutes of vocational education and training (*MIEEK*: *Μεταλυκειακά Ινστιτούτα Επαγγελματικής Εκπαίδευσης και Κατάρτισης*). This decision boosted the efforts to improve the image of the

post-secondary VET sector by presenting it as an attractive educational option. The *MIEEK* programme began to operate in November of 2012.

The *MIEEK* programme has been successful, given the strong interest of young people in being enrolled in its programmes. During 2013/14, the total number of students attending the first and second years of the *MIEEK* institutes reached 400, up from 196 in 2012/13. Since demand is very high and the number of applicants largely exceeds the number of available places, a student placement system with selection criteria has been applied, favouring young unemployed individuals. The *MIEEK* programmes are flexible and responsive to the constant changes in employment and the economy. At the same time, according to the MoEC, employment prospects for *MIEEK* graduates have been significantly better than for other groups.

The MoEC is currently planning to transform the *MIEEK* institutes into State Schools for Vocational Education and Training, belonging to the tertiary sector. This transformation is intended to present VET as an attractive study option in Cyprus, also at tertiary level. The recruitment rate of *MIEEK* graduates so far is encouraging for the future of the institution.

The remaining challenge for the *MIEEK* institutes is to attract well-qualified students who are graduates of general upper secondary schools. To achieve this objective, the current selection criteria for recruiting students to *MIEEK* programmes need to be changed and the programmes need to offer qualification certificates that conform to the EQF.

According to the MoEC, the total cost for establishing and running the *MIEEK* institutes for the 2012/13 to 2014/15 period amounts to EUR 4.4 million. This amount is financed by the European Social Fund and the Republic of Cyprus.

References

Cedefop (2012), 'Vocational education and training in Cyprus'. Short description, http://www.cedefop.europa.eu/files/4118_en.pdf

Cyprus Government (2015), National Reform Programme 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_cyprus_en.pdf

European Commission (2014), 'Teachers' and school heads' salaries and allowances in Europe' in 2013/14, http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/salaries.pdf

European Commission (2015), 'The European Higher Education Area in 2015: Implementation Report Bologna Process', http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf

ILO (2014), Skills mismatch in Europe, http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_315623.pdf

MoEC (2014), Curriculum for Information Technology, http://www.moec.gov.cy/dde/programs/eniaio_oloimero/pdf/curriculum_ict.pdf

OECD (2013a), OECD Survey of Adult Skills (PIAAC), <http://www.oecd.org/site/piaac/>

OECD (2013b), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

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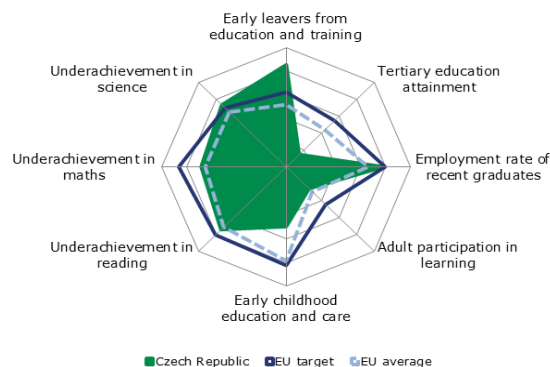
Czech Republic

1. Key Indicators and Benchmarks

			Czech Republic		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	●	:	16.9% ¹²	:	17.8% ¹²
	Maths	●	:	21.0% ¹²	:	22.1% ¹²
	Science	●	:	13.8% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		5.1%	5.2% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		12.1%	12.3% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		5.4%	5.8%	15.2%	12.7%
	Women		4.4%	5.2%	11.5%	9.5%
	Total	●	4.9%	5.5%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		21.5%	24.2% ^u	31.0%	33.6%
	Women		26.1%	32.5% ^u	38.7%	42.3%
	Total	●	23.7%	28.2% ^u	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		●	87.8%	85.7% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	82.5% ¹³	:	84.6% ¹³
	Special needs education		:	23.8% ¹³	:	32.4% ¹³
	Multicultural settings		:	11.4% ¹³	:	13.2% ¹³
	ICT skills for teaching		:	53.4% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		30.7%	42.6% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			73.0%	73.8% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		76.7%	81.2%	71.3%	70.8%
	ISCED 5-8		85.9%	81.4%	82.5%	80.5%
	ISCED 3-8 (total)	●	80.7%	81.3%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	7.4% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	9.6% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	●	11.4%	9.3%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The overall educational outcomes and employability of school and higher education graduates in the Czech Republic are good. The early school leaving rate remains low and progress in tertiary education attainment is rapid. A new comprehensive strategy for education that has been adopted for the period 2015-2020 emphasises the need to reduce inequalities, support teachers and improve governance of the educational system. Measures aiming to increase participation in early childhood education and care, strengthen the teaching profession and further develop the evaluation framework are to be implemented in the near future. The new Action Plan for Inclusive Education proposes or confirms a number of concrete measures designed to reduce existing inequalities in the education sector and make mainstream education more inclusive. To bring about the changes needed and to reduce inequalities that affect socially disadvantaged students and Roma in particular, the legislative amendments adopted in 2015 will have to be supplemented by adequate financial means, close communication with stakeholders and strict monitoring of the impact of measures.

Teachers' salaries are low in comparison to other countries, the prestige of the profession is weak and the teacher population is ageing. It is necessary to make the profession more attractive to talented young people, in particular men — who are largely under-represented among teachers. Skills mismatches need to be reduced, in particular for graduates from the vocational education and training (VET) sector. As more and more young people are now entering higher education, further measures will be necessary to ensure quality and labour market relevance.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to the Czech Republic (Council of the European Union 2015) included a recommendation on education and training:

CSR 4: Adopt the higher education reform. Ensure adequate training for teachers, support poorly performing schools and take measures to increase participation among disadvantaged children, including Roma.

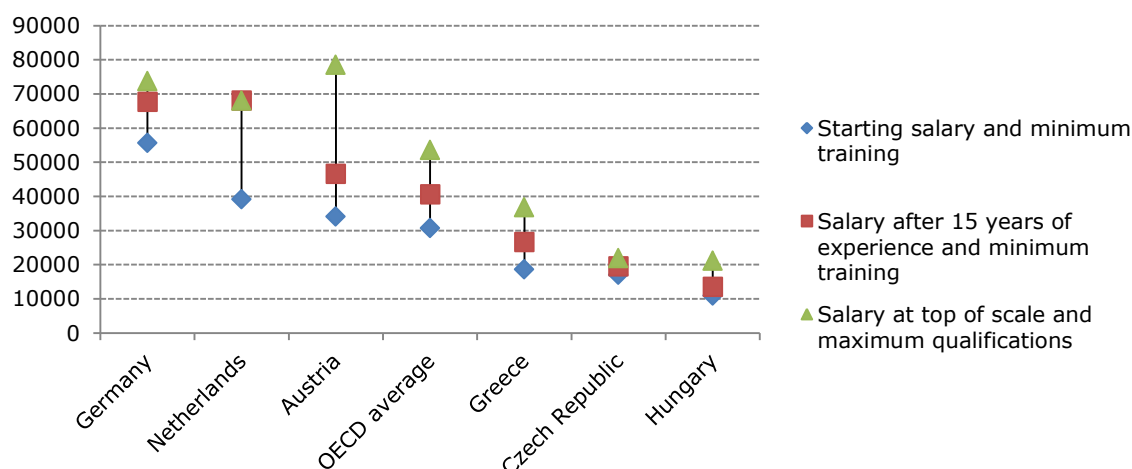
3. Investing in education and training

General government expenditure on education as a share of GDP was 5.2% in 2013, surpassing the 5.0% EU average.⁵⁵ This represents a 0.2 percentage point increase compared to 2012. Teachers' salaries went up by 3.5% from November 2014. They are still low compared to salaries of other Czech workers with equivalent qualifications and to those in other countries (Figure 2). New funding was also allocated to enable municipalities to increase capacities in early childhood education and care (ECEC) and for early stages of compulsory education, as a result of rising pressure due to demographic trends and the decision to increase participation in ECEC.

The funding available to the regional (upper secondary) education system will be reviewed to support optimisation of the school network. This is necessary to reduce current regional differences in funding levels, to react on the lower number of students in the relevant cohorts and to better reflect the employability of VET graduates from different programmes. The reform is being supported by an ongoing OECD review on the efficiency of the use of school resources.

⁵⁵ Source: Eurostat, General government expenditure by function (COFOG) database. A new European System of National and Regional Accounts was implemented from September 2014, affecting the figures for the Czech Republic also for previous years.

Figure 2. Lower secondary teachers' salaries at different points in their careers (2012)
Annual statutory teachers' salaries, in public institutions, in equivalent USD converted using PPPs



Source: OECD (2014a)

4. Tackling inequalities

The early school leaving rate, standing at 5.5% in 2014, remains very low in comparison to other countries, with only three EU Member States performing better. The small increase during recent years (up from 4.9% in 2010) could still put the Europe 2020 national target at risk if the negative trend was to continue. Regional disparities are strong. In particular, 72% of Roma children leave school early according to European Union Agency for Fundamental Rights (2014).

While the overall results from the 2012 OECD Programme for International Student Assessment (PISA) were good, the survey showed that the students' socioeconomic background strongly influences educational outcomes (OECD 2013). Early tracking, selectivity, frequent delayed entry into primary education, misplacement in 'practical schools' with reduced curricula all hamper the future educational and labour market outcomes of socially disadvantaged pupils.⁵⁶

The proportion of teachers participating in professional development related to teaching students with special needs is one of the lowest among countries surveyed by the OECD in its 2013 Teaching and Learning International Survey (TALIS): 23.8% against the OECD average of 31.7%. The same holds for participation in training for teaching in multicultural or multilingual settings. The 10% proportion of teachers having participated in student guidance and counselling is much lower than in most other countries. Similarly, only 32.2% of teachers report that they give different work to students with difficulties or those advancing faster than the group, making the Czech Republic one of the EU countries where this practice is least common (OECD 2014c).

PISA also confirmed the impact of low participation in ECEC on future educational outcomes. The decreasing participation rate stood at 85.7% in 2013, much lower than the 93.9% EU average. According to the 2015 National Reform Programme (NRP), the insufficient availability of public kindergartens particularly affects low-income groups (Office of the Government of the Czech Republic 2015). The latest available data show that only 26% of Roma children aged 4 have participated in ECEC prior to starting compulsory education (European Agency for Fundamental Rights 2014).

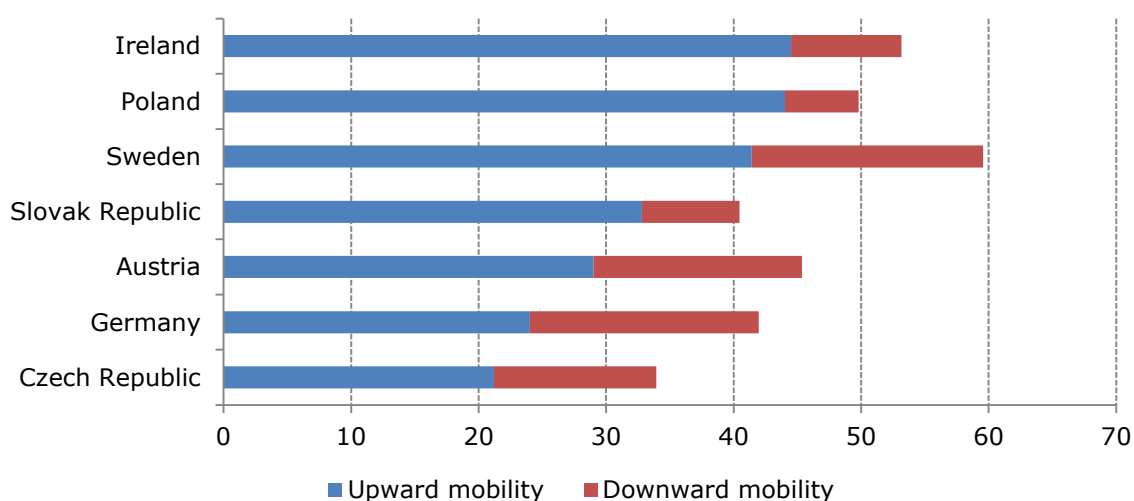
⁵⁶ The European Commission has launched infringement proceedings against the Czech Republic for indirect discrimination of Roma children placed in 'practical schools' with a reduced curriculum intended for children with mild mental disabilities.

A number of strategic documents adopted in 2015, including the Action Plan for Inclusive Education 2016-2018 and the Roma Integration Strategy 2020, set out measures aiming at greater equality through a significant reduction in the number of Roma children in 'practical schools', targeted reduction of early school leaving, helping teachers move towards inclusive education, increasing the number of education assistants, strengthening support for secondary and tertiary education of Roma. They will be largely financed by EU funds. Reliable data would be needed to effectively monitor the impact of the measures taken on particular populations such as the Roma.

One of the main measures adopted in 2015 consisted in amending the Education Act to ensure that individual support is given to pupils with special educational needs — including those from disadvantaged backgrounds — in mainstream education. The amendments were welcomed by a majority of stakeholders. It is hoped that the measures will be supported by sufficient funding in mainstream education. If most of the 'practical schools' are to be closed as a consequence of the amended legislation, their financial and human resources could usefully be redeployed to support the schooling of pupils with special needs in mainstream education.

Legislation is being drawn up to make the last year of ECEC compulsory from 2017/18; this could have a positive effect on the participation of socially disadvantaged children. Capacities are being strengthened with the support of national and EU funding. At the end of 2014, legislation was adopted to enable employers to provide childcare services for their employees' children. The NRP is forecasting a balance between supply and demand by 2016. Targeted efforts, including work with families, will be important to ensure increased participation of children from disadvantaged backgrounds. The widening of availability should go hand in hand with high quality and inclusiveness in ECEC services. To that end, the planned reflections on strengthened requirements for staff qualifications are positive, in particular because current requirements are lower than in most other EU Member States.

Figure 3. Absolute educational mobility
Percentage of 25-64 year-old non-students whose educational attainment is higher than (upward mobility) or lower than (downward mobility) that of their parents



Source: OECD (2014a)

5. Modernising school education

Teachers perceive their status as very low according to the TALIS survey. The profession is not attractive to talented young people yet demographic projections point to a need to increase the number of teachers in particular in the compulsory education sector in order to maintain the current student-teacher ratio. There are shortages of qualified teachers in certain areas, hence

the exceptions to the amended Act on Education Staff allowing teaching to be delivered by staff who do not fulfil the formal qualification requirements in certain conditions. There is a strong gender imbalance in the profession: women are largely over-represented and get lower salaries than men, while the reverse is true for headmasters. The Czech Republic is one of the few EU Member States that still do not have a structured induction programme for new teachers.

As regards teacher training, the TALIS survey shows an overall proportion of teachers undertaking some professional development in the previous 12 months close to the EU average (82.5% compared to 84.7%). Participation in training to develop information and communication technologies (ICT) skills for teaching (53.4%) or using ICT for student projects or class work (36.5%) is slightly above the EU average and Czech pupils score well in digital literacy as shown by the 2013 International Computer and Information Literacy Study (IEA 2014).

The NRP announced the support needed to develop teachers' everyday formative assessment abilities. Other measures to enhance the evaluation framework — in the system where schools have a large degree of autonomy — include centrally-designed tests at various levels of education — designed by the Czech School Inspectorate. A platform aimed at enabling schools, teachers and pupils to evaluate their performance on certain subjects is also being developed. A new unified entrance exam for secondary schools leading to the State school-leaving exam was pilot-tested in 2015 (this measure is controversial as some experts consider it may hamper the efforts to reduce inequalities). The NRP confirmed that the comprehensive framework for evaluation is to be completed in 2015 and will include 'criteria of quality schools' to be published. It is hoped that the Czech School Inspectorate will have enough resources to carry out the inspections at the pace needed and to offer support and recommendations to underperforming schools so that they can improve the educational outcomes.

Following a change to the curricula for secondary education making the learning of a second foreign language compulsory from the academic year 2013/2014, the previously low proportion of students learning two or more foreign languages is likely to improve in the years to come. A new Strategy for Digital Education until 2020 was adopted in autumn 2014. With the support of EU funds, it aims at widening the use of modern digital technologies in education, developing teachers' and pupils' digital skills, reinforcing infrastructure, supporting innovative practices. More generally, a revised comprehensive Long-term Plan on Education and the Educational System was adopted for 2015-2020. As to reducing inequalities, it is not clear if mechanisms to incentivise the best and most experienced teachers to teach in challenging schools are envisaged; such measures could bring additional positive results.

Box 2. The new career system for teachers and pedagogical staff

The teaching profession is facing a number of challenges: low in prestige and unattractive to talented young people, due among other things to low salaries that do not rise much over the course of a career, ageing, gender imbalance in terms of numbers and salaries, unequal continuous professional development of teachers (CPD). In addressing these challenges and placing more emphasis on CPD and career development, as well as enhancing the governance of the system which is currently largely in the hands of headmasters, authorities are finalising a new career structure for teachers with the support of EU funds (national project 'Career system').⁵⁷ Strengthening skills and competences as well as giving better feedback and support to teachers to enhance teaching quality are among the main objectives.

The system provides for the classification of educational staff into four career levels, each characterised by a description of work activities, qualifications required, evaluation and standards.

⁵⁷ <http://www.nidv.cz/cs/projekty/projekty-esf/karierni-system.ep/>

- Level 1 (compulsory): novice teacher newly graduated from an initial teacher training programme or recently arrived in the teaching profession, with a temporary contract for two years. The teacher will work in a classroom and take part in an induction programme. This stage lasts for two years, after which the teacher must go through the attestation/evaluation that is obligatory to get to level 2 as a regular teacher.
- Level 2 (compulsory): excellent teacher with long-term prospects, taking part in regular CPD, still working mainly in a classroom.
- Level 3 (optional): besides fulfilling the requirements of a level-2 teacher, he/she is a pedagogical leader in his/her school, supporting colleagues with positive results.
- Level 4 (optional): on top of fulfilling the conditions for a level-3 teacher, he/she is a leader at the system level and carries out work that influences the development of education beyond the school.

The system will be based on teachers' standards for each level and will be linked to remuneration. Standards are to be developed for headmasters too, which may support the improvement of underperforming schools in terms of educational outcomes.

Progressive implementation and necessary legislative measures are planned between the academic year 2015/2016 and 2018 (full implementation). One of the potential obstacles to implementing the new system may lie in the classification of existing teachers. Furthermore, some critics point to the hierarchical structure of the standards linked to the four career levels and would have favoured a unique set of 'Master teacher standards'; they fear bureaucracy and possible competition between teachers. These critics would have preferred more autonomy for headmasters to carry out evaluation and determine remuneration of teachers at school level. There could be scope for combining the new system with additional resources for headmasters to evaluate and reward teachers' work.

For the new system to produce tangible results, sufficient additional financial means to meet the overall cost of increased salaries will be essential, but plans remain unclear at this stage. Furthermore, adequate support for proper understanding and implementation will be needed. Additional measures aimed at enhancing the prestige, attractiveness and quality of initial teacher training could also contribute to meeting the challenges that the profession faces. Communication directed towards upper-secondary students, i.e. prospective trainee teachers, could also help to enhance the perception of the profession.

6. Modernising higher education

The tertiary education attainment rate has more than doubled since 2007, reaching 28.2% in 2014 (the EU average was 37.9%). At the same time, many (often private) new higher education institutions (HEIs) have been created. While still slightly above the EU average, the employment rate of recent tertiary graduates⁵⁸ has fallen in recent years to 81.4% in 2014, compared to the 80.5% average at EU level. At the same time, the relatively low proportion of graduates who are overqualified for the jobs that they do has increased, in particular among younger graduates. The latest OECD survey on higher education in the region of Ostrava (OECD 2014b) has also confirmed increasing skills mismatches and suggests that the current offer in more practice-oriented programmes is unsuited to meeting needs for more professional and experience-based skills. Existing tertiary professional schools are often not very attractive. There is little direct involvement of external stakeholders in public HEIs, making study programmes more supply- than demand-driven. These trends reinforce the need to continue efforts to modernise higher education and insist on quality and labour market relevance.

Completion and drop-out rates are not yet monitored systematically. Current expectations are that less than half of the bachelor studies started in 2012 will be successfully completed. These

⁵⁸ People aged 20-34 who left education between one and three years before the reference year.

data vary a lot between institutions and programmes. The data also show that a large number of students drop out and then choose a different field of study, pointing to a possible lack of guidance in upper secondary education.

Two strategic documents on the development of higher education until 2020 were adopted in 2015. They include aims related to enhanced quality assurance, accessibility, internationalisation, more effective and efficient funding. EU-funded projects will provide support in these areas.

After many years of discussion, amendments to the Act on Higher Education were adopted by the Government in March 2015 prior to going through the parliamentary process. The aims are (i) to enhance internal quality assurance, (ii) to support the diversification of programmes offered, in particular by distinguishing between professional or academic study programmes, and (iii) to enhance the accreditation system with the creation of an independent accreditation agency and by introducing the possibility for institutional accreditation. If they are well designed, attuned to needs on the labour market and sufficiently recognised by employers, profession-oriented programmes are likely to improve the transition of graduates to the labour market and reduce the currently high proportion of students studying for Master's degrees, thereby making spending on higher education more efficient and further reducing the drop-out rate.

The qualitative criteria used for calculating the funding of higher education institutions are being revised. Criteria such as the employability of graduates or internationalisation were introduced into the formula in 2010; in 2015, 24% of the funding was based on these qualitative criteria.

7. Modernising vocational education and training and promoting adult learning

Upper secondary students' participation in VET is significantly higher than the EU average (73.8% compared to 49.8% in 2013). Nevertheless, the international trend towards general education rather than VET is also apparent: upper secondary VET has steadily become less popular since the mid-1990s, and the number of upper secondary students in VET has fallen by 24% over the last decade. Yet, the labour market demand for workers with vocational qualifications is still high. The Government has been taking measures to promote vocational training and also employers are becoming more active in this respect. While the employment rate of recent upper secondary graduates⁵⁹ is above the EU average (75.4% compared to 69.4%), skills mismatches have grown significantly, in some regions more than others. VET graduates, especially those from ISCED 3C programmes without *maturita* (i.e. those who graduate from programmes that do not give access to higher education) have fewer employment opportunities compared to experienced workers. Employers often complain about the poor knowledge and skills taught in these programmes. There is no coherent system for forecasting labour market needs. The VET system is largely school-based. However, mandatory work-based learning (practical training and work placements) is integrated into initial VET curricula.

Since 2014, direct and indirect funding of secondary and tertiary vocational education by employers is considered as tax-deductible expense.⁶⁰ In addition, the limit of tax-deductible amounts for corporate scholarships has been increased. The principal objective of the measure is to compensate part of entrepreneurs' costs and motivate new companies to cooperate with the schools. A development programme has been launched to support in-service training for teachers and professional staff in cooperation with employers.

⁵⁹ People aged 20-34 who left education between one and three years before the reference year.

⁶⁰ Deductible amount equivalent to approximately EUR 7 per hour of practical training or internship provided to a pupil/student on the taxpayer's premises; and costs of the assets at least partially used for the purposes of vocational training.

Binding rules for work-based training, as well as assessment standards to secure transferable skills and to strengthen interaction with private employers, could be a first step towards improving VET programmes. A new final examination was launched in 2015 and curricula are to be amended so as to increase the emphasis on practical training at the workplace. 2015 has been declared the Year of Industry and STEM⁶¹ Education aiming inter alia to enhance the attractiveness of VET. Various initiatives that have been developed recently aim at creating methods and tools for early identification of skills relevant to the labour market. They still take the form of single projects that are not interrelated, and their results do not serve as a regular source of information. There are no incentives (financial or other) for secondary schools or other actors based on the employability of graduates or employers' needs. Nevertheless, in the last few years, employers have become more engaged in public discussions regionally and nationally to reflect on the need for better matching of education supply with economic demands.

Adults can take part in any form of VET provided within the school system. However, participation of adults in these formal programmes is rather low. Balancing work/family life and studies can be difficult and most adults are reluctant to return to schools where traditional teaching methods (lecture type/teacher-driven approaches) still predominate and individual needs, work and life experience are not always taken into account. The entrance exam, mechanically testing the knowledge gained in prior initial education, is frequently an obstacle to adults' access to education, particularly at the higher levels. At the same time, VET schools are being turned into lifelong learning centres.

References

Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of the Czech Republic and delivering a Council opinion on the 2015 Convergence Programme of the Czech Republic, 2015/C 272/09, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_czech_en.pdf

European Union Agency for Fundamental Rights (2014), Roma survey - Data in Focus: Education: the situation of Roma in 11 EU Member States, http://fra.europa.eu/sites/default/files/fra-2014_roma-survey_education_tk0113748enc.pdf

IEA (2014), International Computer and Information Literacy Study ICILS, http://www.iea.nl/icils_2013.html

OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>

OECD (2014a), Education at a Glance 2014. OECD indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b) LEED Reviews Universities, entrepreneurship and local development, Moravia-Silesia <http://www.oecd.org/cfe/leed/OECD-LEED-2014-Moravia-Silesia.pdf>

OECD (2014c), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing, <http://www.oecd.org/edu/school/talis.htm>

Office of the Government of the Czech Republic (2015), National Reform Programme of the Czech Republic 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_czech_en.pdf

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⁶¹ Science, Technology, Engineering, Mathematics.

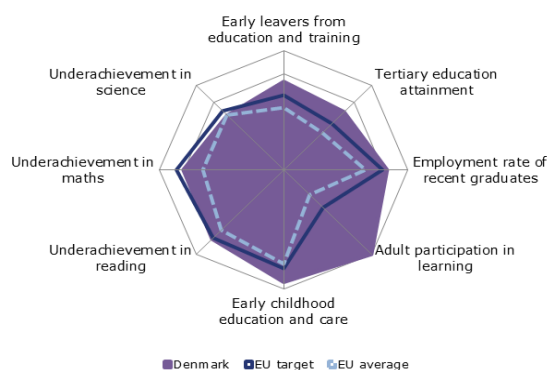
Denmark

1. Key Indicators and Benchmarks

			Denmark		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	•	:	14.6% ¹²	:	17.8% ¹²
	Maths	•	:	16.8% ¹²	:	22.1% ¹²
	Science	•	:	16.7% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		6.9%	7.0% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		12.1%	12.3% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		12.1%	9.3%	15.2%	12.7%
	Women		7.0%	6.0%	11.5%	9.5%
	Total	•	9.6%	7.7%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		34.7%	38.4% ^u	31.0%	33.6%
	Women		48.0%	50.0% ^u	38.7%	42.3%
	Total	•	41.2%	44.1% ^u	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	97.9%	98.3% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	86.4% ¹³	:	84.6% ¹³
	Special needs education		:	25.3% ¹³	:	32.4% ¹³
	Multicultural settings		:	11.4% ¹³	:	13.2% ¹³
	ICT skills for teaching		:	48.7% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		81.5%	81.6% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			46.1%	43.3% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		82.9%	81.0%	71.3%	70.8%
	ISCED 5-8		83.1%	86.4%	82.5%	80.5%
	ISCED 3-8 (total)	•	83.0%	83.8%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	7.4% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	18.1% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	32.3%	31.7%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Denmark is performing well in many education and training areas, including early school leaving, tertiary attainment, participation in early childhood education and care, participation of adults in lifelong learning as well as employment rate of recent graduates. The level of public funding for education remains one of the highest in the EU. Denmark's main challenges are to decrease the high proportion of underachievement in basic skills among pupils with an immigrant background and also reduce the rate of drop-out from vocational education and training. The reforms in the school and vocational education and training sectors launched in 2014 provide an opportunity to address these issues.

3. Investing in education and training

Despite a minor drop since 2012, Denmark has the highest proportion of government expenditure on education as a share of GDP in the EU (7% in 2013 compared with a 5% EU average).⁶² Government expenditure as a share of GDP in preschool and primary as well as in tertiary education is double the EU average (3.2% and 1.6% compared to 1.6% and 0.8%, respectively) even with a 0.1 percentage point reduction on preschool⁶³ and primary education and no changes in tertiary education compared to 2012. The on-going education and training reforms also have a budget implication. The 2015 National Reform Programme of Denmark (Danish Government 2015) specifically refers to planned allocations for the reform of primary and lower secondary education (*Folkeskole*; see Box 1 below), as well as DKK 3.1 billion for 2013–16 earmarked for optimising the apprenticeship capacity and DKK 3.6 billion between 2014 and 2020 for modernising and making VET attractive for ninth and tenth grade pupils.

4. Tackling inequalities

The early school leaving rate remains below the EU average (7.7% compared to 11.1% in 2014), having fallen from 11% in 2010. Early school leaving is below the national average in densely populated urban areas (5.8%), but it is higher in outlying (8.9%) and thinly populated (rural) areas (9.8%). The gender gap between boys and girls who leave school early is decreasing (9.3% for boys compared to 6% for girls) and the difference in drop-out rates among foreign-born and native-born students is about 6 percentage points.

Participation of 4 year-olds in early childhood education and care, at 98.3% in 2013, is among the highest in the EU. Participation of foreign and native-born children is almost identical at the age of 4; nevertheless, differences in enrolment can be seen for 3 year-olds and below — with first- and second-generation immigrants participating to a lesser degree.

While around the EU average, the mean scores in maths in the OECD Programme for International Student Assessment (PISA) show a declining trend (500 points in 2012 compared to 514 in 2003) (OECD 2013b). The proportion of low achievers in science is around the EU average (16.7% compared to 16.6%), but it is lower in maths (16.8% compared to 22.1%) and reading (14.6% compared to 17.8%). There is a significant gap between native-born and foreign-born students in the average maths performance; furthermore, the difference between the proportion of low achievers among native-born (13.2%) and among first- and second-generation immigrants is 35.2 and 25.6 percentage points respectively (Figure 2).

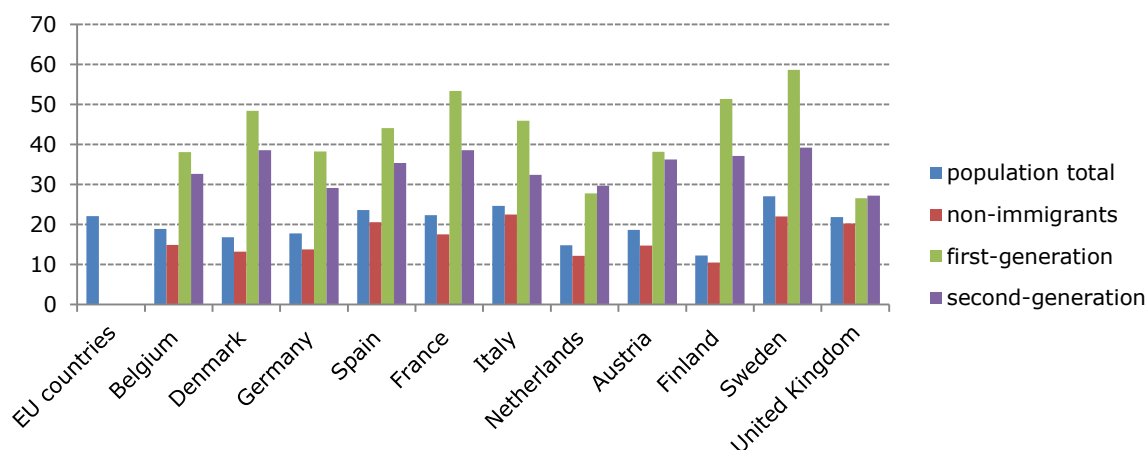
As regards the professional practice and preparation of teachers working in diverse classrooms, the 2013 OECD Teaching and Learning International Survey (TALIS) demonstrated that the percentage of teachers assigning different work to students based on their individual needs is close to the EU average (44.2% compared with 46%). Nevertheless, only every tenth teacher has participated in continuing professional development that promotes multicultural education and a quarter of them have developed teaching skills in support of students with special

⁶² Source: Eurostat, General government expenditure by function (COFOG) database.

⁶³ In the Danish context, this refers to early childhood education and care (ISCED 0).

educational needs (OECD 2014b). This raises concerns in particular because more than half of the teachers express a medium to high sense of need to learn about working with students with special needs, which indicates that teachers are aware of practical professional challenges they are not sufficiently equipped to respond to.

Figure 2. Proportion of low-achievers in maths among 15 year olds of non-immigrant and immigrant background, % (2012)



Source: OECD 2013b

In order to promote social inclusion, the government has taken measures aimed at ensuring the inclusive mainstream education of pupils with special educational needs⁶⁴ (Danish Government 2012b). This approach has been embraced by the *Folkeskole* reform (for more detailed information, see Box in section 5). The decision is much debated among stakeholders. Some teachers expressed their concerns at the launch of the initiative that they lacked ability to support the learning of special needs students. In addition, the national budget earmarked for special needs education decreased in 2012 compared to 2011 and about half of the municipalities announced a reduction in their public school expenditure for 2015. These developments may put into question the availability of sufficient resources for the successful implementation of the measures.

At the same time, Local Government Denmark published a new strategy 'At risk children — the future belongs to them' (KL 2015), which aims to promote social inclusion of children at local level. The strategy calls on municipalities to develop coherent strategies covering preschool and primary education and to prioritise investment in this area. For the identification of at-risk children a common model will be proposed to all municipalities, and any concrete measures will be thoroughly piloted before their full roll-out. The successful implementation of this ambitious project will largely depend on municipalities' capacities and willingness to allocate sufficient human and financial resources to it — smaller municipalities may face problems due to lack of professionals in the area.

In parallel, in 2015, the minister for social affairs launched a public consultation on the quality of service in kindergartens, nurseries and child minder provision (Social- og Indenrigsministeriet 2015). The consultation addresses the quality of service available for 0-2-year-old children, transition to schools, cooperation between institutions and parents and the well-being of children. The initiative was terminated with the recent change of government in June 2015.

⁶⁴ These included the transfer of about 10 000 children with special educational needs from specialised institutions to mainstream schools, the establishment of a national inclusion forum and expert teams that support municipalities in implementation.

At upper secondary level, a new funding formula was agreed in the 2015 financial bill. The so-called 'social taximeter' introduces the redistribution of funds from schools with pupils achieving high grades to schools with less successful pupils. In this way, EUR 33 million will be reallocated to upper secondary general and vocational schools with a proportion of at risk-students that is greater than the annual national average. At-risk students are identified on the basis of their performance average in ninth or tenth grade.

5. Modernising school education

The ageing of the teacher population is less worrying in Denmark than in other countries. However, the over-60 teacher population constitutes 10% (compared to an 8.7% EU average) and just 5% of teachers are under 30 (which is below the EU average of 8.6%). About 10% of the under-30 teachers work with a qualification that is lower than tertiary level and this age group feels that the teaching profession is less valued by society. Danish teachers' statutory salary levels are higher than the EU average at every career stage. Pedagogues⁶⁵, primary and lower secondary teachers earn somewhat less than other tertiary graduates (OECD 2014b). Initial teacher training is a 240 European Credit Transfer System (ECTS) programme, which includes 90 ECTS of professional training, 30 ECTS in-school placements included. Induction of first-time teachers is in the hands of individual schools. Only 40% of teachers entering the profession have participated in induction programmes and only 15% of under-30 teachers have been assigned a mentor compared to 28.2% EU average.

Continuous professional development is optional for teachers and there are few incentives for participation. According to TALIS, 86.4% of teachers participated in some professional development activities in the last 12 months compared to 84.7% EU average. At the same time, the average number of days spent on such training and the variety of subjects offered is lower than the EU average (European Commission 2015b). Almost half of the teachers (48.7%) participated in training aimed at improving their information and communication skills in teaching, but only a minority of them (6.6%) followed training in career guidance and counselling. The proportion of teachers using information and communication technologies (ICT) for student projects or class work is above the EU average (73.9% compared to 34%). Schools are well equipped with ICT tools and pupils also score well in demonstrating their skills in such technologies (IEA 2014).

Data show a decreasing percentage of students studying two or more foreign languages at lower secondary level. In 2013, 81.7% of students studied at least two languages, which means a 5.7 percentage point drop over a five-year period.⁶⁶ All pupils study English and three quarters of them study German at lower secondary level. Students learn 1.8 foreign languages at ISCED level 2, while the average number of languages learnt is lower at upper secondary level (0.9), with visible differences in language learning opportunities in general and vocational pathways (1.5 vs. 0.3).

With the reform of initial teacher training in 2012 (Danish Government 2012a), the government aimed at improving the quality of the training and making it more attractive to recent upper secondary graduates. An evaluation of the changes is due in 2017; however, application and admission data in relation to teacher training programmes in 2013 show that the number of applications has increased, but fewer students are capable of fulfilling the newly raised admission criteria.

Further reform packages have been presented as all-party efforts to improve educational outcomes of Danish pupils. August 2014 saw the start of implementation of the compulsory school reform (Box 1) as well as the upper secondary vocational school reform (described in

⁶⁵ The specific term used in Denmark for teaching staff working in early childhood education and care (ISCED 0) is 'pedagogue'.

⁶⁶ Source: Eurostat. Language learning.

section 7). Furthermore, a proposal for a reform of upper secondary general education was presented in December 2014. This latter reform proposal has been triggered by high levels of absenteeism, difficulties facing students in choosing study combinations that allow access to further studies and learning outcomes that prove insufficient for meeting admission requirements for certain university programmes. The planned measures were a reduction in the number of study combinations – with options for local adaptation, better linkages with higher education, compulsory medium proficiency level in maths and sciences for more students, assessment of social and creative skills and higher entry requirements for general upper secondary schools. In summer 2015 the new government however decided not to take forward this proposal.

Equipping pupils with ICT and entrepreneurship skills remains a key priority as outlined in the 'e-government strategy 2011-2015' and 2010 innovation strategy. The ongoing *Folkeskole* reform intends to make entrepreneurship and innovation an even more integral part of the curriculum.

Box 1. The *Folkeskole* reform

An ambitious agenda to reform compulsory schooling (*Folkeskole*) was adopted in Denmark in summer 2013. It builds on the Productivity Committee's report (*Produktivitets Kommissionen 2013*) and the agreement of various political parties. The reform and its goal of improving learning outcomes and quality in Danish public schools (80% of pupils should achieve good scores in national maths and reading tests, the impact of social background on academic results should diminish, and the well-being of students should increase) enjoys broad political support. The implementation process began in August 2014 and is expected to conclude in 2020. The main elements of the reform are:

- Rationalisation of Denmark's common objectives (*Fælles Mål*) aims to clarify for teachers, parents and students what learning outcomes students need to acquire. The revised objectives are accompanied by guidelines and tools that help the organisation of teaching. This is expected to allow more diversified pedagogical practice and give better support to individual learning needs. Entrepreneurship and innovation are embedded in the common objectives of all subjects and a new subject 'crafts and design' has been introduced.
- Integrated school days have become longer⁶⁷ at all levels (age 0-15) and more varied with wider subject coverage and assisted learning, the introduction of daily physical exercise, opening up the school to the community and cooperation with stakeholders in practical exercises, entrepreneurial and innovative projects. Specific attention and more time is allotted to Danish and maths, and English as a foreign language is introduced from the first grade (age 7) and a second foreign language in the fifth grade (age 11).
- Increased focus on preparing students for further education with the objective that at least 95% of young people complete at least one post-compulsory programme. The final year of compulsory schooling will be more focussed on preparing students for further learning, in particular in maths and Danish, and providing more educational and labour market guidance. It will be explored how the compulsory school final examination can have a more important role in upper secondary school admission.
- Improving inclusive education of students with special educational needs in public schools through legislation and educational consultants who help municipalities and schools in establishing inclusive practises, monitoring and awareness raising.
- Improving teacher competences and giving more support to learning in schools through aiming that all students in public schools are taught by teachers who have obtained main subject qualifications and increased funding for continuous professional training of teachers and pedagogues (EUR 134 million in government funding for this purpose) and school heads (EUR 8 million in public funding set aside for this), and establishing a body

⁶⁷ In 2014/15, the recommended minimum instruction time in hours for the compulsory curriculum in a notional year during full-time compulsory education in Denmark was 1 004 hours, which is the highest in the EU. (European Commission 2015a).

of 80 educational consultants to advise schools and municipalities, a public school resource centre, which will disseminate existing good methods and tools and gather best practises and developing competence measurement tools that can be used in teachers' daily practice.

- More attention paid to the well-being of students: indicators for learning environment and well-being will be defined, which will serve as basis for a compulsory survey that checks students' well-being. The results of the survey will be used, together with the results of national competence tests and municipalities' quality reports, in school inspections. The first survey was carried out at the beginning of 2015.
- Monitoring the impact of the reform through a five-year research and monitoring programme with a total budget of DKK 75 million. 400 schools will be closely followed and implementation at local level will be monitored through surveys, with interim results being communicated annually to stakeholders. Such monitoring, in particular on the impact of the reform on students with a migrant background, will be invaluable in ensuring quality provision to specific target groups.

Additionally, the minister responsible for higher education and science announced in May 2015 that the content of initial teacher training will be adjusted to reflect the *Folkeskole* reform – in particular in foreign language teaching, sports and crafts, and more emphasis will be put on giving feedback to pupils.

For the full implementation of the reform until 2020, DKK 7.2 billion have been earmarked by the government.

6. Modernising higher education

Denmark's tertiary education attainment rate in the 30-34 year-old group continues to rise (43.4% in 2013 and 44.1% in 2014) and remains above the EU average (37.9% in 2014). More young women (50%) than men (38.4%) have a tertiary degree, but the gender gap has narrowed slightly compared to previous years. The attainment rate of foreign-born young people is getting closer to native-born rates (31.4% and 42.7% respectively in 2011 and 41.5% and 44.5% in 2014). This can largely be explained by the significant increase in the proportion of EU citizens with tertiary qualifications in the 30-34 age group (57.4% in 2012 and 72.9% in 2014). In 2012, 19.9% of 18-34-year-olds were enrolled in higher education, which makes a 3.1 percentage point increase in six years (European Commission 2015c).

The completion rate in Denmark was 81% in 2011 (compared to a 68% OECD average) (OECD 2013a). At the same time, the final report of the Expert Committee on Quality and Relevance in Higher Education (Expert Committee 2015) points to a high proportion of students dropping out or changing programme in the first year of study — around 21% in 'academy profession programmes', 14% in 'professional undergraduate programmes' and 16% in 'university programmes'. The employment rate of recent tertiary graduates⁶⁸ has not yet reached pre-crisis rates (92.8% in 2007); it was 86.4% in 2014 compared to an EU average of 80.5%. The Expert Committee underlines that the unemployment rate among tertiary graduates one year after graduation is about 30%.

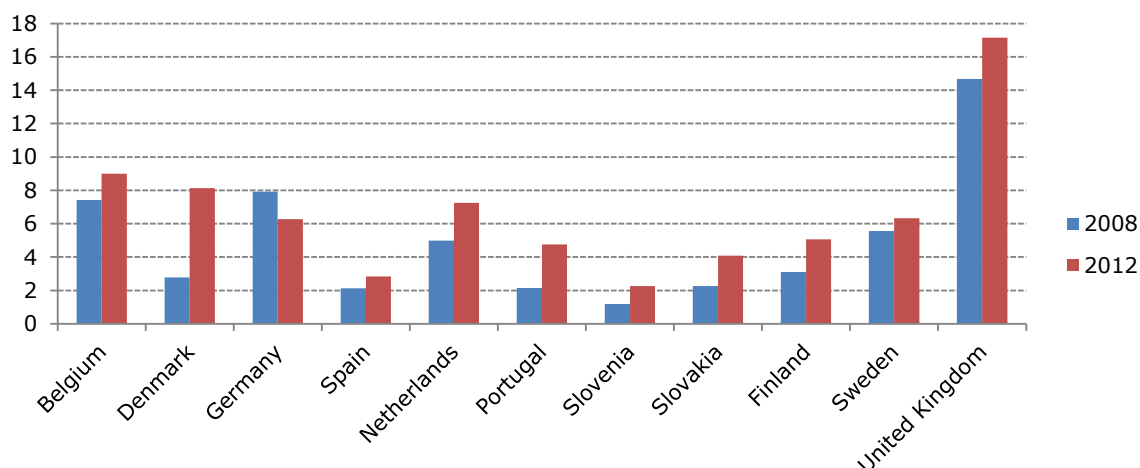
Denmark has the second highest incoming/outgoing student ratio in the European Higher Education Area after the UK (European Commission 2015c). Inward mobility is on the rise. While in 2008 2.8% of students came from abroad, 7.4% of students were incoming mobile students in 2013 (Figure 3), which also means a significant increase in the absolute number of incoming students (more than 3.75 times). Statistics show almost 29 500 (10.1% of all students) mobile students in Denmark in 2013, most of whom came from Norway, Germany, Sweden, Romania and Asian countries.⁶⁹ At the same time, only 2% of Danish students went to

⁶⁸ People aged 20-34 who left education between one and three years before the reference year.

⁶⁹ The order of countries in the list shows the order of the size of the incoming student body from a specific country.

other EU, EEA or candidate countries to study in 2013.⁷⁰ The main factors discouraging students from studying abroad are lack of information and encouragement, separation from their family and expected additional financial burden. Stronger efforts to support outward mobility will be needed to reach the 50% national outward mobility target.

Figure 3. Inward mobile students as percentage of student population in the host country (2008, 2012)



Source: Eurostat, Students from abroad by level of education and origin [educ_momo_orig]

Data show that the length and workload of first cycle programmes in Denmark is the most varied within the European Higher Education Area (European Commission 2015c). About 55% of programmes entail 180 ECTS, 8% require 240 ECTS and 35% of the programmes follow the 210 ECTS model. These latter are mainly professional bachelor programmes, where a certain number of credits is allocated for professional training. When it comes to the actual time spent on studying, the Eurostudent survey suggests that study intensity of Danish full-time students is one of the lowest in the EU. Only 72.8% of the full-time students devote over 21 hours per week to studies. Between a quarter to a half of first cycle students continued studies in the second cycle within one year of graduation in 2013. The likelihood of participating in higher education is three times higher for young people whose parents already have tertiary attainment than for those with below tertiary education background (OECD 2015). The Eurostudent survey shows that a large proportion of students (76%, highest in the EU) have parents with a higher education background. First-generation migrants account for 26% and second-generation migrants for 6% of all students (Eurostudent 2015).

Further to the Productivity Committee's report (Produktivitets Kommissionen 2013), the Danish government set up the 'Expert Committee' in 2013. The final report of that Committee (Expert Committee 2015) identified challenges that Danish higher education currently faces and advised the government on significant changes required at system and institutional levels in order to improve the quality and labour market relevance of higher education. The recommendations included: i) introducing flexibility in the length of programmes depending on the specificities of the study field and making tertiary pathways more flexible; ii) developing central regulation of student admission numbers based on data and expert advice as well as reforming the admission system;⁷¹ iii) deregulation of programme content and organisation, leaving institutions more space and responsibility in managing these; iv) descaling the taximeter funding model and introducing fixed annual grants and allocating an annual DKK 1 billion to improving quality and

⁷⁰ Source: Eurostat, Students mobility.

⁷¹ Institutions should gradually define programme-specific entry requirements instead of the current grade average; particular attention will be paid to programmes with high drop-out rates and which are most popular among applicants; admission criteria should also be defined to masters instead of the current automatic access.

relevance of programmes on a competitive basis; v) further developing a central electronic information system *Uddannelseszoom*⁷² with additional measurable indicators and providing public information at individual programme level.

In response to the first report of the Expert Committee, the Ministry of Higher Education and institutions agreed on a 'dimensioning plan' and a reform of the study grant scheme in November 2014. It is planned to reduce, between 2015 and 2018, the number of bachelor study places by 3 500 and masters by 2 500 in fields which have seen higher levels of unemployment in the last eight years. Measures to increase study intensity of students — mandatory enrolment to subjects and tests, no possibility of postponing exams — and shorten the length of studies are also being introduced. The above policy recommendations of the Committee were also discussed in spring 2015 at a major conference. As a result, the ministry and higher education institutions have made a quality agreement on responsibilities regarding full-time studies, better training agreements, improvement of the labour market relevance of programmes and changes in enrolment processes. The development and implementation of a comprehensive package of measures, as well as the assessment of its expected impacts, are tasks awaiting the recently installed government.

7. Modernising vocational education and training and promoting adult learning

Denmark has a lower than EU average proportion of upper secondary students enrolled in vocational education and training (VET) programmes (43.3% compared to a 48.9% EU average in 2013). Participation among 16-19 year-olds is significantly lower but it is higher among the over-20s.⁷³ The proportion of VET students in work-based programmes is 97% compared to the EU average of 28% (Cedefop 2013). This is the highest share in the EU. Approximately half of the companies with more than 10 employees provide initial VET training (2010).⁷⁴ Nevertheless, the drop-out rate from VET is high (almost 50%),⁷⁵ which can be explained by students having an inadequate level of basic skills, changing VET programmes and lack of sufficient apprenticeship places. In 2014, 12 258 students had no company placement places — about half of them had no contracts at all and the other half (6556) were enrolled in practical training centres established by the government in 2013 (Cedefop 2014). The employment rate of recent upper secondary graduates⁷⁶ increased to 81% in 2014, which is 2 percentage points higher than in 2013. This is the fifth highest in the EU, but still lower than in any year between 2007 and 2012 in Denmark. In 2014, Denmark again had the highest proportion of adults participating in lifelong learning in the EU (31.7% compared to an 11.7% EU average). Lifelong learning is popular among adults at all attainment levels⁷⁷ and participation rates are particularly high for women (37.5%).

The VET reform 'Better and more attractive vocational education and training programmes' (Danish Ministry of Education 2014) was adopted by the Danish Parliament in June 2014 and came into effect in September 2015. It aims at tackling challenges of attractiveness, non-completion and quality in VET and sets ambitious targets: by 2020, at least a quarter of 9th or 10th graders should choose a VET path and 60% of the students enrolled in VET should complete their programme.⁷⁸ In order to attract more young people to VET, emphasis is placed on an

⁷² The website of the information system is available here: <https://www.ug.dk/vaerktoej/uddannelseszoom/#/>

⁷³ 13.8% of 16 year-olds, 20.9% of 17 year-olds, 23.9% of 18 year-olds, 37.4% of 19 year-olds and 68.1% of 20-24 year-olds were enrolled in vocational education and training. Source: Eurostat, Pupils enrolled in upper secondary education by programme orientation, sex and age.

⁷⁴ Source: Eurostat, Percentage of enterprises providing initial vocational training by size class.

⁷⁵ In 2012, the VET completion rate was 52%. Source: (Danish Ministry of Education 2014).

⁷⁶ People aged 20-34 who left education one to three years before the reference year.

⁷⁷ Participation rates are as follows: 22.8% of adults with low (ISCED 1-2) attainment (five times the EU average of 4.4%), 28.3% for adults with secondary (ISCED 3-4) attainment levels and 40.7% among adults with tertiary (ISCED 5-8) education.

⁷⁸ The reform sets a second milestone as regards new young entrants and completion rates: by 2025, 30% of ninth or tenth graders should go for VET and 67% of them should complete their VET studies.

inspiring youth learning environment through creating class communities and establishing campus environments.

A new basic one-year programme helps ensure that all students acquire the necessary level of basic skills for a vocational path, and provides more time for students to choose a professional programme. Flexibility is also extended by making progression to tertiary level programmes possible for more students,⁷⁹ and by recognising prior learning in the new vocational programmes for those aged 25 or older. A minimum level of grade average in Danish and maths in grades 9 or 10 ('education readiness') is set as an admission requirement for VET. Students who do not meet the requirements are offered two new alternative programmes:

- 'Eud10', a combined one-year general and VET programme at grade 10, is to be provided by all municipalities as of August 2015 to prepare students to acquire the necessary competences to be admitted to VET;
- the 'combined post-compulsory education' will offer a way to a VET qualification in a limited range of occupations for 15-24 year-old students who are not in school.⁸⁰

Besides the structural changes, it will be obligatory for teachers to participate in pedagogical training and strengthen differentiated teaching in classes. This approach may be successful in ensuring that students with different skills levels could successfully complete their studies. Finally, a strategy for digital VET will be prepared to boost the use of ICT in VET. The government has set aside about EUR 120 million for the reform in the period 2014-20.

As far as adult education is concerned, the government proposed to the Parliament new integration initiatives with a focus on immigrants and refugees based on the recommendations of an independent group of experts, the Koch Committee (Koch 2015). Through better quality and more flexibility, the proposal aimed both to upgrade the qualifications of unskilled workers, and to improve the level of education of skilled workers. The ambition was to increase participation by up to 180 000 in adult learning programmes, in particular vocational training programmes, academy profession programmes, and also 20 000 enrolments in higher education programmes. The proposal has not been on the agenda of the Parliament. Finally, the new Social Assistance Reform obliges unemployed people under the age of 30 to participate in education and training as a condition of receiving social benefits. This reform measure will increase the number of unemployed in vocational and adult education programmes. The extent to which capacities (logistics and staff) are available for this measure is yet to be seen.

References

Cedefop (2014), Refernet. Apprenticeship-type schemes and structured work-based learning programmes. https://cumulus.cedefop.europa.eu/files/vetelib/2015/ReferNet_DK_2014_WBL.pdf

Cedefop (2013), On the way to 2020: data for vocational education and training policies, <http://tinyurl.com/qd5sdzq>

Danish Government (2011), eGovernment Strategy 2011-2015. The digital path to future welfare. <http://www.digst.dk/ServiceMenu/English/Policy-and-Strategy/eGOV-strategy>

Danish Government (2012a), Forligskredsen bag læreruddannelsen, <http://ufm.dk/lovstof/politiske-aftaler/reform-af-laereruddannelsen>

Danish Government (2012b), Lov om ændring af lov om folkeskolen, lov om friskoler og private grundskoler m.v. og lov om folkehøjskoler, efterskoler, husholdningsskoler og håndarbejdsskoler (frie kostskoler), <https://www.retsinformation.dk/Forms/R0710.aspx?id=141611>; <http://www.uvm.dk/Uddannelser/Folkeskolen/Inklusion-og-specialundervisning/Inklusion/Regler-for-inklusion>

⁷⁹ Through the so called 'EUX' programme, students can pass the 'matura' and the VET qualification simultaneously.

⁸⁰ This programme is planned to be offered between 2015 and 2021 to 2500 students annually.

Danish Government. (2015), The National Reform Programme 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_denmark_en.pdf

Danish Ministry of Education (2014), Improving Vocational Education and Training – overview of reform of the Danish vocational education system. <http://www.uvm.dk/~media/UVM/Filer/English/PDF/140708%20Improving%20Vocational%20Education%20and%20Training.ashx?smarturl404=true>

Eurostudent (2015), Social and Economic Conditions of Student Life in Europe, http://www.eurostudent.eu/download_files/documents/EVSynopsisofIndicators.pdf

European Commission (2015a), Recommended Annual Instruction Time in Full Time Compulsory Education in Europe 2014/2015, http://bookshop.europa.eu/is-bin/INTERSHOP.enfinity/WFS/EU-Bookshop-Site/en_GB/-/EUR/ViewPublication-Start?PublicationKey=ECAK15002

European Commission (2015b), Teaching Profession in Europe. Practises, Perceptions and Policies. https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Publications:The_Teaching_Profession_in_Europe:_Practices,_Perceptions,_and_Policies

European Commission. (2015c), The European Higher Education Area 2015. Bologna Implementation Report, http://www.ehea.info/Uploads/SubmittedFiles/5_2015/132824.pdf

Expert Committee on Quality and Relevance in Higher Education (2015), New Ways and High Standards. <http://ufm.dk/en/education-and-institutions/councils-and-commissions/the-expert-committee-on-quality-in-higher-education-in-denmark/new-ways-high-standards.pdf>

IEA (2014), Preparing for Life in a Digital Age. The IEA International Computer and Information Literacy Study (ICILS) international report, http://www.iea.nl/icils_2013.html

KL (2015), De udsatte børn- Fremtiden er Deres, <http://www.kl.dk/Born-og-unge/KL-Vi-skal-have-ambitioner-for-udsatte-born-og-unge-id175443/>

Koch (2015) Carsten Koch II Recommendations (2015), <http://bm.dk/da/Aktuelt/Pressemeddelelser/Arkiv/2015/03/Regeringen%20har%20modtaget%20Kochudvalgets%20anbefalinger.aspx>

OECD (2013a), Education at a Glance 2013. OECD Indicators, [http://www.oecd.org/edu/eag2013%20\(eng\)-FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)-FINAL%2020%20June%202013.pdf)

OECD (2013b), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b), TALIS 2013, An International Perspective on Teaching and Learning, Paris: OECD Publishing

OECD (2015) Are Young People Attaining Higher Levels of Education than their Parents?, <http://www.oecd-ilibrary.org/docserver/download/5js7lx8zx90r.pdf?expires=1443016362&id=id&accname=guest&checksum=687A5BBBF7B2FDC453C4DC6F19504610>

Produktivitets Kommissionen (2013), Analyserapport 4: Uddannelse og innovation. Uddannelse og innovation er Produktivitetskommissionens fjerde analyserapport, http://produktivitetskommissionen.dk/media/162592/Analyserapport%204,%20Uddannelse%20og%20innovation_revideret.pdf

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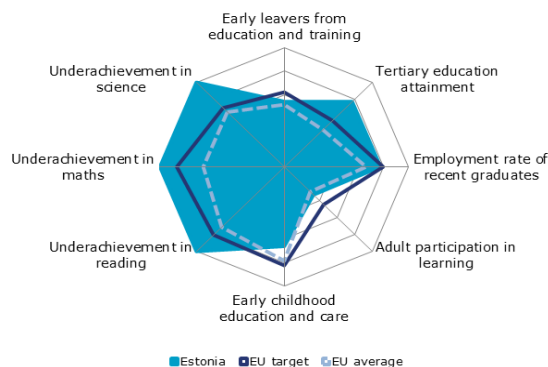
Estonia

1. Key Indicators and Benchmarks

			Estonia		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	•	:	9.1% ¹²	:	17.8% ¹²
	Maths	•	:	10.5% ¹²	:	22.1% ¹²
	Science	•	:	5.0% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		6.3%	6.0% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		16.6%	15.4% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		12.8%	15.3% ^u	15.2%	12.7%
	Women		8.4%	7.5% ^u	11.5%	9.5%
	Total	•	10.6%	11.4% ^u	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		30.6%	35.6%	31.0%	33.6%
	Women		50.4%	58.2%	38.7%	42.3%
	Total	•	40.2%	46.6%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	89.9%	90.4% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	93.0% ¹³	:	84.6% ¹³
	Special needs education		:	36.9% ¹³	:	32.4% ¹³
	Multicultural settings		:	21.9% ¹³	:	13.2% ¹³
	ICT skills for teaching		:	63.3% ¹³	:	51.0% ¹³
Foreign language learning			96.2%	90.6% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			34.4%	34.4% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		68.9%	74.4%	71.3%	70.8%
	ISCED 5-8		81.0%	87.0%	82.5%	80.5%
	ISCED 3-8 (total)	•	75.1%	81.0%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	1.2% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	5.0% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	11.9%	11.5%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor). Figures for Estonia's tertiary education attainment rate will be readjusted as part of Eurostat's October 2015 revision of LFS data (October 2015).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Funding levels for education in Estonia remain relatively high and fairly stable. Basic skill levels and the tertiary education attainment rate are also very high. The number of graduates in science, technology, engineering and mathematics (STEM) has been considerably growing and represents over one-fourth of all higher education graduates. The employment rate of recent graduates has recovered quickly after the economic crisis. Estonia also launched a system for labour market monitoring and forecasting future skills.

However, there are certain structural challenges related to the effectiveness and efficiency of the education system. These involve adapting the Estonian education system to the rapidly declining demographic situation and to the future requirements of a technology-intensive labour market. For instance, the existing upper secondary school network for general education needs consolidating, mainly due to negative demographic trends. The attractiveness of vocational education and training and the provision of apprenticeships remain problematic. To address this issue, an apprenticeship development programme is being planned. Stronger links are needed with the business sector within the knowledge triangle. Finally, the gender gap in education is an issue, especially for young males.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Estonia (Council of the European Union 2015) included a recommendation on education and training:

CSR 3: Increase participation in vocational education and training, and its labour market relevance, in particular by improving the availability of apprenticeships [...].

3. Investing in education and training

General government expenditure on education as a proportion of GDP is relatively high in Estonia. In 2013 it reached 6.0% of GDP compared with the EU-28 average of 5.0%.⁸¹ According to the 2015 draft budgetary plan (Ministry of Finance 2014), public spending on education is set to reach 6.3% in 2014, while in 2015 it is forecast to be as much as 6.5% of Estonian GDP (European Commission 2014). The 2013 education budget was reported to be EUR 1.15 billion, while the 2014 budget was estimated to be EUR 1.24 billion, an increase of about EUR 90 million (+7.8%, year on year). Finally, spending on education as a proportion of total public expenditure was high at 15.4% in 2013, compared with the EU average of 10.2%.

To make public spending on education more efficient, Estonia has begun to consolidate the upper secondary school network for general education across the country. In parallel, it has launched an investment programme aimed at adapting the supply of education to Estonia's rapidly changing demographics and providing high-quality choice in upper secondary education in all counties. The newly adopted school network programme supports the creation of state upper secondary schools (grades 10 to 12). The organisation of studies in these schools is designed solely with upper secondary school students in mind, preparing them for studies in a higher education institution or in a vocational educational institution. Bringing general upper secondary schools with an optimal number of students under the state administration also gives local governments more capacity to focus on providing high quality basic education (grades 1 to 9). Between 2014 and 2020, funding for this project will total EUR 241 million, including EUR 204.8 million from the European Regional Development Fund.

⁸¹ Source: Eurostat, General government expenditure by function (COFOG) database.

4. Tackling inequalities

Estonia's performance is close to the EU average with regard to the early school leaving rate (11.4% compared to 11.1% in 2014), and is presently slightly above the Europe 2020 national target of 9.5%. It increased significantly in 2014 compared to 2013 (by 1.7 percentage points). This is most probably due to a break in time series. The early school leaving rate has decreased rather slowly in recent years (by only 2.5 percentage points since 2004) and is concentrated in certain geographic areas of the country. The early school leaving rate for males (15.3%) has fallen significantly over the last decade, but is still more than twice that for females (7.5%).

The results of the 2012 OECD Programme for International Student Assessment (PISA) on basic skills for 15-year-olds show that overall performance has improved significantly since 2009 (OECD 2013b). Estonia now ranks very high among the EU countries participating in the survey, with a low proportion of low achievers (Figure 2). Students in both Estonian and Russian-language schools have overall very good results, and schools with Russian as the teaching language have improved considerably since previous PISA surveys, thus the gap between the two language groups is decreasing (Ministry of Education and Research and Innove Foundation, 2014). This fact could be explained by the policy of language immersion and a gradual transition to more teaching in the Estonian language.

The participation rate in early childhood education and care (ECEC) is slightly below the EU average (90.4% in 2013 compared with 93.1%). There is still a shortage of ECEC places, mainly in large urban centres such as Tallinn and Tartu, but the situation is steadily improving, partly due to the additional support of European Structural and Investment funds for building facilities and providing services.

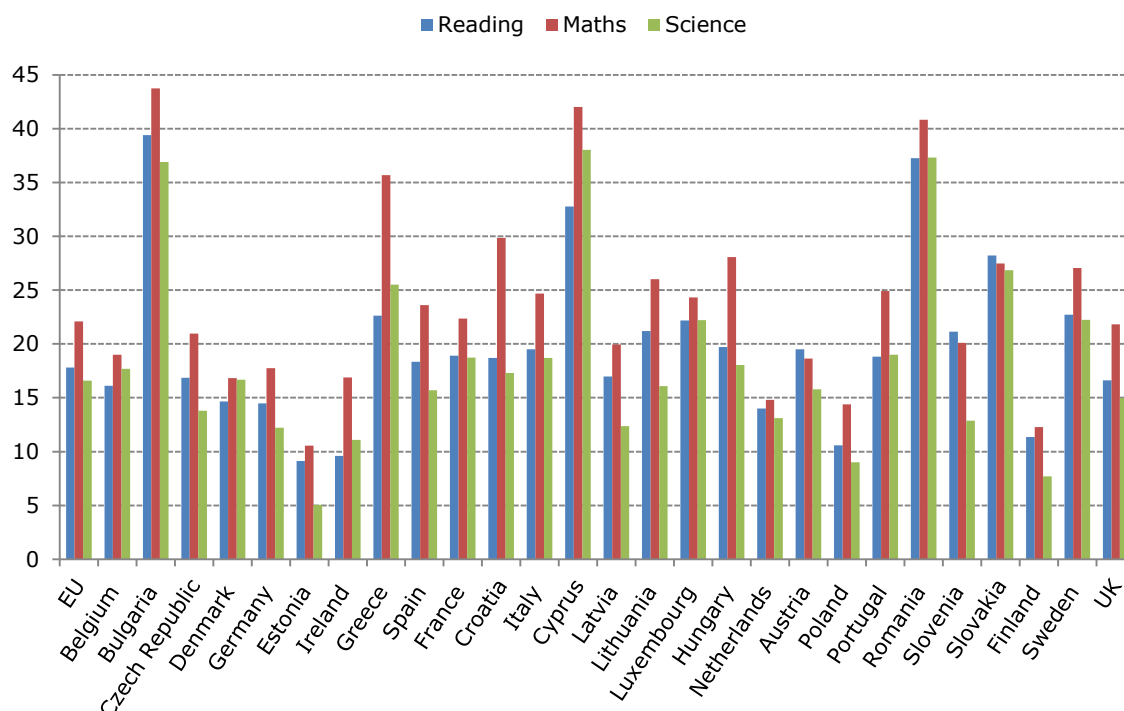
Estonia does not currently have a dedicated strategy to combat early school leaving, but the 2014 national lifelong learning strategy (Box 2) contains several relatively ambitious aims in this regard, in particular:

- reducing the early school leaving rate to less than 9% by 2020;
- reducing drop-out rates from lower-secondary compulsory education to less than 1% by 2020, from vocational schools to less than 20% by 2020, from upper-secondary general education to less than 0.8% by 2020, and from higher education institutions to less than 15% by 2020.

There is no single direct measure to combat early school leaving, but rather a comprehensive approach to tackle the problem through a shift in the approach to learning and more support staff.

The study and career counselling programme (2014-2020) was presented by the Ministry of Education and Research in late 2014 in conjunction with the implementation of the national lifelong learning strategy. The existing county career and education counselling centres were merged from September 2014 into a single system (*Rajaleidja keskus* or 'Pathfinders'). The service is coordinated and funded by the state and provides career and educational counselling services across all Estonian regions. The Innove foundation was tasked with the development of the network of the *Rajaleidja* centres, the implementation of a quality management system, the training of career and study counselling specialists, the evaluation and monitoring of the quality of services, as well as the preparation and distribution of publications. This scheme aims to provide systematic and coordinated career services comprising information and counselling. Future funding is set to be of EUR 58.5 million for 2014-20, with EUR 34.5 million from the European Social Fund.

Figure 2. Share of low achievers in basic skills (2012)



Source: OECD (2013b) and European Commission calculations.

5. Modernising school education

The 2013 OECD Teaching and Learning International Survey (TALIS) indicated that Estonian teachers perceive their status as relatively low, with only 14% of them thinking that the teaching profession is valued in Estonian society, compared to an EU average of 19%. The survey gives in fact a very mixed picture of the teaching profession in Estonia. For instance, it shows that 93% of lower secondary teachers in Estonia had undertaken some form of professional development, which is well above the EU average of 84.7%. During the same period, 63.3% of Estonian teachers reported having participated in information and communication technology (ICT) training, but only 29% of teachers used ICT for students' projects or class work (compared to an EU average of 34%). In Estonia 47% of teachers assign different work to students with different abilities, i.e. those who have difficulties learning and those who can advance faster, which is close to the EU average of 46%. Finally, 20% of teachers reported providing students with career guidance and counselling, compared to the OECD average of 23.6%. As regards special education needs, in 2012 as much as 36% of teachers reported teaching students with special needs, in comparison to the OECD average of 31.7%. As regards multicultural training, 21.9% of teachers reported having participated in such courses, compared with the OECD average of 16.4% (OECD 2014b).

Teaching does not seem to be a very attractive employment option in Estonia. Teachers' salaries remain low in relation to the earnings of full-time, full-year workers with a tertiary education, at 84% in 2012 for both primary and secondary levels (OECD 2014a), but at 88% in 2013 according to Estonian authorities. Furthermore, the salary progression prospects are still fairly limited for all educational levels, especially by international comparison. For instance, the starting salary at primary level stands at 40.2% of the OECD average, while the top salary at upper secondary level is only 33.4% of the OECD average, expressed in purchasing power standards for 2012. However, the goals of the new lifelong learning strategy include fully aligning teacher salaries with the earnings of full-time, full-year workers with tertiary education by 2020 and raising the percentage of teachers under 30 years of age to 12.5% by 2020.

The newly adopted digital focus programme (2015-20) concentrates on improving the digital competences of learners, teachers, other teaching staff and heads of schools. It also pursues one of the goals of the lifelong learning strategy, which is to use modern digital technology to teach and learn more effectively and efficiently, to improve the digital skills of the whole population; and to enable access to the new generation of digital provision. The successful implementation of this modern approach to learning, and the subsequent increase in the quality of teaching, requires teachers to have a higher level of digital competence and to use ICT daily in the classroom, as shown for example by TALIS results. The overall budget for this programme is about EUR 47 million.

6. Modernising higher education

Estonia's tertiary education attainment rate for the age group 30-34 is well above the EU average (46.6% compared to 36.9% in 2014). It increased by a significant 18.3 percentage points between 2004 and 2014, and already exceeds the Europe 2020 national target of 40%. The attainment rate for female students has been particularly marked with 58.2% in 2014 against an EU average of 42.3%. It is also worth noting that Estonia shows a much higher tertiary attainment rate for foreign-born students (56.7%) than for Estonian ones (46%), but the absolute number of those students remains fairly limited.⁸²

However, the labour market relevance of higher education is still a challenge in Estonia. In view of Estonia's aim to foster a technology-intensive economy, more students could be pursuing technology and STEM subjects, expected to be in high demand in the labour market in the future. STEM students in Estonia represented 28.9% of all higher education students in 2014, according to Estonian authorities. In terms of doctoral students in technology and science, the level in Estonia already exceeds the EU average and is comparable to Sweden. The employability of recent tertiary graduates⁸³ continues to be high in Estonia compared with the EU-28 average, standing at 87% versus 80.5% in 2014. In terms of internationalisation, Estonia presents a fairly strong mobility imbalance of 0.31, which is the ratio of incoming/outgoing tertiary students within the European Higher Education Area (EHEA) in the 2011/12 academic year compared with the EHEA ratio of 1 (European Commission 2015).

The reform introduced by the Higher Education Act, in force since September 2013, aims to raise the quality of provision, ensure better access to higher education and make university graduates more competitive in the labour market. It also introduced changes to the higher education funding system with, inter alia, performance contracts. The budget for this reform is estimated at EUR 66.7 million for the 2013-15 period.

The impact of the first two elements of this reform is already visible:

- The new funding system has enabled the authorities to address shortages in certain areas by establishing sectorial objectives in performance contracts, while maintaining the very high degree of autonomy of higher education institutions. It also facilitates support for nationally important areas of development (e.g. the so-called 'smart specialisation' areas).
- Need-based study allowances and conditional free tuition possibilities could also be seen as incentives for increased access to higher education.

⁸² Figures for Estonia's tertiary education attainment rate (including by gender and country of birth) shown in this paragraph will be readjusted as part of Eurostat's revision of LFS data (October 2015). For the latest data, please use the Eurostat online data code `edat_lfs_9912`.

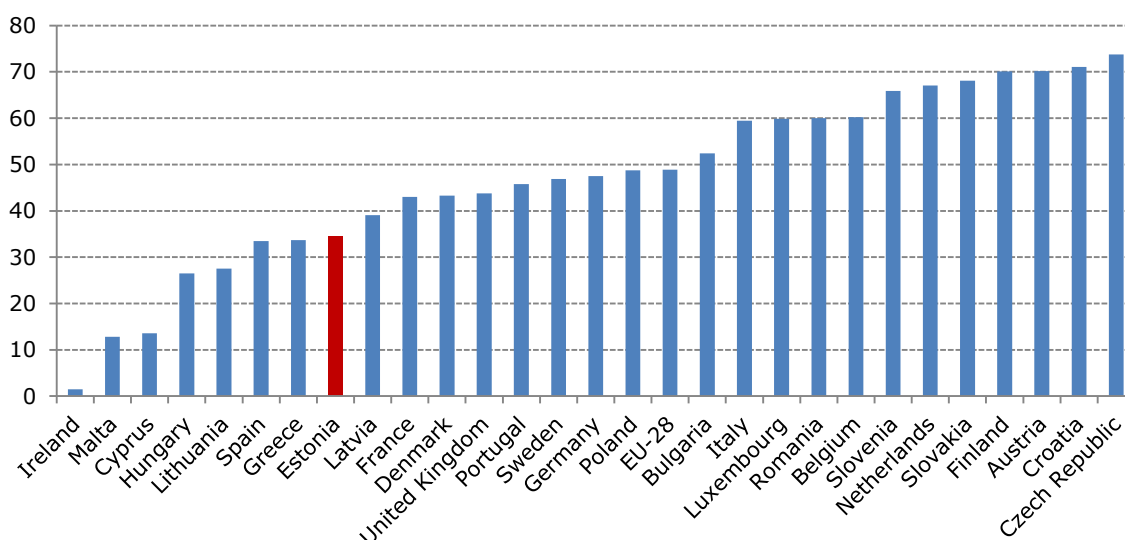
⁸³ People aged 20-34 who left education between one and three years before the reference year.

7. Modernising vocational education and training and promoting adult learning

The participation rate of upper secondary students in vocational education and training (VET) is fairly low in Estonia at 34.4%, compared to the EU average of 48.9% in 2013 (Figure 3). The initial number of VET students participating in apprenticeships is also very low. In 2013 only 583 students undertook an apprenticeship in Estonia, representing approximately 2% of all initial VET students. The employment rate for recent upper secondary graduates⁸⁴ is nonetheless now above the EU-28 average (74.4% in comparison to 70.8% in 2014) and has greatly improved since the height of the economic crisis (i.e. by 25.7 percentage points from 2010).

Adult participation in lifelong learning is currently above the EU average of 10.7%, increasing markedly from 6.6% in 2004 to 11.5% in 2014. However, the relatively high participation rate masks significant differences between different age groups: only 3.9% of people aged 55+ take part in lifelong learning activities; and participation rates for people with lower levels of education are limited (only 3.3% in 2014), as are those for foreign-born people. The OECD PIAAC survey of adult skills shows that adults aged 16-65 in Estonia perform above the EU average in proficiency tests on literacy and numeracy. The proportion of low-skilled adults is under 15%, significantly below the EU average. However, the survey also shows that low-skilled people are four times less likely to participate in job-related learning than highly skilled people (OECD 2013a).

Figure 3. Share of vocational education and training students at ISCED 3 level (2013)



Source: Eurostat

Estonian authorities aim to achieve a 60/40 distribution as regards general upper secondary education and vocational education by 2020. They also intend to provide more work-based learning, including apprenticeships. According to Estonia's national lifelong learning strategy, the country also aims to increase the proportion of basic education graduates (i.e. end of lower secondary) who continue their studies to upper-secondary vocational education to 35% by 2020 (compared with 27.2% in 2014, according to Estonian authorities). Another goal is to increase the proportion of initial VET students in apprenticeships from the current approximately 2.3% to approximately 7% by 2020 (European Commission 2012). In early 2015 the Ministry of Education and Research presented the Labour Market and Education Cooperation Programme (2015-20) which addresses the attractiveness of work-based learning and VET quality. The cost of the activities under the programme totals EUR 51 million, including EUR 43.5 million of

⁸⁴ People aged 20-34 who left education between one and three years before the reference year.

financing from the European Structural and Investment Funds. All in all, increasing the provision and attractiveness of both vocational education and training, as well as of apprenticeships, remains important.

The national lifelong learning strategy was adopted by the Estonian government in early 2014 and implementing programmes were drawn up by the Ministry of Education and Research (see Box 2 below). One of the goals of the national lifelong learning strategy is to reduce the percentage of adults (aged 25-64 years) having only a general education to the target level of 25% by 2020, which is ambitious given the large proportion of people in Estonia with only a general education and no professional or vocational education (29.3% of the population in 2013, according to Estonian authorities). The 2015-18 adult education programme was presented by the Ministry of Education and Research in early 2015. It contains several objectives, e.g. the percentage of learners aged 25+ in VET should increase from 26.3% in 2013 to 31% in 2020. The total funding for this programme will be EUR 22.4 million, including a contribution from the European Structural and Investment Funds of EUR 15.4 million.

Finally, the Adult Education Act and the Professions and Occupational Qualifications Act were also adopted in early 2015. The Adult Education Act's purpose is to improve the quality of the provision of adult education, i.e. to set quality standards, introduce principles based on learning outcomes and increase the visibility of adult training. The objective of the Professions and Occupational Qualifications Act is to create a legal basis for launching a system for labour market monitoring and forecasting future skills (OSKA, to be operational in 2016) as a part of an occupational qualifications system in Estonia. All in all, there is still scope for greater participation in lifelong learning in Estonia, particularly for low-skilled persons.

Box 2. The national lifelong learning strategy (2014-20)

In February 2014 the Estonian Government adopted the Estonian Lifelong Learning Strategy. This document provides the long-term strategic and holistic approach in the area of education and training, including combatting early school leaving. It is also the basis for budgetary and funding decisions for 2014-20.

The Lifelong Learning Strategy has a key role in achieving the general objectives of the 'Estonia 2020' programme under the Europe 2020 strategy. The strategy also specifically addresses the most important challenges in the area of lifelong learning, in line with existing strategies such as those on research and innovation, entrepreneurship and smart specialisation. The strategy has five general goals and related key activities: (i) changing the approach to learning; (ii) competent and motivated teachers and school leadership; (iii) aligning lifelong learning opportunities with the needs of labour market; (iv) a digital focus in lifelong learning; and (v) equal opportunities and increased participation in lifelong learning.

The success of the strategy depends on developing sectorial and thematic implementation programmes containing specific policy measures and actions, which were already adopted in 2015 — the school network programme, the programme for better matching the labour market and education, the programme for educational and career counselling, the adult education programme, the digital focus programme, the general education programme, the vocational education programme, the higher education programme, and the teacher and school leadership education programme.

The strategy contains a number of fairly ambitious objectives to be achieved by 2020, except in the field of VET where it has a fairly limited scope, both in terms of participation and drop-out rates. The same principle applies to the proportion of adults with only general education.

More information on the strategy can be found at:

https://www.hm.ee/sites/default/files/estonian_lifelong_strategy.pdf

References

Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Estonia and delivering a Council opinion on the 2015 Stability Programme of Estonia, 2015/C 272/16, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_estonia_en.pdf

Estonian Government (2014), National lifelong learning strategy (2014-20), <http://www.kogu.ee/wp-content/uploads/2014/05/Lifelong-Learning.pdf>

European Commission (2012), Apprenticeship supply in the Member States of the European Union, <http://ec.europa.eu/social/BlobServlet?docId=7717&langId=en>

European Commission (2014), 'National Sheets on Education Budgets in Europe — Facts and Figures on education and training', http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/National_Budgets.pdf

European Commission (2015), The European Higher Education Area in 2015: Implementation Report, http://bologna-yerevan2015.ehea.info/files/2015%20Implementation%20report_20.05.2015.pdf

Ministry of Education and Research (2015). Haridus- ja Teadusministeeriumi aasta-analüüs. Tartu: HTM. <https://www.hm.ee/sites/default/files/aastaanalys2015.pdf>

Ministry of Education and Research and Innove Foundation (2014), Summary of PISA 2012 results for Estonia, http://www.innove.ee/UserFiles/%C3%9CIdharidus/PISA%202012/PISA_2012_results_Estonia.pdf

Ministry of Finance (2014), Ülevaade Eesti 2015. aasta eelarvekavast, http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/dbp/2014/2014-10-15_ee_dbp_et.pdf

OECD (2013a), OECD Survey of Adult Skills (PIAAC), <http://www.oecd.org/site/piaac/>

OECD (2013b), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education at a Glance, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

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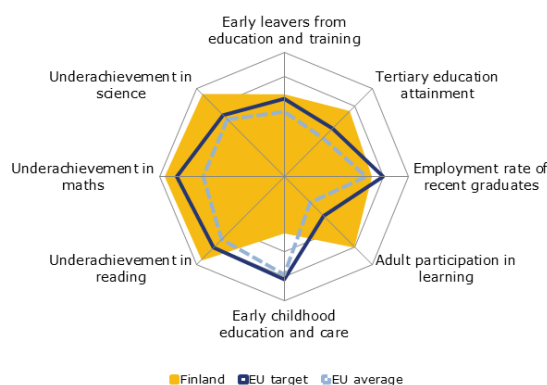
Finland

1. Key Indicators and Benchmarks

			Finland		EU average			
			2011	2014	2011	2014		
Educational poverty and spending cuts: challenges for the education sector								
Share of 15 year-olds with underachievement in:	Reading	•	:	11.3% ¹²	:	17.8% ¹²		
	Maths	•	:	12.3% ¹²	:	22.1% ¹²		
	Science	•	:	7.7% ¹²	:	16.6% ¹²		
Education investment	Public expenditure on education as a percentage of GDP		6.5%	6.5% ¹³	5.1%	5.0% ¹³		
	Public expenditure on education as a share of total public expenditure		11.9%	11.2% ¹³	10.5%	10.3% ¹³		
Education attainment levels of young people across Europe								
Early leavers from education and training (age 18-24)	Men		11.2%	11.9%	15.2%	12.7%		
	Women		8.4%	7.2%	11.5%	9.5%		
	Total	•	9.8%	9.5%	13.4%	11.1%		
Tertiary education attainment (age 30-34)	Men		37.1%	38.2%	31.0%	33.6%		
	Women		55.0%	52.6%	38.7%	42.3%		
	Total	•	46.0%	45.3%	34.8%	37.9%		
Policy levers for inclusiveness, quality and relevance								
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	74.0%	84.0% ^{13, b}	93.2%	93.9% ¹³		
Teachers' participation in training	Any topic (total)		:	79.3% ¹³	:	84.6% ¹³		
	Special needs education		:	34.7% ¹³	:	32.4% ¹³		
	Multicultural settings		:	14.4% ¹³	:	13.2% ¹³		
	ICT skills for teaching		:	47.6% ¹³	:	51.0% ¹³		
Foreign language learning			Share of ISCED 2 students learning two or more foreign languages	98.3%	96.5% ¹²	63.0%	:	12
Share of ISCED 3 students in vocational education and training (VET)				69.6%	70.1% ¹³	50.4%		48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		73.6%	74.0%	71.3%	70.8%		
	ISCED 5-8		85.1%	81.5%	82.5%	80.5%		
	ISCED 3-8 (total)	•	78.4%	77.0%	77.1%	76.1%		
Learning mobility	Inbound graduates mobility (bachelor)		:	5.1% ¹³	:	:	13	
	Inbound graduates mobility (master)		:	8.9% ¹³	:	:	13	
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	23.8%	25.1%	8.9%	10.7%		

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Finland has an equitable education system providing for very good learning outcomes. The level of basic skills remains high, despite somewhat less favourable results in recent international surveys. New challenges are emerging, especially for young migrants and in the light of a recent trend towards differentiation between schools in densely populated urban areas. While there is a high level of participation in vocational education and training and new apprenticeships have been created recently, the overall number of apprenticeship type placements remains comparably low.

3. Investing in education and training

General government expenditure on education as a share of GDP has remained stable since 2009 and stood at 6.5% in 2013, well above the EU average of 5%.⁸⁵ However the proportion of education spending in relation to government expenditure declined from 12% in 2010 to 11.2% in 2013. Finland actually saw a reduction in education expenditure in real terms as of 2011, with the biggest drop in 2012 (-0.7% in 2011, -3.0% in 2012 and -0.8% in 2013). For 2014 the national education budget was reported at EUR 6.66 billion, down by 1% compared to 2013. Both secondary education and higher education saw a decline of over 4% in 2013, and only primary education spending remained almost unchanged.

The structural policy programme adopted in 2013 already had significant impacts on government expenditure on education over the period 2014-2017 (Ministry of Finance 2013). In line with the highly decentralised model of administration, local authorities will certainly have to make difficult choices as regards spending for social affairs and education. The tighter budgetary situation may for example make it necessary to consolidate the upper secondary school network and/or the provision of preschool education by local authorities.

The budget proposals presented by the newly elected government at the end of September 2015 foresee further far reaching cuts in expenditure addressing all levels of education that could amount to a total of EUR 2.9 billion (Ministry of Finance 2015). At the same time, EUR 300 million will be devoted to a programme supporting structural change in the education system. This programme would aim at further developing primary education, speeding up the transition from education to work, improving vocational education, and improving the use of ICT across the education system.

4. Tackling inequalities

The early school leaving rate stands slightly below the EU average (9.5% compared to 11.1% in 2014). However, while the EU average has improved, school leaving rates in Finland have remained fairly stable over the last decade. With a rate of 7.2%, girls score significantly better than boys, representing a 4.7 percentage points' advantage. Even though the data are not fully reliable, there is an indication that foreign-born pupils perform much worse than native-born ones (19.4% against 9.1% in 2014). Also this rate has remained stable over the last few years.

Finland's rate of early childhood education and care (ECEC) participation is lower than the EU average (84.0% compared to 93.1% in 2013). However, in the year prior to starting school at the age of 7, 97.7% of that age group attend preschool classes according to Eurostat data.

The results of the 2012 OECD Programme for International Student Assessment (PISA) survey measuring the skills of 15-year-olds were less positively than previous results for Finland, though the country maintained its position as one of the EU's top performers and is still among the top five countries worldwide, e.g. in science. However, Finland's overall performance worsened significantly in all three areas, as compared to 2009, and in particular in numeracy

⁸⁵ Source: Eurostat, General government expenditure by function (COFOG) database.

(OECD 2013b). Increasing differences of learning outcomes levels between pupils are observed. They were influenced by various socio-economic factors, but also changed attitudes related to commitment and attitudes of pupils as well as an overall reduction of reading time. Finland also has one of the largest performance gaps between native-born people and first-generation migrants (second-generation migrants however perform significantly better than the first generation).

Several measures have been taken to address these issues:

1. The strategic programme of the Finnish Government, submitted to Parliament on 29 May 2015, contains a certain number of goals for education and training and underlines the importance of new pedagogical approaches combined with digitalisation. By early autumn, the government will decide on detailed indicators for assessing progress towards these key objectives.
2. The organisation of responsibilities for the provision of education services, in particular at local level, is currently being reviewed.
3. The Finnish Parliament approved the first part of the Early Childhood Education Act, which has been in force since 1 August 2015. For example, it regulates the maximum group size for different age groups. The parliament also decided to make participation in pre-primary education mandatory as from August 2015. However, it rejected the government's proposal to raise the age of compulsory schooling to 17.
4. In order to ensure that education is delivering competences and skills for the 21st century, new national curricula for pre-primary and basic education, developed since three years, were confirmed by the Finnish National Board of Education in December 2014.⁸⁶ They provide a framework at national level. The contributions of local authorities are now being determined and local and school curricula are to be adopted at municipal level before 1 August 2016.⁸⁷ All these measures are also part of a general revision of programmes at all levels of education, which should be completed by the end of 2016.⁸⁸ One of the objectives is to have more continuity from early education to basic education. Once implemented, the modernisation of curricula could be an important step towards stemming the recent negative trend in education outcomes.

Box 1. Integration of immigrants into the Finnish school system

The Finnish education system aims traditionally at providing equal access for each child to high quality education for free. This extends to immigrants. The Basic Education Act and the Early Childhood Education and Care Act stipulate that their rights include free access to ECEC and education. The National Curriculum Guidelines on Early Childhood Education and Care of 2005 take into account children's diverse cultural backgrounds. Each child's culture, customs and background are appreciated and supported by ways which are specified in an individual plan drawn up jointly by parents and ECEC staff.

PISA 2012 results have been discussed in depth. They showed, depending on the subject, a 98 to 126 point disadvantage for first-generation immigrants, equivalent to a two-year gap. Second-generation immigrants registered a 64 to 81 point disadvantage compared to the native-born population (OECD 2013b). Clear differences can be identified according to where migrants originate from. Asians tend to have better learning outcomes, comparable to medium results of native Finns. This is less obvious for those originating from ex-Yugoslavia, Northern Africa and from the Sub-Saharan region. In particular girls from families originating from these

⁸⁶ <http://www.minedu.fi/OPM/Verkkouutiset/2015/03/curricula.html?lang=en>.

⁸⁷ National curricula in Finland provide only general guidance, requiring local actors to define them more precisely and adapt them to their needs.

⁸⁸ http://www.oph.fi/english/current_issues/101/0/ops2016_renewal_of_the_core_curriculum_for_pre-primary_and_basic_education

countries show identifiable disadvantages compared to native-born girls. Results can also be linked to the employment status of the mother (Kilpi-Jakonen 2012).

In 2014 the number of immigrants represented 300 000 or 5.4% of the population.⁸⁹ Immigration is a fairly recent phenomenon and the origins of migrants are increasingly diverse. Finland is considered as a country with legislation and policies in place to help newcomers adapt to their new circumstances. However, the employment situation of foreign-born compared to native-born people is significantly worse and even second-generation immigrants face difficulties in finding education or work (Jahn et al. 2015).

The National Core Curriculum for Pre-primary Education (2010) allows for special primary classes to be organised for immigrant children. This curriculum and those for higher age groups are designed in such a way as to take into account differences in age, learning capabilities and background.

As far as basic education is concerned, municipalities and individual institutions decide on practical measures to be introduced for fostering integration. This concerns inclusion of the first language or arrangements for Finnish as second language.⁹⁰ Cooperation between school and parents is seen as important, facilitating the supervision of students by the teacher, who manages this individualised process. Not all municipalities have the necessary experience and skills to address all relevant issues. Support available to them or networking among them should be increased accordingly.

The curriculum in education preparing for the upper secondary level also aims to help immigrant students to become 'active and capable members of the Finnish linguistic and cultural community and of their own linguistic and cultural community'. In addition Finland introduced a preparatory education programme for general upper secondary education in autumn 2014, which is particularly aimed at migrants, in order to improve their performance in secondary education and to also increase the current modest numbers continuing in higher education.

Not all teachers feel well prepared to face the new challenges. This is reflected in only 14.4% of Finnish teachers teaching in a multicultural or multilingual setting compared to an OECD average of 16.4% (OECD 2014b). Increasingly, teacher education is incorporating relevant subjects like multicultural education, cultural diversity and social participation into initial training and in continued education. This is a step in the right direction but all training institutions should be closely involved and there is still a need for a better understanding of what is required in teacher training.

5. Modernising school education

Finnish education is characterised by a high level of trust in all the parties concerned, in particular teachers. This enables highly trained individuals to perform well and to remain highly motivated. Secondary education teachers' salary is above the average salary of a full-time worker with equivalent qualifications (Figure 2). Finnish starting salaries, except in pre-primary, tend to be 10% higher than the EU average, but final salaries are about 5% below the EU average (OECD 2014a).⁹¹

Finland educates its teachers to high standards at master's level. According to the 2013 OECD Teaching and Learning International Survey (TALIS), 79.3% of Finnish teachers report that they have participated in professional development during the last 12 months, compared with an EU average of 84.6%. In Finland, 11% of teachers report having taken part in a qualification programme during the last year. This is below the OECD average. For instance 23.6% of lower secondary teachers reported participation. Teachers feel at the same time that their education and training is not preparing them sufficiently for work in the classroom and interaction with the

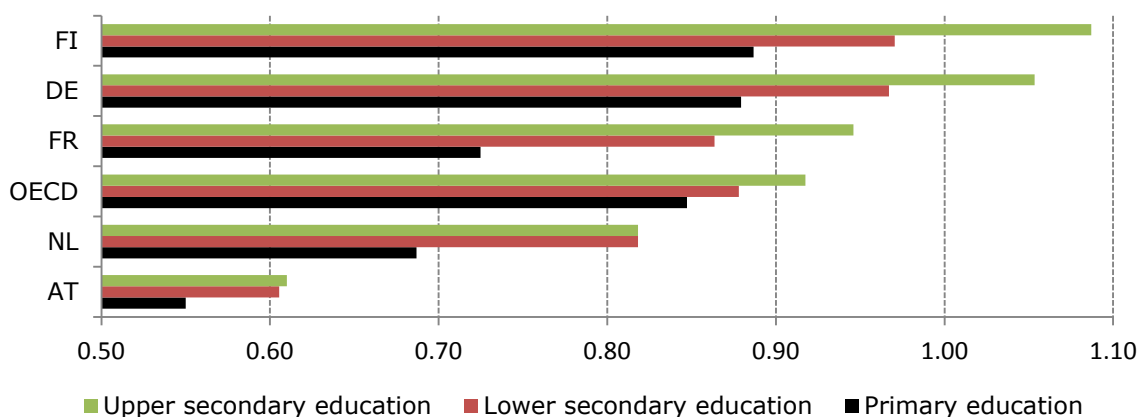
⁸⁹ Overall the proportion of immigrants among the students participating in the PISA survey increased between 2006 and 2012 from 1.5% to 3.0%. Despite this increase, the level remains low compared with other EU countries.

⁹⁰ In any case Swedish is the second national language.

⁹¹ To be noted, however, that there is a considerable difference between the average salaries of HE graduates with Bachelor and master degrees.

different stakeholders. Finally, only 36.6% of teachers give different work to students who have difficulties in learning and to those students who can advance faster, below the EU average of 46% and the OECD average of 44.4% (OECD 2014b).

Figure 2. Ratio of teachers' salaries to earnings for full-time workers with tertiary education (2012)



Source: OECD (2014a)

Just 47.6% of Finnish teachers participated in professional development and training on ICT skills in teaching within the 12 months prior to the TALIS survey. The fact of being below the 51% EU average indicates a need for policy action, even though Finland is in line with other Nordic countries (Sweden 46.8%, Denmark 48.7%). Only 18.2% of Finnish students use ICT for projects or class work, far below the average of the participating EU (34%) and OECD countries (37.5%). The weekly usage of desktop and laptop computers at grade 8 and 11 is among the lowest in the EU (European Commission 2013). This has to be looked at in combination with the teacher perception of ICT. Teachers are generally familiar with ICT but they are less competent in applying their knowledge concretely in class. This might be because they still lack trust in ICT tools and are short of actual experience in using ICT. There is scope for boosting local efforts aimed at providing training that can help teachers to change their attitudes towards ICT and improve their related teaching skills.

In March 2015 a working group composed of representatives of all key education stakeholders presented a recommendation on the Future Primary School (*Tulevaisuuden peruskoulu – Uuteen nousuun!*): 'Basic education of the future – Let's turn the trend!'. The report includes a description of the current status of basic education as well as proposals for improving the situation in the future (Ministry of Education and Culture 2015). It concentrates on nine areas. Starting point remains the local school and intensive research on core education issues. It focuses on further developing the structure of the school day supported by an adequate operating culture and adapted in-service and pre-service training of teachers with greater emphasis on lifelong development of teachers and stronger school leadership. Modernised learning and pedagogical concepts will be supported through adapted teachers' working duties and sufficient financial resources at local level.

Adaptation of curricula to 21st century skills is being taken to post-secondary level as well. The first version of the new upper secondary school core curriculum was published in May 2015 and public feedback was collected during the same month. It aims at ensuring broad literacy, using new pedagogical approaches to foster learning skills, creating a more collaborative and participatory school culture and strengthening student counselling and supervision. It is designed in such a way as to make it easier to develop local school curricula by offering an electronic curriculum application. The first proposals made by the government to reform the

secondary level from 2017 onwards, as part of the structural policy programme, were in the end not adopted by the Parliament before the 2015 elections.

Finland has a history of national ICT development strategies; ICT was also an important input of the latest teacher development programme '*Osaava-ohjelma*' that helped shape the 2010-14 activities and projects selected by the National Board of Education.⁹² Actions included in-service training of teachers, professional development projects and the provision of ICT infrastructure. Further measures include additional training for teachers to improve their assessment skills. The matriculation examination⁹³ has been gradually transformed into a computer-based examination. The current government programme states the objective of creating new learning environments and intensifying the use of digital material in comprehensive schools. This will include introducing digital learning environments and new pedagogical approaches. Initial teacher training and continued professional education will be strengthened in this respect.

Finally, the Ministry of Education and Culture has launched a development programme called *LUMA* ('Finland's Science Education') for the period 2014–2019. The target group is 6 – 16-year-old pupils and students as well as teachers. There is currently a network of 10 *LUMA* Centres in Finnish Universities and University Consortiums around Finland. The aim of *LUMA* is to inspire and motivate children and youth in the fields of mathematics, natural sciences and technology through the latest methods and activities of science and technology education. The aim is also to support the lifelong learning of teachers working at all levels of education from early childhood to universities, and strengthen the development of research-based teaching.

6. Modernising higher education

Finland has a successful higher education system, with the tertiary education attainment rate of 30-34 year-olds above the EU average (45.3% compared to 37.9% in 2014). Women (52.6%) do remarkably better than men (38.2%). The 14.4 percentage point advantage is one of the largest in Europe. Native-born Finns (46.9%) have a much higher attainment rate than foreign-born students (31%). Applicants outnumber study places available. Even though entry criteria are different for universities and for polytechnics (universities of applied sciences), widespread cooperation ensures equal access to higher education, i.e. through the unified nationwide application system. The Finnish economic situation has had a delayed impact on employment rates of recent tertiary graduates (Figure 3).⁹⁴ It dropped by 4.2 percentage points in 2014 to 81.5%, but was still above the EU average of 80.5%.

The drop-out rate from higher education stood at 24% in 2011 in Finland, low compared with an OECD average of 32% (OECD 2013a). Recent measures may be starting to yield results since in 2014 the number of students decreased while the number of degrees awarded increased, according to national statistics.

The duration of studies in Finland is amongst the longest of all those reported by OECD member countries. In view of this, the university funding model was revised in 2013 to take better account of the number of courses completed by students and their progress in their studies. The reform aims to improve completion rates and to accelerate the transition to working life. This approach was extended to polytechnics (offering tertiary professionally oriented education) at the beginning of 2014. Practical implementation will determine success. The system of financial aid for students will be reformed so as to promote full-time studies and faster completion of

⁹² According to national responsibilities the Ministry of Education and Culture ensures policy development while the National Board of Education is in charge of designing an implementation plan at school level.

⁹³ The purpose of the matriculation examination is to determine whether students have acquired the knowledge and skills required by the curriculum for upper secondary school, and whether they have reached an adequate level of maturity in line with the goals of upper secondary school. Passing the matriculation examination entitles students to continue studies in universities, polytechnics or vocational institutions.

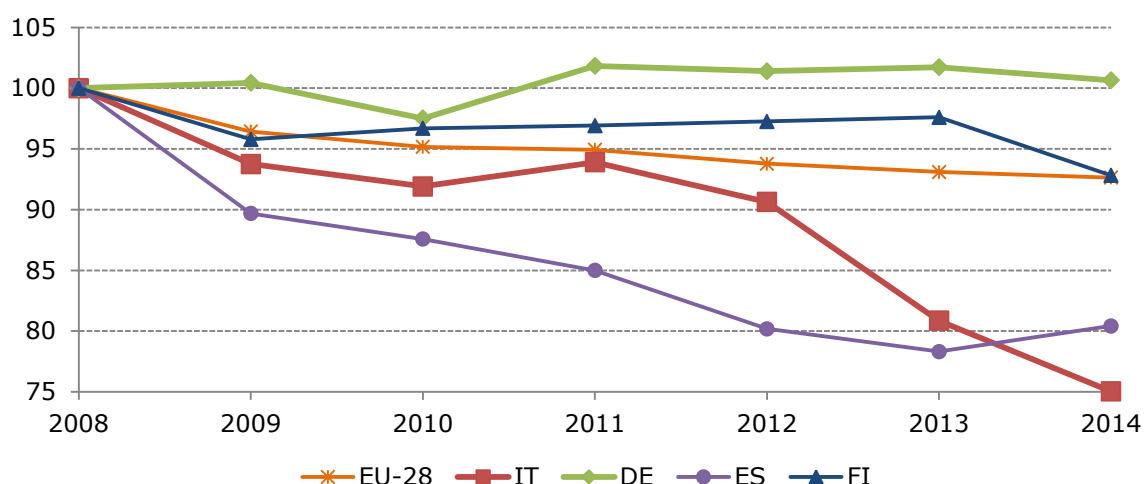
⁹⁴ People aged 20-34 who left education between one and three years before the reference year.

courses. Effectiveness of these measures will also only be shown once the implementation has been evaluated.

The May 2015 government programme underlines the importance of increasing cooperation between higher education institutions and the business world to ensure that innovation generated in these institutions actually reaches the market. In order to facilitate this, respective roles of higher education institutions and research centres have to be clarified in order to enhance cooperation between all actors.

As regards quality assurance, the Ministry of Education and Culture has set up a national education evaluation centre to undertake the evaluation activities previously carried out by the Finnish National Board of Education, the Finnish Education Evaluation Council and the Finnish Higher Education Evaluation Council. The reform was motivated by a desire to merge the tasks of evaluation into a more efficient, effective and coherent entity. The Finnish Education Evaluation Centre started operating in May 2014.

Figure 3. Employment rates of recent tertiary graduates (index 2007 = 100)



Source: European Commission calculations based on Eurostat data

7. Modernising vocational education and training and promoting adult learning

Participation of upper secondary students in vocational education and training (VET) is very high in Finland, with 70.1%⁹⁵ following vocational courses in 2013 compared to an EU average of 48.9%. The number of participants in apprenticeship training has traditionally been relatively low in Finland, but student numbers have increased considerably in recent years (ca. 70 000 in 2009, corresponding to about a quarter of all initial VET students) (European Commission 2012). The employment rate of recent upper secondary graduates⁹⁶ stood at 74% in 2014, which is above the EU average.

The level of adult participation in lifelong learning is the third highest in the EU (25.1% in 2014, well above the EU average of 10.7%). Participation rates for older and low-skilled adults are also higher than the EU average, but considerably lower than that of the general adult population: the estimated participation rate in 2013 for those aged 55-64 was 13.5%, while for the low-skilled it was 10.7%. Unlike in many other Member States, participation of people born outside Finland was actually higher (28%) than that of native-born people (24.3%).

⁹⁵ Finnish national data are different from Eurostat data, showing a somewhat lower share.

⁹⁶ People aged 20-34 who left education between one and three years before the reference year.

The Vocational Education and Training Act was amended on 3 October 2014, aiming at strengthening the learning-outcome approach of vocational qualification requirements. It further introduces a modular structure to support the creation of flexible and individual learning paths and to promote the validation of prior learning. The core subjects are regrouped into four larger entities: competence of communication and interactive ability, mathematical and scientific competences, skills needed in society and the world of work, and social and cultural competences. The reformed legislation is due to come into force on 1 August 2015.⁹⁷

The government programme of May 2015 envisages educational reform to take account of the need for skills required in working life and to bring education and working life closer together. Therefore training and skills constitute strategic objectives. Vocational upper secondary education will be reformed, increasing its standing in society, revamping the financing and the structure of the system, mostly streamlining it, while maintaining the variety of educational paths.

The Youth Guarantee, which is currently being implemented, remains one of the key projects related to skills and education under the May 2015 government programme.⁹⁸ The idea is for the youth guarantee to evolve towards a community guarantee. An evaluation carried out in March 2014 revealed generally good implementation and showed that education-related activities were being more successfully implemented than others.⁹⁹ Further improvements will aim at better identifying and linking best practices of the municipalities and providing one-stop shops. This should guarantee all comprehensive school graduates a place in education, work or rehabilitation.

References

European Commission (2012), Apprenticeship supply in the Member States of the European Union, Final report, <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=6633&visible=1>

European Commission (2013), Survey of Schools: ICT in Education, <https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/KK-31-13-401-EN-N.pdf>

Jahn D., Anckar D., Kuitto K. and Oberst C. (2015), SGI - Sustainable Governance Indicators 2015 Finland Report, http://www.sgi-network.org/docs/2014/country/SGI2014_Finland.pdf

Kilpi-Jakonen E. (2012), Does Finnish Educational Equality extend to children of immigrant?, *Nordic Journal of Migration Research*, Volume 2, Issue 2, pp. 167-181, <http://www.degruyter.com/view/j/njmr.2012.2.issue-2/v10202-011-0039-4/v10202-011-0039-4.xml>

Ministry of Education and Culture (2015), Tomorrow's comprehensive school, http://www.minedu.fi/OPM/Julkaisut/2015/tulevaisuuden_peruskoulu.html?lang=fi&extra_locale=en.

Ministry of Finance (2013), Draft Budgetary Plan 2014, http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/dbp/fi_2013-10-15_dbp_en.pdf

Ministry of Finance (2015), Draft Budget Proposal 2016-2019, http://budjetti.vm.fi/indox/tae//2016/hallituksenEsitys_tae_2016.jsp

OECD (2013a), Education at a Glance 2013. OECD Indicators, [http://www.oecd.org/edu/eag2013%20\(eng\)-FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)-FINAL%2020%20June%202013.pdf)

OECD (2013b), PISA 2012 results, <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>

OECD (2014a), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

⁹⁷ More information at <http://www.finlex.fi/fi/laki/alkup/2014/20140787>.

⁹⁸ http://www.nuorisotakuu.fi/en/youth_guarantee/information/news/youth_guarantee_continues_as_one_of_governments_key_projects.118182.news.

⁹⁹ The Finnish youth guarantee resulted in a reduction in unemployment amongst young people, with an estimated 83.5% of guarantee beneficiaries successfully allocated a job, traineeship, apprenticeship or further education within three months of registering with the Finnish public employment service. More information at <http://www.nuorisotakuu.fi>.

OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

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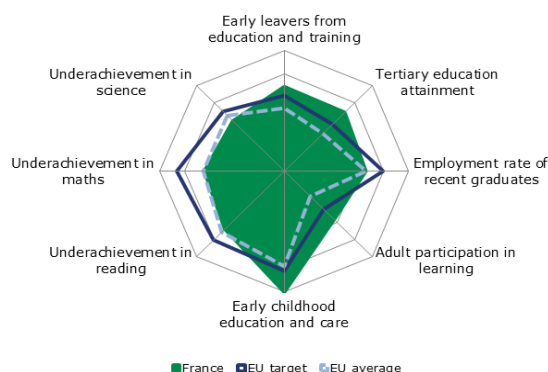
France

1. Key Indicators and Benchmarks

			France		EU average			
			2011	2014	2011	2014		
Educational poverty and spending cuts: challenges for the education sector								
Share of 15 year-olds with underachievement in:	Reading	•	:	18.9% ¹²	:	17.8% ¹²		
	Maths	•	:	22.4% ¹²	:	22.1% ¹²		
	Science	•	:	18.7% ¹²	:	16.6% ¹²		
Education investment	Public expenditure on education as a percentage of GDP		5.5%	5.5% ¹³	5.1%	5.0% ¹³		
	Public expenditure on education as a share of total public expenditure		9.8%	9.6% ¹³	10.5%	10.3% ¹³		
Education attainment levels of young people across Europe								
Early leavers from education and training (age 18-24)	Men		13.8%	9.5% ^u	15.2%	12.7%		
	Women		10.1%	7.4% ^u	11.5%	9.5%		
	Total	•	11.9%	8.5% ^u	13.4%	11.1%		
Tertiary education attainment (age 30-34)	Men		39.0%	39.6%	31.0%	33.6%		
	Women		47.4%	48.4%	38.7%	42.3%		
	Total	•	43.3%	44.1%	34.8%	37.9%		
Policy levers for inclusiveness, quality and relevance								
Early childhood education and care (participation from age 4 to starting age of compulsory education)			•	100.0%	100.0% ¹³	93.2%	93.9% ¹³	
Teachers' participation in training	Any topic (total)		:	76.4% ¹³	:	84.6% ¹³		
	Special needs education		:	23.2% ¹³	:	32.4% ¹³		
	Multicultural settings		:	3.6% ¹³	:	13.2% ¹³		
	ICT skills for teaching		:	39.8% ¹³	:	51.0% ¹³		
Foreign language learning				Share of ISCED 2 students learning two or more foreign languages	52.6%	52.9% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)				44.6%	43.0% ¹³	50.4%	48.9% ¹³	
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		68.4%	66.9%	71.3%	70.8%		
	ISCED 5-8		83.5%	80.4%	82.5%	80.5%		
	ISCED 3-8 (total)	•	77.6%	75.4%	77.1%	76.1%		
Learning mobility	Inbound graduates mobility (bachelor)		:	: ¹³	:	: ¹³		
	Inbound graduates mobility (master)		:	: ¹³	:	: ¹³		
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	5.5%	18.6% ^b	8.9%	10.7%		

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Participation in early childhood education and care is almost universal for children from three years old. Public investment in education remains high, and since 2013 France has been undertaking ambitious reforms in all sectors and at all levels of education and training. However, results are average in comparison to other countries and educational inequalities linked to socio-economic status have been constantly widening. Despite a below EU average early school leaving rate, significant regional disparities remain. There are still too many young people, namely among those with an immigrant background, who leave education with at most a lower secondary level diploma, while the labour market prospects of this group have significantly deteriorated. The number of apprenticeships has increased at higher education level, but there are still not sufficient apprenticeships for the least qualified. Finally, the level of adult literacy and numeracy is among the lowest in the EU for those with poor qualifications and for older age groups.

3. Investing in education and training

In recent years, general government expenditure on education as a proportion of GDP has remained slightly above the EU average (5.5% in 2013 compared to 5.0%).¹⁰⁰ With a 2.4% increase compared to 2014, the initial 2015 budget for education (Ministry of Education 2015a) safeguards the (global) funding needed to implement the compulsory education reform. The higher education budget is relatively stable despite the rising number of students, particularly in universities. Whilst the average public expenditure per student in tertiary education is still high, there are significant differences depending on the type of institution, with lower funding for universities. Reversing previous trends, the government has given high priority to preschool and compulsory education with the creation of 54 000 teaching posts between 2013 and 2017. The increase in resources per student may however be lower than anticipated due to higher than expected growth of the school population and to unfilled posts. This seems also to be the case for higher education where many of the 1 000 yearly new jobs planned have not yet been filled.

4. Tackling inequalities

The early school leaving (ESL) rate is below the EU average (8.5% in 2014 compared to 11.1%). The Europe 2020 national target of 9.5% has been reached but the overall rate hides large disparities linked to socioeconomic factors, between regions and sub-groups. In 2014, a gender gap persisted (9.5% of males compared to 7.4% of females) and those who are foreign-born are more at risk of ESL than native-born people (14% in comparison with 8.1%). At 15% during the 2010-12 period,¹⁰¹ the proportion of youngsters leaving education with no qualifications¹⁰² remains significant despite a decrease compared to the 2008-10 period.

Whilst participation of children from three years old in early childhood education and care is almost universal, the corresponding rate among 2-3 year-olds declined dramatically from 35% in 2000 to 11% in 2012, affecting in particular the most disadvantaged.

Educational inequalities have been steadily widening during the last decade. In the 2012 OECD Programme for International Student Assessment (PISA), results of low achievers worsened and their proportion is somewhat higher than the EU average (OECD 2013c). This trend is confirmed by national surveys (DEPP 2015a, 2015b). There is increasing awareness of the poorer performance of pupils with an immigrant background, even when their socio-economic background is taken into account (France stratégie 2015a). Further analysis might be needed as important performance differences between different migrant groups are observed (DEPP 2013). Reports confirm the very unequal distribution of immigrant children between schools, the higher risk to be oriented towards educational pathways which are less valued (IGEN 2015) and the

¹⁰⁰ Source: Eurostat, General government expenditure by function (COFOG) database.

¹⁰¹ The percentage relates to Metropolitan France.

¹⁰² Without at least an upper secondary qualification (BAC, CAP, BEP).

more difficult transition that they experience from education to work, in particular for women (Dares 2014). This concerns a large number of pupils, as France's proportion of the population with an immigrant background is the second highest in the EU (25% compared to 16% EU average) (OECD 2015).

In terms of policy response, the 2013 reform of compulsory education is being implemented, including measures to reduce educational inequalities and to raise basic skill levels. A new action plan against early school leaving was started in early 2015. It is supported by an annual budget of EUR 50 million. The plan encompasses 12 key measures organised under three strands: the mobilisation of all actors inside and outside schools; increased prevention; and acquisition of qualifications for early school leavers. Most of the measures should be implemented in 2015-16. A key measure in 2015 is the 'legal right to get back into training': any young adult (aged between 16 and 25) having left school without a certificate or a qualification may qualify for training to get a diploma. The adaptation of ICT systems to interlink data on youngsters from different sources is expected to start in 2016.

The initial phase of a new 'Priority Education' plan targeting schools in disadvantaged areas started in September 2014. The objective is to reduce to less than 10% the differences in basic skills attainment between such areas and the average. The plan, which should be fully implemented in 2016 or 2017, is organised around 14 key measures under three strands: 1) revision of the 'priority education' map and networks; 2) stronger support for improved pupil learning; 3) pedagogical reform with collaborative teaching, appropriate pedagogical approaches and stable team. Teachers will also benefit from financial incentives. The success of the plan will among other things depend on the effective implementation of the pedagogical reform, appropriate training as well as the capacity to attract and retain experienced teachers and headmasters.

The 'educational success' programme (*Programme de Réussite Éducative* - PRE) offering individualised support will be extensively developed in high-need areas from September 2015 onwards. A report (Cour des Comptes 2015a) however questions the efficiency of the numerous schemes to support individual learning, highlighting the need to improve the governance and to revise the organisation namely the teachers' time organisation at secondary level.

The 'Grand Mobilisation of Schools for the Values of the Republic' announced in January 2015 in response to the 'Charlie Hebdo' events in Paris provides for acceleration of some of these measures as well as new ones (Ministry of Education 2015b). A lot of attention will be given to civic education, teachers training in secularism and teaching of religious facts, early school leaving and a good mastery of French across all levels of education and across the various subjects taught. This encompasses the introduction of a test to detect insufficient competence in French at the beginning of the third year (8-year-old pupils). Specific measures involve greater language support for newly arrived migrants and measures related to the learning of their own language and culture. There are also first reflections on developing a specific approach targeting youngsters with an immigrant background as well as stronger and better-coordinated policies concerning education, employment, housing and the fight against discrimination. The follow-up which will be given to those reflections is not yet known.

The national strategy for 'Equality and citizenship' announced in March 2015 seeks to improve the social mix in schools,¹⁰³ including through work on the schools' catchment area (*carte scolaire*) and pilot measures related to clusters of *collèges* (by the end of 2015). Other measures seek to avoid bypass strategies at upper secondary level (*Lycées*).

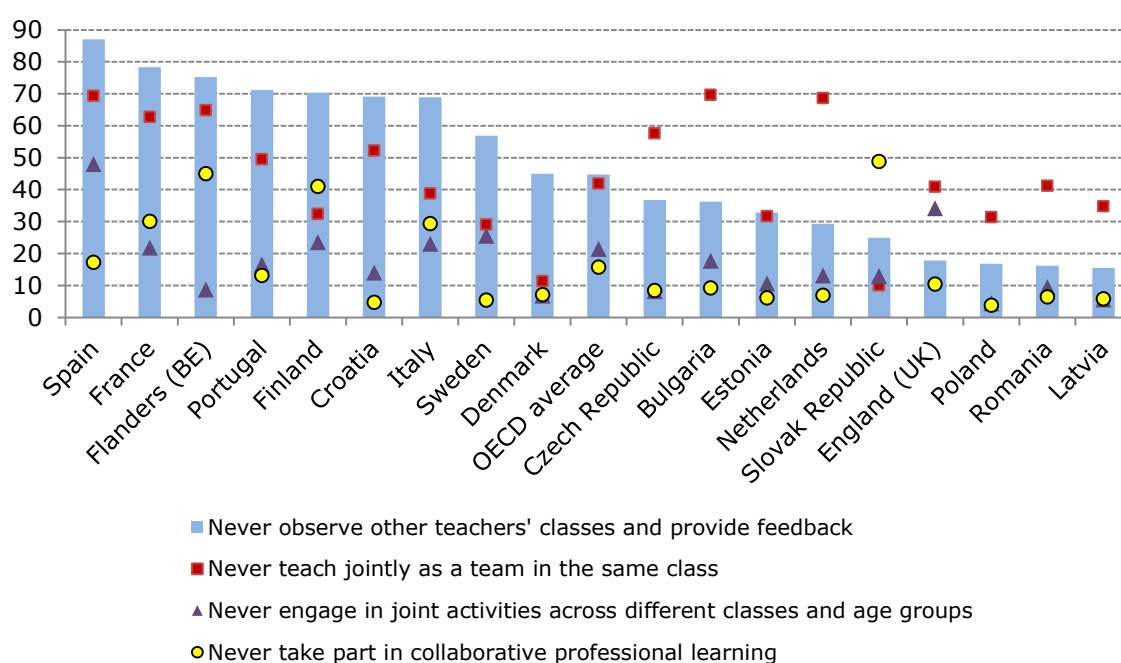
¹⁰³ Egalité et Citoyenneté: la République en actes 6 March 2015
http://www.ville.gouv.fr/IMG/pdf/06.03.2015_dossier_de_presse_comite_interministeriel-egalite-citoyennete-la_republique_en_actes.pdf.

A new early childhood education programme is being rolled out as of September 2015.¹⁰⁴ Moreover, new schemes are being introduced to raise the participation rate of children under 3 years in particular in disadvantaged urban and rural sectors and overseas regions. In priority education areas, the objective is to raise their participation rate from 17.5% in 2012 to 30% by 2017 and even to 50% for children in 'reinforced priority education' areas (REP+). The participation rate of children under three years in priority education rose to 20.6% in 2014 with however great variation across the priority education areas. Positive results are observed but further efforts will be needed (IGEN, IGAENR 2014) to address the quantitative objectives supported by new teacher's posts, and to further improve the quality namely by reinforcing the cooperation between care and early childhood education services. The 'Equality and citizenship' strategy provides for additional resources to facilitate the construction/ acquisition of buildings to avoid overpopulated classes.

5. Modernising school education

Teachers' continuing professional development is problematic in France. According to the 2013 OECD Teaching and Learning International Survey (TALIS), the proportion of teachers undertaking some professional development activities in the previous 12 months was below the EU average (76.4% compared to 84.7%) and the average duration of the training was shorter. Participation in ICT training (39.8%) and training for teaching in a multicultural or multilingual setting (3.6%) is below the EU average. French teachers are among those who feel less well prepared as regards pedagogical practice. Only 24% of teachers use ICT for students' projects or class work (the EU average is 34%). Collaborative teaching and peer mentoring are not well developed (Figure 2) and a limited number of teachers report that they assign different work to students based on their individual abilities (22% versus a 46% EU average) (OECD 2014).

Figure 2: Percentage of lower secondary education teachers who report never doing the following activities

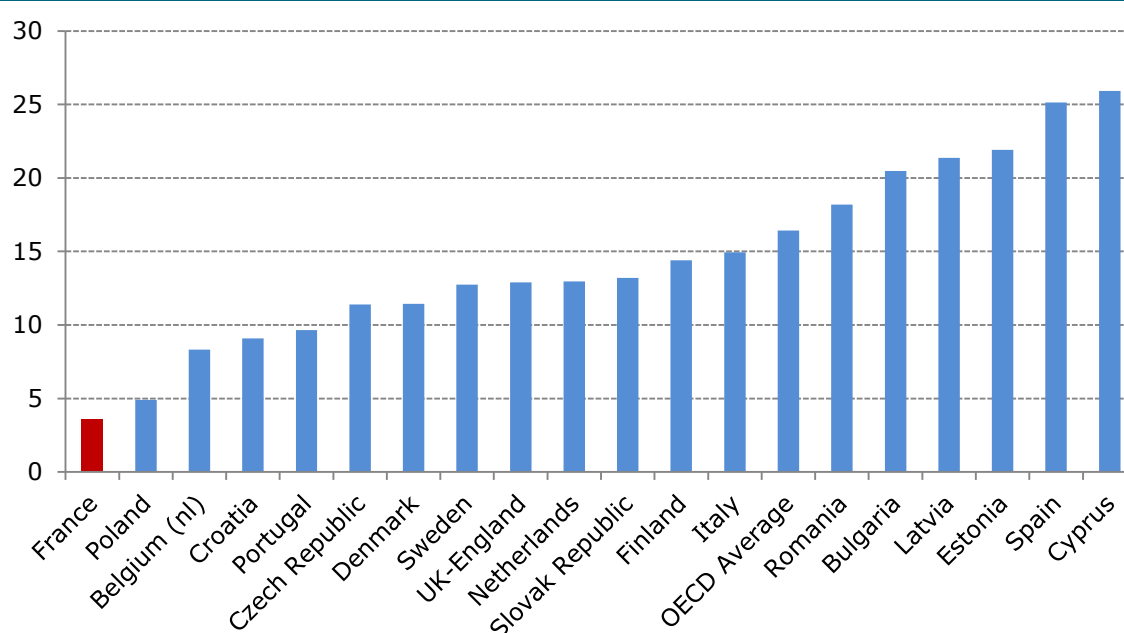


Source: OECD (2014)

¹⁰⁴ The new curriculum aims at comprehensive development of the cognitive, social, emotional and physical sides of children whilst a stronger focus was placed previously on the cognitive aspect. Emphasis is on good mastery of the language, and learning is now organised in five domains: 1) use language in all its dimensions; 2) act, express and understand through physical activities; 3) act, express and understand through artistic activities; 4) build the first tools to organise one's thoughts; 5) explore the world.

As regards the teaching profession and pedagogy, the reform of compulsory education puts a strong emphasis on new pedagogical approaches,¹⁰⁵ in particular collaborative teaching, pedagogical training for better inclusion, appropriate use of ICT for education as well as the extension of schemes for individual pupil support. Teacher training is a key lever. The reform of initial teacher education¹⁰⁶ started in 2013. As regards continuous professional development (CPD), current measures focus on training the trainers, new forms of CPD using ICT/blended learning and revision of the training available. A recent report (Cour des Comptes 2015b) highlights that key challenges relate also to the adaptation of training programmes in terms of relevance to needs, school context, quantity and link with research. It argues also for CPD to become a real lever for human resource management.

Figure 3: Percentage of lower secondary education teachers who report participation in professional development with the following content in the 12 months prior to the survey : teaching in a multicultural or multilingual setting.



Source: OECD (2014)

Unlike in previous years, the teaching profession has been seen as more attractive since 2013. Efforts are being made to attract students from low-income backgrounds: from September 2015, the current scheme (*emplois d'avenir professeur*) will be progressively phased out and replaced by a disposal based on apprenticeships (*étudiants apprentis professeurs*). Specific financial measures aim to reward teachers in priority education areas. It is unclear if this will be sufficient to replace the teachers who are retiring, to fill the newly created posts and to contribute to stabilising teams in the most difficult schools.

Concerning curricula, reforms aim to improve the acquisition of core standards at the end of each of the three cycles. The common core of knowledge, skills and culture based on five academic domains was adopted in 2015. The curricula reforms should be implemented by 2016: three new curricula/pathways were introduced in September 2015 and the revised curricula from primary to lower secondary levels will be implemented in September 2016. A consultation on reforming pupil assessment was held in 2015.

¹⁰⁵ Measures focusing on pedagogical reform and teacher training do not cover the system of allocation of teachers to schools (which does not give headmasters autonomy in recruitment), teacher evaluation and career management. See European Commission (2014).

¹⁰⁶ For more details, see European Commission (2014).

The reform of French middle schools (*collège*), adopted mid-2015, will enter into force in September 2016. A first objective is to ensure that every pupil acquires the new common core of knowledge, skills and culture. It entails new programmes, new pedagogical approaches and more tailored instruction, and a reorganisation of instruction time with greater school autonomy. A second objective is to reinforce civic education and improve the school's atmosphere. The reform is intended to reinforce links with parents. It introduces a 20% teaching time margin to be dedicated to different learning approaches (e.g. small group assignments), 'interdisciplinary' teaching methods/hours and more personalised support in particular during the first year of secondary education. The pedagogical use of ICT is envisaged as well as the development of pupils' digital/media skills. A further aim is to reinforce skills in two foreign languages.¹⁰⁷ Public debates about the reform relate to the greater school autonomy, the fear of insufficient involvement of teachers in the reorganisation, the interdisciplinary approach, the reduction of the number of bilingual classes, and changes in the teaching of ancient languages.

Following a national consultation on digital technology for education in early 2015, a 'Digital school' plan was launched in May 2015 with the aim being to catch up in this field. In a pilot phase, 500 additional schools and *collèges* should be connected to the Internet in 2015, resulting in over 70 000 pupils and 8 000 more teachers having access to digital forms of teaching and learning. The plan also includes objectives in terms of minimum equipment. Pupils and teachers will receive portable hardware and digital resources and teachers will benefit from specific training. Local authorities will be supported by the State when acquiring hardware.

6. Modernising higher education

The French tertiary education attainment rate remains above the EU average (44.1% in 2014 compared to 37.9% for 30-34 year-olds) with females clearly outperforming males (48.4% against 39.6%). In 2013, France was at 2.5 percentage points of its specific national target which relates to 17-33 year-olds (DEPP 2014) of 50% higher education attainment in 2017. The attainment rate for foreign-born people is lower than that of the native-born population (39.5% against 44.8% in 2014). The employment rate of recent tertiary graduates¹⁰⁸ has declined and is now close to the EU average (80.4% in comparison to 80.5% in 2014).

The tertiary education completion rate is above the OECD average (80% in comparison to 68% in 2011, OECD 2013a). However, less than a third (27.6%) of students obtain their bachelor degree in the scheduled time (three years). After an additional year, 38.6% of students obtain their bachelor degree. Access to and success in higher education varies greatly according to prior educational pathways: on the basis of the '2009 generation'¹⁰⁹ while 33.2% of students with a general baccalaureate finish the first cycle of studies in the scheduled time, only 3% of those with a vocational baccalaureate and 8.7% of those with a technological baccalaureate do so (MENESR 2015).

In 2012, France received the third highest number of international students in the world (after the USA and UK) and the second in Europe.¹¹⁰ 75% of those students join universities and represent on average 15% of the university enrolment. This share is increasing with the education level and reaches 41.5% at doctoral level.

The implementation of the 2013 higher education reform is underway with measures aiming to widen access of under-represented groups, to reduce drop-outs and to increase employability.

¹⁰⁷ Pupils will start sooner to learn a first foreign language (6 years old) and a second modern language will become mandatory for all pupils (12 years -beginning of cycle 4). Bilingual classes in primary education ('continuity classes') are maintained.

¹⁰⁸ People aged 20-34 who left education between one and three years before the reference year.

¹⁰⁹ Students enrolled in the first year in 2009 and graduating in 2012.

¹¹⁰ The economic costs and benefits of international students were measured by Campus France in 2014: the net benefit was estimated at the level of EUR 1.56 billion with long-term positive impacts through business, industry, education and culture.

Measures designed to reduce financial barriers include: an extension of need-based scholarships in September 2014 and 2015, tuition fees that hardly increased between 2013 and 2015, 40 000 additional student housing units (*Plan 40.000*) during the 2013-17 period, and the implementation in 2015-16 of a new national plan for student life. Progress is also being made in improving guidance and the simplification of higher education provision. A new nomenclature that reduces the number of Master's degrees from nearly 6 000 to 250 will be implemented as of September 2015.

To tackle inequalities, the national 'Equality and citizenship' strategy focuses on support for students during the transition between compulsory education and higher education. This encompasses better guidance, in line with recent expert recommendations on a new higher education strategy (see below). New measures for the provision of individual support to vulnerable students by teachers and other students, digital resources and small groups' assignments are planned from September 2015.

A remaining challenge is that although the involvement and training of university teaching staff are key factors for the success of these measures, performance in teaching has little influence on academic careers (Institut Montaigne 2015). To improve the employability of tertiary graduates, financial aid for traineeships and support for student entrepreneurship have been increased. Finally, measures related to the reform of the higher education landscape are underway with the progressive setting-up of 'Communities of universities and institutions' (COMUE).

After a wide consultation of stakeholders, the 'Committee of Experts on Higher Education', tasked with proposals to define a national strategy for higher education (called 'STRANES') for the next decade submitted in September 2015 its final report to the President of the French Republic. Stakeholders' debates relate to the funding system in light of the increasing number of students, the low tuition fees and the lack of selection at entry in universities. Stakeholders have presented proposals on internationalisation, including differentiated fees for non-EU students (France stratégie 2015b; Institut Montaigne 2015).

Box 1. The 'France Digital University' initiative for higher education (2013-17)

Adapting to the digital era is central to the 2013 higher education reform. The efforts focused on two priorities: the definition of a strategic agenda and the implementation of one of its key elements.

- France Digital University (France Université Numérique – called 'FUN'): this 5-year national strategy (2013-17) is organised around four objectives/priority axes:
 - improving student success and transitions: use digitalisation to support students from school to lifelong learning through: 1) improved guidance during transition from school to higher education; 2) more diversified and personalised learning; 3) access to open resources with the setting-up of a national FUN-MOOCs (massive open online courses) platform (see below); 4) increasing possibilities for contacts to support transition from higher education to work; 5) developing learning provision for continuing education and lifelong learning
 - encouraging new pedagogical approaches and use ICT to drive new student-centred pedagogy. This covers a wide range of measures from initial teacher education and support for teaching staff and pedagogical teams to the recruitment of staff,¹¹¹ the strengthening of research, better links between teaching and research, and better rewards for the career of 'teachers-researchers'.
 - supporting the development of connected campuses: six action lines support more efficient spending by institutions in the field of ICT infrastructure (namely by encouraging them to share resources), improve information systems and their

¹¹¹ To implement this agenda MESR requires that higher education institutions allocate 10% of the 1 000 new posts (per year) provided for by the higher education reform to support digitalisation and e-learning activities.

interoperability, and encourage the development of digital services. A key action line is to support the development or renovation of infrastructure adapted to e-education and to the digital world, in particular the 'Campus of the Future' (*Campus d'@venir*).

- Improving the international competitiveness of French higher education by an open and internationally attractive university and online offer of MOOCs and other training courses. This includes, first, developing 'digital learning' material in French in cooperation with the French-speaking countries and, secondly, a good tie-in between the French initiatives and European (namely Erasmus +) or international ones.
- The FUN-MOOCs platform offers higher education institutions in France as well as other countries a platform for publishing their courses online. The objective is to increase available online courses from 3% to 20% between 2013 and 2017. The platform should support not only higher education, but also vocational and adult training and greater university-industry interaction.

With implementation underway, positive results can be observed in terms of rapidly increasing participation of higher education institutions in FUN MOOCs. In line with a trend observed for similar initiatives, many learners are graduates whilst participation among current students remains low. Recent advice from the Economic, social and environment Council (CESE 2015) on digital pedagogy in higher education points to the institutional heaviness and some lack of clarity regarding different aspects of the project. It also calls for setting up a clear funding framework. Whilst potential benefits seem large, results will depend on effective implementation and monitoring. To support implementation, the 2013 Law requires each higher education institution to appoint a vice-president for the digital agenda. In addition, a committee has been set up to provide strategic guidance to further develop the initiative. In September 2015, a public benefit corporation (called 'GIP FUN-MOOC') was set up by ministerial decision which aims to develop shared disposals helping universities which have become its members to publish their MOOCs/SPOC (Small Private Online Course).

7. Modernising vocational education and training and promoting adult learning

Participation of upper secondary students in vocational education and training remains below the EU average (43% compared with 48.9% in 2013). Around 27% of students in vocational education and training are involved in work-based learning. In 2014, the employment rate of recent upper secondary graduates¹¹² was slightly below the EU average (66.9% compared to 70.8%). The number of students having obtained VET qualifications (*baccalauréats professionnels*) increased from 156 063 in 2011 to 190 700 in 2014 (MENSER2015).¹¹³ Yet, the number of young people involved in apprenticeships is down by 3% from a peak of 438 000 during the 2012/13 school year to around 424 000 during 2013/14. A similar trend is seen regarding newly signed apprenticeship contracts. The overall decrease is mostly due to a declining number of apprentices at secondary and post-secondary non-tertiary levels, while apprentice numbers at tertiary level are gradually increasing.

Between 2013 and 2014, the adult participation rate in education and training has risen by 0.9 percentage points to 18.6%, far above the 10.7% EU average. A methodological change since 2013 explains a break in time series seeing the French rate evolve from 5.7% in 2012 to 17.7% in 2013. However, France ranks low in adult basic competencies and entrepreneurial skills. The level of adult literacy and numeracy in France for those with at most lower secondary education is among the worst in the EU (OECD 2013b). Access to lifelong learning is more difficult for older people, the unemployed and those with low levels of skills.

¹¹² People aged 20-34 who left education between one and three years before the reference year.

¹¹³ <http://www.education.gouv.fr/cid57096/reperes-et-references-statistiques.html>.

As regards initial vocational education and training, the main elements of the 2013 reform of compulsory education are now being implemented. The national 'Economy-Education' Council (established at the end of 2013 to improve the links between education and economic actors) has seen its remit extended to cover also connections with tertiary education. New 'Campuses of professions and qualifications' bringing together different levels of vocational education, research and companies around a specific sector have been set up (31 in 2015, working towards a medium-term objective of 100 campuses). The *parcours Avenir*, aimed at raising pupils' awareness and define their education and professional project, is to be applied for all pupils as of September 2015 (Ministry of Education 2015c).

The government's objective is to reach 500 000 apprentices by 2017. As set out in the plan to re-launch apprenticeship, a significant communication effort aimed at young people and companies has been undertaken to promote apprenticeships in private and public sectors. On top of different financial incentives applied in the framework of the plan, a new financial incentive of EUR 4 400 was introduced in June 2015 for companies with fewer than 11 employees recruiting a young (less than 18 years old) apprentice.

Regarding continuous vocational training, a key element of the 2014 law on lifelong learning and vocational training, the personal training account (*compte personnel de formation* – CPF)¹¹⁴ has been open since 1 January 2015. The statutory rules on funding of companies' vocational training will be implemented as of January 2016. The impact of the training reform will depend on the quality of training offered, its relevance to the needs of the labour market and the resources allocated to gearing access to the system towards jobseekers (which in 2013 accounted for 14% of vocational training expenditure) and the low-skilled. To support quality of professional life, a decree defining the 'common core of vocational knowledge and competences' was published on 13 February 2015.

In addition to these ongoing structural measures, the government has also maintained its plan of priority training for 100 000 jobseekers per year (*formation prioritaire pour l'emploi*) in economically promising sectors. This approach aims to match unoccupied jobs with the skills of the unemployed.

References

CESE, (2015), La pédagogie numérique: un défi pour l'enseignement supérieur, <http://www.france-universite-numerique.fr/preconisations-sur-la-pedagogie-numerique-le-cese-a-rendu-son-avis.html>

Cour des Comptes (2015a), Le suivi individualisé des élèves: une ambition à concilier avec l'organisation du système éducatif, Rapport public thématique, synthèse, March 2015

Cour des Comptes (2015), Référé sur la formation continue des enseignants, 14 April 2015

DARES (2014), Jeunes immigrés et jeunes descendants d'immigrés. Une première insertion sur le marché du travail plus difficile, en particulier pour ceux qui résident en Zus, N. 74, September 2014

DEPP (2013), Qui décroche?, http://cache.media.education.gouv.fr/file/revue_84/44/1/DEPP_EetF_2013_84_qui_decroche_294441.pdf

DEPP (2014), Diplômés de l'enseignement supérieur: situation contrastée en Europe, Note d'information No 5, March 2014

DEPP (2015b), Mathématiques en fin d'école primaire: les élèves qui arrivent au collège ont des niveaux très hétérogènes, Note d'information No 18, May 2015

DEPP (2015b), Mathématiques en fin de collège: une augmentation importante du pourcentage d'élèves de faible niveau, Note d'information No 19, May 2015

European Commission (2014), Education and Training Monitor 2014, http://ec.europa.eu/education/library/publications/monitor14_en.pdf

¹¹⁴ For more information, see European Commission (2014).

France stratégie (2015a), Jeunes issus de l'immigration: quels obstacles à leur insertion économique? Note d'analyse, 1 March 2015,

<http://www.strategie.gouv.fr/publications/jeunes-issus-de-limmigration-obstacles-insertion-economique>

France stratégie (2015b), report 'Investir dans l'internationalisation de l'enseignement supérieur, pistes et analyses',

http://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/fs_rapport_internationalisation_enseignement_12022015_web.pdf

IGEN, IGAENR (2014), Scolarité des enfants de moins de trois ans : une dynamique d'accroissement des effectifs et d'amélioration de la qualité à poursuivre , *Report n° 2014-043*, MENESR, June 2014, http://cache.media.education.gouv.fr/file/2014/11/3/2014-043_Scolarite_moins_de_3_ans_345113.pdf

IGEN (2015), Grande pauvreté et réussite scolaire, May 2015, <http://www.education.gouv.fr/cid88768/grande-pauvrete-et-reussite-scolaire-le-choix-de-la-solidarite-pour-la-reussite-de-tous.html>

Institut Montaigne (2015), Université pour une nouvelle ambition, April 2015, <http://www.desideespourdemain.fr/index.php/post/2015/04/02/Universit%C3%A9-%3A-pour-une-nouvelle-ambition-Nouvelle-publication>

MENESR (2015), Repères & Références Statistiques (RERS). Enseignements, la formation et la recherche, www.education.gouv.fr/statistiques/rers

Ministry of Education (2014), Evaluation partenariale de la politique de lutte contre le décrochage scolaire, Rapport de diagnostic, 28 March 2014.

Ministry of Education (2015a), Projet de loi de finances 2015 : l'Éducation redevient le 1er budget de l'État, <http://www.education.gouv.fr/cid82613/projet-de-loi-de-finances-2015-l-education-redevient-le-1er-budget-de-l-etat.html>

Ministry of Education (2015b), La grande mobilisation de l'école pour les valeurs de la République. La concrétisation de ces mesures, Fiche 25,

http://cache.media.education.gouv.fr/file/DP_rentree/32/2/2015_rentreescolaire_fiche_25_456322.pdf

Ministry of Education (2015c), Press file for the 2015-16 academic year, Fiche 21,

http://cache.media.education.gouv.fr/file/DP_rentree/31/4/2015_rentreescolaire_fiche_21_456314.pdf

OECD (2013a), Education at a Glance 2013. OECD Indicators, [http://www.oecd.org/edu/eag2013%20\(eng\)-FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)-FINAL%2020%20June%202013.pdf)

OECD (2013b), OECD Survey of Adult Skills (PIAAC), <http://www.oecd.org/site/piaac/>

OECD (2013c), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

OECD (2015), Indicators of immigration integration 2015. France country fiche, <http://www.oecd.org/els/mig/press-note-France.pdf>

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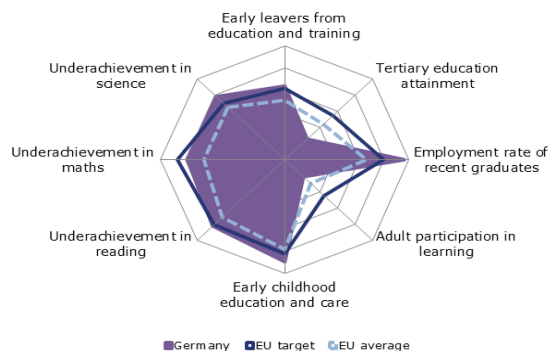
Germany

1. Key Indicators and Benchmarks

		Germany		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	•	14.5% ¹²	:	17.8% ¹²
	Maths	•	17.7% ¹²	:	22.1% ¹²
	Science	•	12.2% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		4.3% 4.3% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		9.7% 9.7% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men		12.5% 10.0% ^u	15.2%	12.7%
	Women		10.7% 8.9% ^u	11.5%	9.5%
	Total	•	11.6% 9.5% ^u	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		29.9% 32.0%	31.0%	33.6%
	Women		31.3% 30.8%	38.7%	42.3%
	Total	•	30.6% 31.4%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	96.4% 97.0% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	:	84.6% ¹³
	Special needs education		:	:	32.4% ¹³
	Multicultural settings		:	:	13.2% ¹³
	ICT skills for teaching		:	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		:	:	63.0% :
Share of ISCED 3 students in vocational education and training (VET)			48.6% 47.5% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		84.6% 87.7%	71.3%	70.8%
	ISCED 5-8		94.2% 93.1%	82.5%	80.5%
	ISCED 3-8 (total)	•	88.3% 90.0%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	:	3.3% ¹³
	Inbound graduates mobility (master)		:	:	10.0% ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	7.8% 7.9%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. *On tertiary education attainment, Germany includes post-secondary education (ISCED 4) in the measurement of progress towards its national Europe 2020 target. When included, Germany has reached its 42% national target. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The educational outcomes of pupils, including those from a disadvantaged background, continue to improve. Germany reached its national Europe 2020 target for early school leaving, and participation in early childhood education and care (ECEC) keeps increasing. An effective dual education and training system ensures provision of the skills needed on the labour market.

Nevertheless, there are shortages of highly qualified people in certain sectors and regions, in part due to negative demographic trends. Against this background, improving educational outcomes still further and loosening the strong link between educational achievement and socio-economic status are crucial for sustaining a skills-intensive and export-oriented economy. More and better quality ECEC, increasing the number and the quality of all-day school places, and promoting access to training for the low-skilled are all part of this agenda. Finally, integrating the high number of recently arrived migrants into the education system and preparing their transition to the labour market will be an important challenge to tackle.

Box 1. The 2015 European Semester country-specific recommendation on education

The 2015 European Semester country specific recommendation (CSRs) to Germany (Council of the European Union 2015) included a recommendation on education and training:

CSR 1: Further increase public investment in infrastructure, education and research [...].

3. Investing in education and training

General government expenditure on education as a share of GDP has remained stable since 2009. It was 4.3% in 2013, below the EU28 average of 5.0%.¹¹⁵ Total public and private expenditure on educational institutions of 5.1% of GDP was also well below the OECD average of 6.1% (OECD 2014a). Public expenditure on education as a percentage of all government spending is slowly increasing. Demographic trends have an impact on educational spending. The lower proportion of younger people in the population in principle implies lower expenditure needs, while the high proportion of older teachers drives spending up (Bildungsmonitor 2014).

A change in the federal constitution in December 2014 enables the federal and regional levels to cooperate again in the financing of higher education and research. Hence, from 2015 onwards, the federal level will fully finance the grant programme for students in higher education (BAföG). This will allow the regions (*Länder*) to save EUR 1.16 billion, an amount they have committed to use for other education expenditure. Some *Länder* use these funds for investment in higher education only, while in the remaining *Länder* the funds are partly or entirely channelled to other sectors of the education system, primarily schools and early childhood education (Rupprecht and Kaufmann 2015; Schmoll 2015).

The *Länder* and municipalities receive EUR 5.95 billion in support from federal level for expanding the capacity of places in ECEC for children under three and to improve quality. From 2015 onwards, an additional EUR 845 million will be provided yearly to subsidise running costs (Bundesministerium für Wirtschaft und Energie 2015) and, until 2018, EUR 1 billion per year from the funds originally allocated to the childcare allowance (*Betreuungsgeld*) cancelled by the Constitutional Court on 21 July 2015 (Bundesregierung 2015).

4. Tackling inequalities

The early school leaving rate fell to 9.5% in 2014, and is now below the EU average (11.1%) and below the 10% Europe 2020 national target. With a rate of 8.9% girls continue to score 1.1

¹¹⁵ Source: Eurostat, General government expenditure by function (COFOG) database.

percentage points better than boys. Those born in Germany perform better than the national average by 1.1 percentage points; national data show that, despite a slight narrowing of the gap, the drop-out rate of those born abroad is still twice that of those born in Germany (Bildungsbericht 2014, p.92).

Participation of children aged 4 and older in ECEC has risen steadily to 97% in 2013, which is above the EU average of 93.1%. Since 2008 the total number of children under three in ECEC has more than doubled from 300 000 to 660 750 in 2014. This represents an increase of about 15 percentage points to 32.3% of all children. The provision of ECEC places differs considerably among the *Länder* and municipalities. Density is higher in metropolitan areas and in the eastern *Länder*¹¹⁶ (BMFSFJ 2015). Children from households with a migrant background attend ECEC far less often than the average child, and their participation rates are worsening rather than improving. There is a clear need to intensify actions such as implementing measures to promote (migrant) children's language development and to reach out more effectively to more marginalised groups.¹¹⁷

Germany's results in the 2012 OECD Programme for International Student Assessment (PISA) survey confirm a positive trend compared with earlier surveys. Overall, the proportion of low achievers is now lower than the EU average in all three subjects tested. The proportion of low achievers is lower in science (12.2%) and in reading (14.5%) than in mathematics (17.7%). The proportion of top performers is one of the highest in the EU for both boys and girls. Nonetheless, even when taking into account the progress made by low performers, the influence of socio-economic status on students' performance is still stronger in Germany than in the EU as a whole (OECD 2014). The variation in performance is greater for mathematics and science than for reading.¹¹⁸

Many measures have been put in place in the *Länder* to raise the educational achievement of disadvantaged people and to further reduce the number of early leavers from education and vocational training including with ESF support. At federal level and in various *Länder*, there are specific, also ESF-financed initiatives which concentrate on migrants. They focus in particular on improving language skills, improving counselling and establishing collaboration at local level (National Reformed Programme 2015).

The recent federal programme 'Sprach-KiTas – ECEC Centres Promoting Language Development' (2016-2019) provides support to 3 500 ECEC centres to promote children's language development at an early age and to reach out more effectively to more marginalised groups. As a reaction to the increased number of asylum seekers, early language and literacy programmes, like 'Lesestart', are made available for refugees below the age of 5 years (BMBF 2015b).

The rapid expansion of ECEC places in Germany triggered an intensive dialogue on the quality of provision between ECEC stakeholders, researchers and staff (Bildungsbericht 2014). Experts have, for example, been asking for nationwide staff-child ratios, nationally binding quality standards and improved training for ECEC staff. High-quality ECEC is a particular necessity for disadvantaged groups if they are to have a chance to catch up early on. In early November 2014, the *Bund* and the *Länder* (i.e. the authorities at the federal and regional level) adopted a joint approach to address these issues, establishing nine principles to underpin common ECEC

¹¹⁶ This ranges from 26.9% (Saarland) and 58.2% (Brandenburg) with an overall average of 32.3% in March 2014.

¹¹⁷ According to Bildungsbericht (2014, p.58), the participation rates of young people with a migrant background were 18% below those with a non-migrant background at the time of establishing the right to ECEC for children under 3 years old (1.8.2013). This gap has increased since 2006. Children born to families with a high socio-economic background have a participation rate that is 12 percentage points higher than those born to other families.

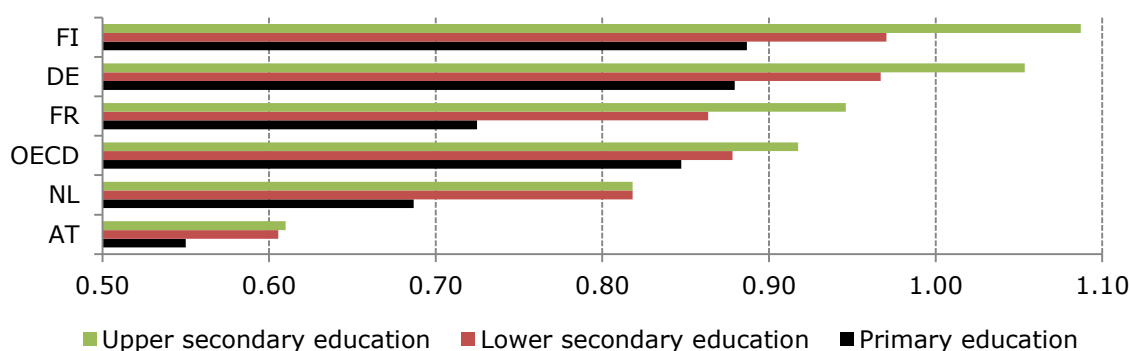
¹¹⁸ PISA 2012 did not provide data for regions (*Länder*). However, national testing (IQB-Ländervergleich 2012) did identify a clear east-west divide, with students from the eastern regions performing significantly better in mathematics and science at the end of lower secondary education. Similarly, a recent study conducted by the Cologne Institute for Economic Research found significant differences in performance across the regions (IdW 2014).

quality standards and sound financing strategies. The first interim report is scheduled for the end of 2016 (BMFSFJ/JFMK 2014).

5. Modernising school education

Germany needs to attract a high number of young people to the teaching profession in the near future. German teachers are among the oldest in the EU — in 2012/13 46% were aged 50 and over (Bildungsbericht 2014, p.81). Länder differ in their efforts to attract young talent and there are clear differences between Eastern and Western Länder and between different school types (KMK 2015). This is also related to different negative effects of demographic growth. German teachers are well paid: their salaries are among the highest in the EU and on a par with other professions with comparable qualifications. A challenge in itself will be the additional demands on teachers as a consequence of the high numbers of refugees. The image of the profession has improved recently, even if it is still not among the most valued public sector jobs (DBB 2014). In-service training is common, but according to a national survey 18% of teachers in primary schools and 24% of those in lower secondary had not followed a training course in the last two years. The survey showed wide variation between the different *Länder*. One reason for the lack of participation in continuing professional training was that the courses offered did not meet perceived needs (Bildungsbericht 2014, p.82).

Figure 2. Ratio of teachers' salaries to earnings for full-time workers with tertiary education (2012)



Source: OECD (2014a)

To address the challenges posed by the increasing internationalisation and diversity of the student population and the enormous change in the teacher population, and to ensure quality teaching outcomes, the *Qualitätsoffensive Lehrerbildung* provides EUR 500 million for projects aimed at upgrading and harmonising teacher training at various higher education institutions and aligning its practical aspect with concrete school realities.

The organisation of secondary education is changing. The general trend has been the gradual transformation of the three-tiered structure of secondary schooling into a two-tiered structure, consisting of an academic track (*Gymnasium*) on the one hand and a new type of school on the other. The new school type may be a merger of the two lower-tier school types (as in the *Realschule plus* in Rheinland-Pfalz) or a more comprehensive type, which also includes the option to obtain a university-entrance qualification (*Abitur*), as in the *Gemeinschaftsschulen* in Baden-Württemberg.¹¹⁹ Most of the *Länder* changed the duration of the *Gymnasium* from 9 years (G9) to 8 years (G8), reducing the overall duration of schooling to 12 years. Following intense public debate on the impact this has on educational content and on the stress levels of school pupils, several *Länder* now offer both options.

¹¹⁹ In six Länder only one form coexists with the *Gymnasium*, in five there are two or three forms and in the remaining six the *Hauptschule* is being continued (Bildungsbericht 2014, p. 70).

Box 2. Inclusive education for children with special needs

The ratification of the UN Convention on the Rights of Persons with Disabilities in 2009 strengthened efforts to include young people with disabilities in mainstream education. In 2011, the Standing Conference of Ministers of Education and Cultural Affairs issued recommendations on inclusive education, promoting the principle of inclusion in ECEC and schools.¹²⁰

Implementation needs to take place in a system with a well-developed special schools infrastructure. In 2012/13, there were 3 258 special schools in primary and lower secondary education, with significant variations between the different *Länder* (Bildungsbericht 2014, p.170). The proportion of students with recognised special educational needs increased from 6.0% to 6.8% between 2008/09 and 2013/14 (Klemm 2015, p.6)

The number of children with special needs attending mainstream education is increasing. The proportion however decreases with age. While in ECEC, more than two thirds of children with special needs attend mainstream provision, the rate drops to 46.9% in primary education and 29.9% in lower secondary education. The rates also differ by region and, in secondary education, by school type. Finally, due to increased registered educational special needs, do attention numbers of specialised school remain relatively stable at the same time (Bildungsbericht 2014, p.9; Klemm 2015).

Recent empirical studies show that children with special needs (and with comparable socio-economic background, cognitive abilities and learning aspirations) obtain better results when supported in mainstream schools compared with those attending special schools, and that positive outcomes of inclusive schooling can be observed both for children with and without special needs (Kocaj et al. 2014; Klemm 2015).

Almost all *Länder* have adapted legislation in order to promote inclusive education and now grant the right of joint education of children with and without special educational needs. The provision of teaching assistants together with the initial and continued professional training of teachers are key points for successfully implementing inclusive education (Bildungsbericht 2014, p.10). The Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany (KMK) and German university rectors issued a joint recommendation on 18 March 2015 to develop teacher training in order to better equip teachers with the skills and competences needed to implement inclusion effectively.

A recent UN report on implementing the UN Convention in Germany recommends amending legal definitions, developing a strategy and implementation plan which ensures high-quality inclusive education, scaling down segregated schooling, and securing reasonable accommodation and adequate teacher training, teaching methods and learning material (UN CRPD 2015).

6. Modernising higher education

Tertiary education attainment of 30-34 year-olds has increased in recent years and now stands at 31.4% (2014). It is still below the EU average (37.9%), which can partly be attributed to the strong presence of vocational education and training in the German education system. Germany includes post-secondary attainment qualifications at ISCED level 4/4a in its Europe 2020 national target.¹²¹ Female attainment is slightly below that of males. Currently more than 500 000 students, i.e. over 50% of the population in the reference age, start tertiary education each year (Bildungsbericht 2014, p.125). It is expected that the numbers will decrease again in the coming years because of the demographic trends. Projections see this figure stabilising between 405 000 and 465 000 in the year 2025 (KMK 2014; Dohmen 2014). A record 2.7 million students were registered in 2014/15.

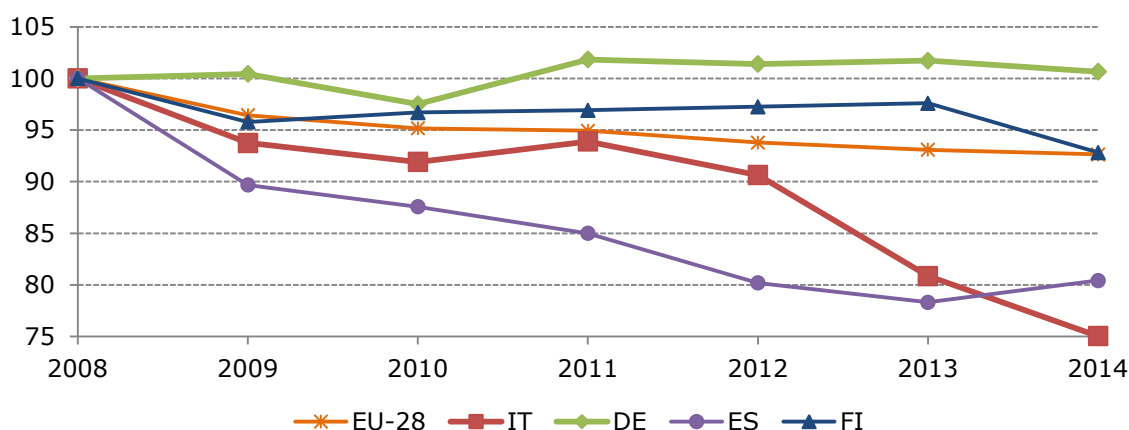
¹²⁰ Social partners and chambers also promote inclusion in vocational education and training: www.inklusion-gelingt.de.

¹²¹ If this level is included in calculations, the rate stood at 44.5% in 2013, against a 42% national target for 2020 (Bundesministerium für Wirtschaft und Energie 2015).

German higher education seems relatively well adjusted to the labour market: 93.1% of recent tertiary graduates¹²² are employed, compared with an EU average of 80.5%. Measures to attract more young people to study in science, technology, engineering and mathematics (STEM) areas have so far had mixed results: 2014 saw a slight increase in young people opting for informatics and construction, but a decrease in those choosing electrotechnics and mechanical/process engineering. Since 2010 more than 40% of new students have registered at universities of applied sciences (Bildungsbericht 2014).

Expectations that Bologna-style study structures would greatly reduce drop-out rates have not yet materialised. 28% of students drop out at bachelor level. Foreigners (41%) did so much more often than Germans (28%) in 2012. Drop-out rates at universities of applied sciences are better (23% in 2012), but this figure has increased by 4 percentage points since 2011 (Heublein et al. 2014).

Figure 2. Employment rates of recent tertiary graduates (index 2007 = 100)



Source: European Commission calculations based on Eurostat data

Several policy initiatives are oriented towards increasing the capacity and the quality of higher education. The Higher Education Pact, a joint federal and regional initiative, is providing about EUR 19 billion in funding towards the creation of an additional 760 000 places for first-year students by 2020. The Quality Pact on Teaching (*Qualitätspakt Lehre* 2011-2020) aims to strengthen teaching resources and quality. Allowances for students will be increased in 2016/17. The *Länder* also invest, sometimes with European Social Fund support, in boosting the support for young people with a migrant background (e.g. Hessen) or with parents without a higher education background (e.g. Schleswig-Holstein), on transitions (e.g. North Rhine-Westphalia) or innovation alliances (e.g. Bavaria). As of January 2016, also certain categories of refugees will have easier access to study grants (*BAföG*, BMBF 2015).

Since 1995/96, 100 additional higher education institutions have been founded or publicly recognised, bringing the total to 400. Privately-founded universities of applied sciences contribute to this increase. The Bologna reforms also pushed up the number of available courses to more than 7 000 at bachelor and master level (Bildungsbericht 2014, Abb. F1-2). There has also been an increase in dual structures in higher education, i.e. curricula which lead to a tertiary degree and a professional qualification at the same time. The proportion of students enrolled in such programmes however remains limited (4% of new students, Bildungsbericht 2014, p.123).

¹²² People aged 20-34 who left education between one and three years before the reference year.

7. Modernising vocational education and training and promoting adult learning

While participation of upper secondary education students in vocational education and training (VET) in Germany is slightly below the EU average (47.5 % compared with 48.9% in 2013), the proportion of students in initial VET programmes enrolled in programmes combining in-company and school-based learning (dual VET) is far above the EU average (88.2% compared with 27%). This contributes to the high employment rate of those who have recently completed their education at ISCED levels 3-4 (87.7% compared with an EU average of 70.8%). Nonetheless, demographic change and the increasing attractiveness of higher education are making it increasingly difficult to recruit a sufficient number of apprentices in some regions and sectors. The increasing number of unoccupied apprenticeship places and lack of qualified personnel coincides with the high unemployment risk of early leavers, drop-outs and learners with poor performance (Cedefop 2014). While the number of people who are searching, but cannot find an apprenticeship place is decreasing, their share (13.5% at the start of the 2014-15 training cycle) is still considered relatively high (Bundesinstitut für Berufsbildung 2015, p.20; see also DGB 2014).

Adult participation in lifelong learning shows mixed trends depending on data sources. Labour Force Survey data identifies no significant improvement in recent years and registers rates below the EU average (7.9% compared with 10.7% in 2014). Adult education survey figures show however an improvement between 2012 and 2014. Also the percentage of older people, the unemployed and those with relatively low qualifications participating in lifelong learning remains lower than in the EU as a whole. This is confirmed by the results of the Survey of Adult Skills (PIAAC), according to which low-skilled adults in Germany are seven times less likely to participate in job-related training than are high-skilled adults (OECD 2013). Whilst it is true for the EU as a whole that employed people have, on average, higher skills than the unemployed, the gap in skill levels between the employed and the unemployed is even more pronounced in Germany. The survey also confirmed that Germany has one of the strongest links between socio-economic background and literacy proficiency. The gap between the skill level of adults born in Germany and those born outside the country is slightly above the EU average.

At the end of 2014 the Federal Government, the Federal Employment Agency, industry, trade unions and the *Länder* signed the Alliance for Initial and Continuing Vocational Training 2015–2018 (*Allianz für Aus- und Weiterbildung 2015–2018*), which is the continuation of a similar previous pact. The partners agreed to put in place a list of measures to enable more young people to take up in-company training and to promote the attractiveness of vocational training. As a first step towards implementing the alliance, the federal parliament on 26 February 2015 voted for expanding assisted initial vocational training and an expansion of accompanying assistance. In future all young people who need support to take up and successfully complete training may receive accompanying assistance.

The 'Education pathways' initiative (*Bildungsketten*) is being expanded to strengthen counselling and coaching. Since March 2015 full-time, 'career-start' advisors have provided individual support to young people with difficulties achieving a school-leaving certificate and finding a way into vocational education and training. Funding, including from the European Social Fund, has been secured up until the 2018/19 school year.

To facilitate the integration into the education system and the labour market of recently arrived refugees, the federal government announced measures to speed up the recognition of professional qualifications and skills and to further develop the required methods and tools. Refugees with an apprenticeship, but unclear legal status, will get a guarantee that they will be allowed to stay in Germany until the end of the education and training they started (BMBF 2015b).

A national strategy for adult literacy is being implemented in 2012-2016, including financial assistance for promoting the literacy skills of adults in the workplace. In September 2015 the federal minister of education and the president of the Standing Conference of Ministers of Education and Cultural Affairs of the *Länder* launched a 'Decade for Literacy' (*Dekade für Alphabetisierung*). They announced the strengthening of current initiatives and that EUR 180 million will be directed to improve the situation of the 7.5 million functional illiterates in Germany (BMBF 2015a). Programmes such as WeGebAU promote both continuing training for older workers as well as young people without professional qualifications. A specific programme is being implemented to include 100 000 young adults aged between 25 and 35 in initial or continuing vocational training by end of 2015 (Deutscher Bundestag 2015).

References

- Bildungsbericht, (2014), Bildung in Deutschland 2014, http://www.bildungsbericht.de/daten2014/bb_2014.pdf
- BMFSFJ/JFMK (2014), Communiqué 'Frühe Bildung — weiterentwickeln und finanziell sichern (6.11.2014)
- BMFSFJ (2015), Fünfter Bericht zur Evaluation des Kinderförderungsgesetzes, http://www.bmfsfj.de/RedaktionBMFSFJ/Broschuerenstelle/Pdf-Anlagen/Kif_C3_B6G-F_C3_Fünfter-Bericht-zur-Evaluation-des-Kinderf_C3_B6rderungsgesetzes,property=pdf,bereich=bmfsfj,sprache=de,rwb=true.pdf
- Bundesinstitut für Berufsbildung (2015), Datenreport zum Bildungsbericht, http://www.bibb.de/dokumente/pdf/bibb_datenreport_2015.pdf
- BMBF, Bundesministerium für Bildung und Forschung (2015a), Dekade für Alphabetisierung ausgerufen, Pressemitteilung 114/2015 vom 8.9.2015, <http://www.bmbf.de/press/3848.php>
- BMBF, Bundesministerium für Bildung und Forschung (2015b), "Viele bringen große Leistungsbereitschaft und Begabung mit", 14.9.2015, <http://www.bmbf.de/de/29489.php>
- Bundesministerium für Wirtschaft und Energie (2015), Nationales Reformprogramm 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_germany_de.pdf
- Bundesregierung (2015): Besprechung der Bundeskanzlerin mit den Regierungschefinnen und Regierungschefs der Länder zur Asyl- und Flüchtlingspolitik am 24. September 2015, http://www.bundesregierung.de/Content/DE/_Anlagen/2015/09/2015-09-24-bund-laender-fluechtlinge-beschluss.pdf?__blob=publicationFile&v=4
- Cedefop (2014), Spotlight on VET Germany, November 2014
- DBB (2014), Bürgerbefragung öffentlicher Dienst 2014, www.dbb.de/fileadmin/pdfs/2014/forsa_2014.pdf
- DGB (2014), Bildungsgipfel-Bilanz 2014, Die Umsetzung der Ziele des Dresdner Bildungsgipfels vom 22 Oktober 2008, DGB Bundesvorstand, Dezember 2014
- Deutscher Bundestag (2015), Ausbildung: 49.000 "Spätstarter" gefunden, http://www.bundestag.de/presse/hib/2015_01/-/352926
- Dohmen D. (2014), FiBS-Studienanfängerprognose 2014 bis 2025: Die Zeit nach den doppelten Abiturjahrgängen
- Fuchs-Rechlin K., Kaufhold, G., Thuilot, M. and Webs T. (2014), Der U3Ausbau im Endspurt. Analysen zu kommunalen Betreuungsbedarfen und Betreuungswünschen von Eltern, hrsg. v. Forschungsverbund TU Dortmund und DJI, Dortmund
- Heublein U., Richter J., Schmelzer R. and Sommer D. (2014), Forum Hochschule, 4, Hannover, http://www.dzhw.eu/pdf/pub_fh/fh-201404.pdf
- IdW (2014), Bildungsmonitor, Institut der deutschen Wirtschaft, Köln
- IQB-Ländervergleich (2012), <https://www.iqb.hu-berlin.de/laendervergleich/lv2012>

Klemm, K. (2015), Inklusion in Deutschland, Daten und Fakten, Bertelsmann Stiftung, https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/Studie_IB_Klemm-Studie_Inklusion_2015.pdf

Kloth, A. (2015), Inklusion in Deutschland, Inklusion an Grundschulen in NRW, Sonderpädagogische Förderung, Zeitschrift für Inklusion, <http://www.inklusion-online.net/index.php/inklusion-online/article/view/263/249>

KMK (2011), Inklusive Bildung von Kindern und Jugendlichen mit Behinderungen in Schulen (Beschluss der Kultusministerkonferenz vom 20.10.2011), http://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2011/2011_10_20-Inklusive-Bildung.pdf

KMK (2014), Vorausberechnung der Studienanfängerzahlen 2014 bis 2025 – Tabellenwerk (8.5.2014)

KMK (2015), Lehrereinstellungsbedarf und -angebot in der Bundesrepublik Deutschland 2014 – 2025 – Zusammengefasste Modellrechnungen der Länder, Dokumentation 208, http://www.kmk.org/fileadmin/pdf/Statistik/Dokumentationen/Dok_208_LEB_LEA_2015.pdf

Kocaj, A., Kuhl, P., Kroth, A. J., Pant, H. A. and Stanat, P. (2014), Wo lernen Kinder mit sonderpädagogischen Förderbedarf besser ?, Kölner Zeitschrift für Soziologie und Sozialpsychologie

OECD (2013), OECD Survey of Adult Skills (PIAAC), <http://www.oecd.org/site/piaac/>

OECD (2014a), Education at a Glance 2014, [http://www.oecd.org/edu/EAG2014-Indicator%20B2%20\(eng\).pdf](http://www.oecd.org/edu/EAG2014-Indicator%20B2%20(eng).pdf)

OECD (2014b), PISA 2012 Key findings Germany, <http://www.oecd.org/pisa/keyfindings/PISA-2012-results-germany.pdf>

Rupprecht A. and Kaufmann S. (2015), Milliarden schwere BAföG-Entlastung muss Hochschulen zugutekommen, Pressemitteilung CDU/CSU Fraktion im Deutschen Bundestag 19.5.2015

Schmoll, H. (2015), So wahr ihnen die Bundesregierung helfe, Frankfurter Allgemeine Zeitung, 15.5.2015

UN CRPD (2015), Convention on the Right of Persons with Disabilities, draft report from 17.04.2015, <http://www.ohchr.org>

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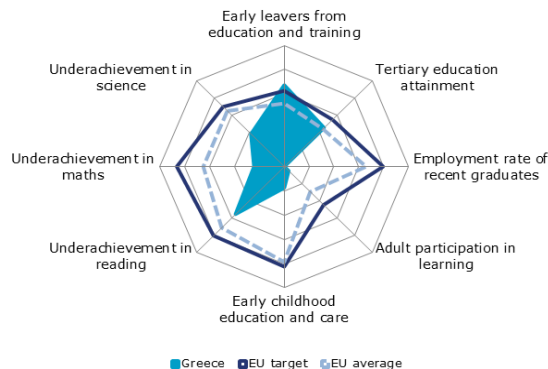
Greece

1. Key Indicators and Benchmarks

			Greece		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	●	:	22.6% ¹²	:	17.8% ¹²
	Maths	●	:	35.7% ¹²	:	22.1% ¹²
	Science	●	:	25.5% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		4.4%	4.5% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		8.2%	7.6% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		15.9%	11.5% ^u	15.2%	12.7%
	Women		10.0%	6.6% ^u	11.5%	9.5%
	Total	●	12.9%	9.0% ^u	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		26.8%	32.9%	31.0%	33.6%
	Women		31.5%	41.6%	38.7%	42.3%
	Total	●	29.1%	37.2%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		●	76.0%	76.4% ^{13,p}	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	: ¹³	:	84.6% ¹³
	Special needs education		:	: ¹³	:	32.4% ¹³
	Multicultural settings		:	: ¹³	:	13.2% ¹³
	ICT skills for teaching		:	: ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		97.2%	95.8% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			31.7%	33.7% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		46.1%	38.8%	71.3%	70.8%
	ISCED 5-8		52.8%	47.4%	82.5%	80.5%
	ISCED 3-8 (total)	●	50.4%	44.3%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	: ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	: ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	●	2.5%	3.0%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

In recent years, the Greek education and training sector has undergone strict fiscal consolidation and a number of important structural reforms took place under the economic adjustment programme, which lasted until the end of June 2015. Greece has begun significant work to reorganise general education and upgrade the vocational education and training (VET) sector. The country has also undertaken to reform the governance and organisation of its higher education system. While it is important that these initiatives continue, recent legislation indicates the intention to revert to the educational policy from the pre-2010 period. There is still considerable room to increase efficiency and effectiveness at virtually all levels of education. The Greek education and training system requires further modernisation in terms of its performance and its ways of working, in particular with regard to providing basic skills, and its capacity to ensure the successful transition of young people to the labour market.

The new Memorandum of Understanding concluded in August 2015 sees education as part of a new national growth strategy. It foresees measures for the modernisation of vocational education and training, as well as a review of the Greek education system and a subsequent Education Action Plan.

3. Investing in education and training

The Greek education and training sector has been strongly affected by very low and decreasing public spending, due to strict fiscal consolidation. General government expenditure on education as a proportion of GDP is among the lowest in the EU (Figure 2). It stood at 4.5% in 2013, compared to an EU average of 5.0%.¹²³ The ratio of expenditure to GDP remained more or less stable throughout 2008-13, but since there was a cumulative reduction in GDP of approximately 25% during this time period, spending on education was reduced by at least the same proportion. The Greek authorities report a 36% drop in funding for education during the 2009-15 period (Hellenic Government 2015). Finally, the proportion of spending on education out of total public expenditure is the smallest in the EU, at 7.6%, compared to an EU average of 10.2%.

According to the latest data (European Commission 2014), the 2014 education budget was EUR 5.71 billion (3.16% of GDP), down from EUR 5.92 billion in 2013 (a decrease of around 3.5%). The Greek national authorities indicate even lower expenditure:

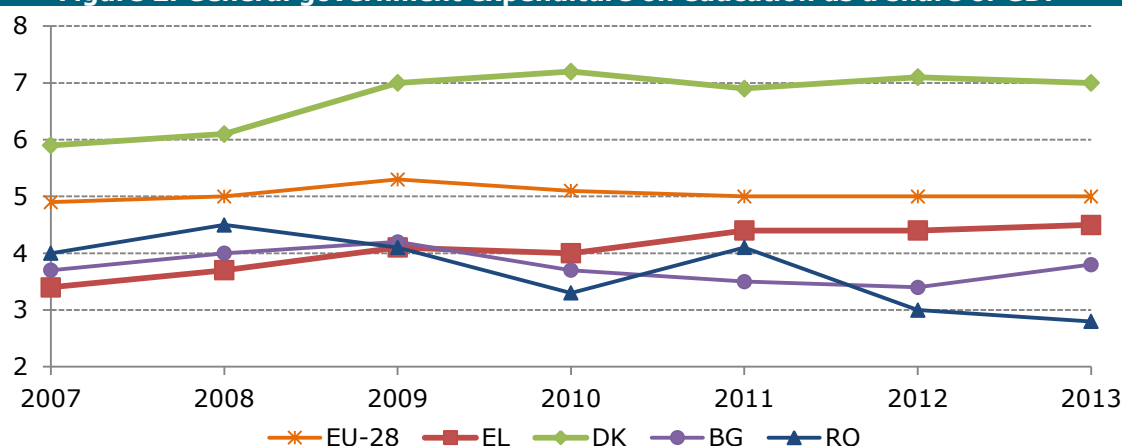
Year/Amount	2015 (proj.)	2014 (est.)	2013 (pay.)	2012 (pay.)	2011 (pay.)	2010 (pay.)	2009 (pay.)	2008 (pay.)
Total million EUR	4.3	4.6	4.9	5.4	6.2	6.3	6.9	6.6
GDP (current prices, million EUR)	187.0	180.8	182.4	194.2	207.8	226.2	237.4	242.0
% GDP	2.3	2.6	2.7	2.8	3.0	2.8	2.9	2.7

Source: Hellenic Ministry of Finance (2015)

There are several possible reasons for the large differences seen in the level of spending, such as:

- changes in the composition of public expenditure from year to year;
- a discrepancy between budgeted and actual expenditure on education;
- the fact that, for example, 2014 data refers to the period July 2013-June 2014, whereas the GDP refers to the whole year;
- frequent adjustments to national accounts figures in line with the economic adjustment programme for Greece.

¹²³ Source: Eurostat, General government expenditure by function (COFOG) database.

Figure 2. General government expenditure on education as a share of GDP


Source: Eurostat, General government expenditure by function (COFOG) database

4. Tackling inequalities

The early school leaving rate was 9% in 2014, with Greece performing significantly better than the EU average (11.1%). The early school leaving rate fell by 5.3 percentage points during the economic crisis, from 14.3 % in 2007. Greece has also already reached its Europe 2020 national target of 9.7%. However, the national average masks significant variation between geographical areas (e.g. in 2013, the *Anatoliki Makedonia* region had an early school leaving rate which was twice the national average), types of schools and social groups. For instance, children born abroad had a much higher early school leaving rate, of 27.8% in 2014, compared to just 7.3% for students born in Greece. Finally, boys were almost twice as likely to leave school early as girls (11.5% compared to 6.6% in 2014).

In contrast to the relatively good figures on early school leaving, the 2012 OECD PISA survey shows that Greece has one of the worst performances in Europe with regard to basic skills. The proportion of low achievers is higher than the EU average in all three fields tested (reading, mathematics and science), and is significantly higher with regard to reading (OECD 2013). There is a slightly worsening trend in performance compared to the 2009 PISA tests and stagnation in all three fields over the last decade. There continues to be a large gender gap in reading and in science, with girls outperforming boys. There is also a large performance gap between native and migrant students, as well as between first- and second-generation students having an immigrant background. In its 2015 National Reform Programme, Greece recognised the need for a strategic framework to deal with the issues of early school leaving and low achievement, based on research and focusing on the most vulnerable social groups (Hellenic Government 2015).

Participation of 4-6 year-olds in early childhood education and care (ECEC) is low. In 2013, 76.4% of children in that age group took part in ECEC, compared to an EU average of 93.1%. A significant increase (9.1 percentage points) in participation rates was recorded between 2008 and 2012. However, in 2012, only 55.6% of 4 year-olds took part in pre-primary education, compared to an EU average of 86.7%. *Attiki* was the only Greek region where less than half of all 4 year-olds were in pre-primary and primary education. In the Greek capital, 30.8% of 4 year-olds took part in early childhood education, approximately one third of the EU average.

In terms of measures targeting early school leaving and low levels of basic skills, a new information system ('MySchool') has been in place for all primary and secondary schools since the 2013/14 school year. It consists of a student database and includes the indicators which are required for measuring early school leaving. The data is available in an aggregated form at national, regional, provincial, local and school level. The pilot of the 'Education Priority Zones'

scheme also aims to improve performance in basic skills through all-day schooling and additional support measures, which now also covers pre-schools. The wider roll-out of these zones and the effective introduction of all-day provision is dependent on the availability of sufficient funding in the future, including from the European Structural and Investment Funds.

September 2014 marked the launch of the 'Social School' programme which aims to draw the attention of teachers, parents and students to social issues. Its main objective is for schools and pre-schools to become places where students are able to develop socially responsible behaviour and an active understanding of citizenship. Following the creation of the Observatory for Preventing School Violence and Bullying in December 2013, a nationwide survey on this issue was held during April-May 2013.

On 17 April 2014, the Ministry of Culture, Education and Religious Affairs presented new draft legislation on special education. This is designed to improve the structure and functioning of special education arrangements in Greece. A public consultation is being held on the draft legislation, which is expected to be adopted in the near future.

All in all, there is still however a lack of a culture of performance evaluation, which would increase the quality of general education. The Greek education system will need to continue measures to improve the internal and external assessment of schools and educational staff, and their accountability and transparency. A further challenge will be in implementing new decentralisation measures to increase the financial and organisational autonomy of primary and secondary schools across the country.

5. Modernising school education

Greece has a highly centralised school education system. While in most European countries teachers in primary education can act relatively autonomously in matters related to teaching, Greece is the only country where the relevant education authorities take decisions nearly on all matters relating to teaching, including the choice of teaching methods (European Commission 2013). In addition, in Greece, only around 40% of 15-year-old students were enrolled in schools whose head teachers said that they often make sure that the professional development activities of teachers are in line with the school's teaching goals. In order to objectively assess the quality of teaching in the country, Greece would benefit from taking part in the next OECD TALIS survey.

The teaching profession remains moderately attractive from a financial point of view, especially given the high overall unemployment rate. In 2012, primary school teachers' salaries were 89% of earnings for full-time, full-year workers with tertiary education, while secondary school teachers earned 93%. The EU averages were 71% and 90% (OECD 2014). However, the salary level in purchasing power standard and salary progression remain fairly limited, e.g. in primary education in 2012, Greek teachers were paid 63.6% of the EU average at the beginning of their career and 77.6% at the end of their career.

Greece is one of the countries with the lowest levels of digital skills in the EU. The country ranks 23rd out of 28 Member States in terms of human capital development and 25th in terms of internet usage (European Commission 2015a). In 2014, 33% of the population had still never used the internet, which is significantly higher than the EU average of 18%. In 2012 as many as 65% of Greeks had few or no digital skills, compared to an EU average of 47%. Within the workforce, levels of ICT skills are also low. For instance, in 2012, as much as 55% of the workforce had few or no digital skills, compared to an EU average of 39%. Greece also has lower rates of daily use of the internet ('frequent users'), with 49% of the population reporting going online every day in 2014, compared to an EU average of 65%. Significant work to improve digital education and training is required, as the lack of digital skills may slow down progress in developing the Greek digital economy and hinder economic growth in general.

At primary and secondary levels, the Greek education system was significantly rationalised between 2011 and 2014. Greece previously had one of the lowest numbers of teaching hours in the OECD and one of the smallest numbers of pupils per class. In addition, numerous organisational rigidities impeded a rational allocation of staff. Increasing the number of students per classroom and the number of teaching hours has now brought Greece closer to the OECD average. Other rationalisation measures were also introduced, such as consolidating the school and pre-school networks, a new electronic database of schools, legal changes to allow for more staff mobility and a decrease in the number of temporary teachers. The wage bill and operational expenditures have therefore been significantly reduced, leading to an approximately 24% reduction in human resources costs, but these changes have also had a significant impact on the teaching force. For instance, the 2015 national reform programme estimated there were approximately 25 000 vacancies for teachers in primary and secondary education schools.

Regarding in-service teacher training, a number of actions were undertaken in 2013-14, in line with the introduction of revised curricula in Greece. These included projects co-financed with EU structural funds, such as the high-profile Digital School project (Box 1). The 2015 national reform programme considers teachers' education and training to be part of improving education quality and efficiency. However, the omnibus law adopted in May 2015¹²⁴ seems to roll back a number of key improvements in the primary and secondary education sector, in particular as regards the autonomy of schools and the need for internal and external evaluation of schools and teachers.

The Memorandum of Understanding from August 2015 foresees a full review of primary and secondary education, to be undertaken by the OECD and international experts by April 2016 (European Commission 2015b). The recommendations formulated in this review are set to constitute a basis for the necessary legislative and regulatory changes to be carried out by June 2016.

Box 1. The Digital School project, part of the 'New School' initiative

The most well-known reform taking place in Greece to introduce ICT in schools is the Digital School project. The project was launched in 2010 to better integrate ICT into curricula and teaching practices. The project has three main goals:

- creation of a single digital environment, which will ensure better educational results both for general subjects as well as specifically in ICT;
- better allocation of resources, by incorporating ICT as a tool for efficient administration and management of the education system at both regional and central level;
- better accessibility, using digital resources to provide equal access to the education system.

The results expected from implementing the project are as follows:

- increase in-class ICT use by teachers (from 36 % to 75 %);
- more schools with fast internet access (from 30 % to 65 %);
- more schools with their own website (from 37 % to 70 %);
- more students with their own e-mail accounts (from 44 % to 75 %);
- fewer students per computer (from 17 to 8).

In order for the implementation of the Digital School to be successful, three priorities were identified:

- 1) improving the infrastructure;
- 2) producing digital material including new curricula and e-books;
- 3) improving teacher training.

¹²⁴ Law 4327/2015 on "Emergency measures for primary, secondary and higher education" of 14 May 2015.

To achieve these, the following actions are being gradually implemented:

- an educational platform and digital content are being created;
- interactive media and classroom equipment and high-speed internet connections are being provided for all schools;
- support for digital actions and infrastructure is being provided;
- teacher training is being given in using ICT (for approx. 60 000 teachers).

The project is currently being implemented and is expected to be completed in stages. Significant progress has been made in some fields, such as e-books for primary and secondary education, e.g. the 'Light Tree' (*Photodendro*, <http://photodentro.edu.gr>) and e-Books (<http://ebooks.edu.gr/>) are already partly operational. However, more work needs to be done on installing ICT equipment in all schools and on teacher training. The full and timely implementation of the Digital School project is crucial for the future of the education and training sector in Greece.

The project is being co-funded by the European Social Fund 'Education and Lifelong Learning' operational programme and the European Regional Development Fund 'Digital Convergence' operational programme for Greece. The project's content is available at <http://dschool.edu.gr>.

6. Modernising higher education

The tertiary education attainment rate in Greece is around the EU average (37.2%, compared to an EU-28 rate of 37.9%, in 2014). Greece has also surpassed the Europe 2020 national target of 32%. However, tertiary education attainment remains very low for those born outside Greece, at only 8.4% in 2014 (while the EU average is 28.6%), compared with 41.3% for those born in Greece. A significantly higher proportion of women (41.6%) complete higher education than men (32.9%). However, Greece continues to suffer from very low levels of employability for recent tertiary graduates,¹²⁵ at only 47.4% in 2014, in comparison with an EU average of 80.5%. Finally, Greece has relatively balanced levels of incoming and outgoing students, with a 3.8% inbound mobility rate and 4.5% outbound mobility rate during the 2011/12 academic year (European Commission 2015c).

In 2013-14, Greece carried out a comprehensive reform of the governance and organisation of its higher education system. As part of the *Athina* project, it has completed a wave of consolidation of higher education institutions, reorganising the academic map of the country, while tackling the issues of the increase in the number of study fields and the geographical dispersion of departments and faculties. Under *Athina*, two universities were closed down (the University of Central Greece and the University of Western Greece). A large number of departments at universities and technological institutes were also consolidated. *Athina* reduced the number of higher education departments by 123 (Hellenic Ministry of Culture and Education 2015), with a much stronger impact on the technological institutes (TEI). *Athina*'s main objective was to upgrade higher education institutions by rationalising scientific fields and strengthening leading departments and institutions, making them more innovative and creating centres of excellence. The government's intention was also to better connect the academic sector with regional development needs.

In the future, the higher education system could benefit from providing better matching between higher education outcomes and the future skills needs of the Greek economy (e.g. using the *ERGANI* system, which monitors the situation of the labour market), and by developing professionally focused tertiary VET opportunities. A step in the right direction is the participation of 8 500 university and technological educational institute graduates in a practical training programme implemented by the Greek manpower and employment organisation (OAED, the Greek public employment service), thanks to the transfer of EUR 45 million from the

¹²⁵ People aged 20-34 who left education between one and three years before the reference year.

national strategic reference framework co-financed by the European Structural and Investment Funds.

The provisions in laws 4009/2011 and 4076/2012 on modernising higher education organisation and governance continued to be implemented in 2014. In particular, an external evaluation of universities was carried out by the Hellenic Quality Assurance Authority, new organisational charts and internal regulations for higher education institution were drawn up, and university councils were put in place. During 2013/14, 85% of higher education institutions were externally assessed. This evaluation was expected to be completed by the end of 2014, and the results were supposed to be made public. The majority of the previously centralised powers and responsibilities, including financial and human resource management, would then have been delegated *de facto* to higher education institutions.

However, law 4327/2015 seems to roll back a certain number of crucial improvements in the governance and functioning of the higher education sector, including the limitation of the powers of university councils and the abolishment of time limits for keeping the student status (Hellenic Parliament 2015). The public consultation of this new draft omnibus law on higher education was completed on 29 June 2015, but it was not debated in Parliament.

In its 2015 National Reform Programme, the government seemed to lay more emphasis on equal access as a key issue for tertiary education (Hellenic Government 2015). This is a positive development, as this is the first time in many years that this question has been publicly addressed by the Greek authorities. Steps in this direction have already been taken, with the adoption of law 4283/2014 in September 2014, providing people with disabilities more access to higher education institutions.

The review foreseen in the Memorandum of Understanding from August 2015 includes higher education. The review is to be presented by April 2016 and necessary legislative changes by June 2016.

7. Modernising vocational education and training and promoting adult learning

Participation in initial VET remains modest in Greece, with a rate of 33.7%, in 2013 in comparison to an EU average of 48.9%. Greece also has a very low employment rate for recent upper secondary graduates,¹²⁶ at 38.8% in 2014, compared to an EU average of 70.8%.

Adult participation in lifelong learning in Greece remains very low and has tended to stagnate over time. It stood at 3.0% in 2014, compared to an EU average of 10.7%. Some groups of people, such as the lower skilled (ISCED level 0-2) - with a participation rate of barely 0.4% in 2014, compared to an EU average of 4.4% - or older people and those living in isolated, remote and sparsely populated areas have less access to training (Figure 3). As of September 2016, the OECD's PIAAC survey will provide, for the first time, direct and reliable data on the level of basic skills of adults in Greece.

Work to modernise the VET sector began in September 2013 with law 4186/2013 on secondary education. This act provides for an optional final apprenticeship year for vocational upper secondary school students, as from September 2016. This additional year will lead to a higher level of qualifications (European qualifications framework level 5). The Greek authorities are now, in principle, ready to ensure the effective implementation of this law and the government is expected to modernise and expand vocational education and apprenticeships, including by:

- creating a quality assurance framework;
- setting up a monitoring mechanism to develop local partnerships in at least six regions;

¹²⁶ People aged 20-34 who left education between one and three years before the reference year.

- gradually involving employers and private sector funding in VET;
- identifying future skills needs;
- matching VET provision with the needs of the labour market.

These investment priorities have been included in the programming for EU structural funds for 2014-20. However, there have been considerable delays in implementing this reform, and this fact risks undermining its full deployment by September 2016.

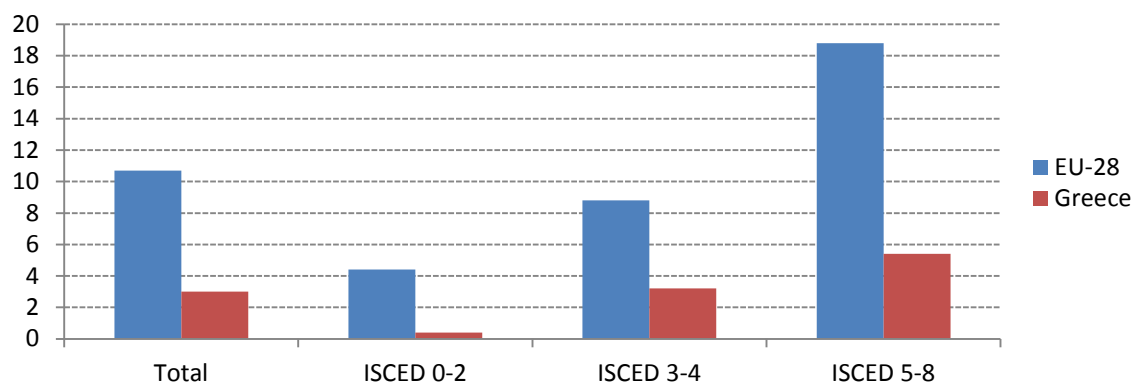
Post-secondary non-tertiary vocational training institute (IEK) graduates who began an internship between 2008 and June 2015 and completed it no later than the end of December 2015 are eligible for a financial subsidy. This project, financed through the European Social Fund, involves implementing programmes for optional practical training for graduates from public and private vocational training institutes, so as to develop links between initial vocational training and the labour market. The internship programme aims to improve the integration of students at vocational training institutes into the labour market by strengthening the capacities and the skills of graduates. The programme is expected to focus on around 9 200 students. The draft referencing report from the Hellenic qualifications framework to the European qualifications framework envisages an upgrade of the qualifications acquired through studying at vocational training institutes to level 5.

In September 2014, under the motto '*ready in 18*', the Ministry of Culture, Education and Religious Affairs launched vocational training schools (SEK). This is a new type of institution providing recognised national certification and training in 56 specialities, aimed at those who have completed compulsory education. The schools are intended to provide initial training to those who have completed compulsory formal education. The course will last three years, with two years of vocational training and one year of apprenticeship. Attendance at public vocational training schools is free of charge. In the end, the number of students in apprenticeship schemes is to be increased, although the source of funding for this increase is not clear. Greece has hence adopted a major initiative to upgrade and expand VET and apprenticeships, but its full and timely implementation is still an open question.

At the same time, also at upper secondary level, dual learning programmes are offered at vocational schools of the public employment service (EPAS) supervised by the Greek Ministry of Labour. The government intends to gradually integrate these vocational schools into the so-called formal education system (i.e. allowing students to progress to higher education). Several popular specialisations, including health-related and applied arts specialisations, will be reintroduced into school-based VET programmes at post-secondary level.

Finally, the 2015 National Reform Programme clearly recognises the need to improve the quality and effectiveness of VET, notably through working with stakeholders; developing a well-functioning skills-forecasting mechanism; and setting up a national quality assurance system. Also the Memorandum of Understanding from August 2015 contains a set of key measures furthering the modernisation of VET in Greece.

Improved access to lifelong learning, focusing in particular on the most vulnerable groups and including measures to recognise previously acquired competences, is a priority for programming European Structural and Investment Funds for 2014-20. At its meeting on 28 May 2013, the Council of Lifelong Learning adopted the national lifelong learning programme (2013-15). It sets out the medium-term strategic framework for lifelong learning in Greece, in which adult education and training is a policy priority. However, the 2015 National Reform Programme recognises that Greece still needs a long-term strategic and holistic vision for developing lifelong learning in the future. Greece is also one of the countries still working on their national qualifications framework, ensuring qualifications are based on learning outcomes, and preparing to reference these to the European qualifications framework.

Figure 3. Adult participation in lifelong learning by level of education (2014)


Source: Eurostat

References

- European Commission (2013), Key data on teachers and school leaders, http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/151EN.pdf
- European Commission (2014), National Sheets on Education Budgets in Europe, 2014, Eurydice — Facts and Figures on education and training, http://eacea.ec.europa.eu/EDUCATION/EURYDICE/documents/facts_and_figures/National_Budgets.pdf
- European Commission (2015a), Digital Agenda Scoreboard, <http://ec.europa.eu/digital-agenda/digital-agenda-scoreboard>
- European Commission (2015b), Memorandum of Understanding with Greece signed on 19 August 2015, http://ec.europa.eu/economy_finance/assistance_eu_ms/greek_loan_facility/
- European Commission (2015c), The European Higher Education Area in 2015: Implementation Report Bologna Process, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf
- Hellenic Government (2015), National reform programme (NRP) for 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_greece_el.pdf
- Hellenic Ministry of Culture and Education (2015), Παρουσίαση Σχεδίου "Αθηνά", http://www.minedu.gov.gr/index.php?option=com_content&view=article&id=9325
- Hellenic Ministry of Finance (2015), State Budget Reports, 2010-15, http://www.statistics.gr/portal/page/portal/ESYE/PAGE-themes?p_param=A0702&r_param=SEL15&y_param=TS&mytabs=0
- Hellenic Parliament (2015), Law 4327/2015 on the 'Emergency measures for primary, secondary and higher education' of 14 May 2015, http://www.hellenicparliament.gr/Nomothetiko-Ergo/Anazitisi-Nomothetikou-Ergou?law_id=bee4cab7-9a6e-4ee3-9a8f-a48a015a7b65
- OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>
- OECD (2014), Education at a Glance, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

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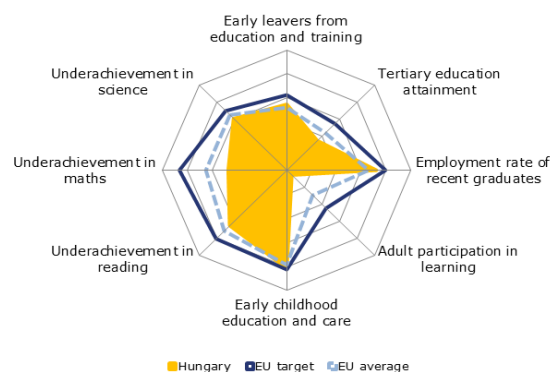
Hungary

1. Key Indicators and Benchmarks

			Hungary		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	•	:	19.7% ¹²	:	17.8% ¹²
	Maths	•	:	28.1% ¹²	:	22.1% ¹²
	Science	•	:	18.0% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		5.1%	4.7% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		10.3%	9.5% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		12.3%	12.5%	15.2%	12.7%
	Women		10.6%	10.3%	11.5%	9.5%
	Total	•	11.4%	11.4%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		23.6%	28.0%	31.0%	33.6%
	Women		32.9%	40.3%	38.7%	42.3%
	Total	•	28.2%	34.1%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	94.5%	94.7% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	: ¹³	:	84.6% ¹³
	Special needs education		:	: ¹³	:	32.4% ¹³
	Multicultural settings		:	: ¹³	:	13.2% ¹³
	ICT skills for teaching		:	: ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		5.9%	6.0% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			26.2%	26.5% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		63.6%	72.6%	71.3%	70.8%
	ISCED 5-8		83.3%	85.7%	82.5%	80.5%
	ISCED 3-8 (total)	•	73.4%	78.5%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	2.8% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	7.0% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	2.6%	3.2%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Hungary has adopted several national strategies in 2014-15 which aim to improve the quality of its education and training system, in particular an early school leaving prevention strategy, a mid-term strategy of public education development, a new concept paper for vocational training, a higher education strategy and a new lifelong learning strategy. Early childhood education and care is compulsory for all children from the age of 3 as of September 2015, which may contribute to improving education outcomes, particularly those of students from disadvantaged socio-economic backgrounds.

Nevertheless, Hungary's education and training system still faces major challenges. The proportion of low achievement in basic skills is increasing and the socio-economic gaps in performance are still among the highest in the EU. Increasing the participation of disadvantaged students, in particular Roma, in mainstream inclusive education and improving support through targeted teacher training is a challenge. The three-year vocational programme is not attractive to young people and does not provide flexible career opportunities; moreover, the early school leaving rate among pupils in vocational schools is significant. Many students drop out of higher education and adult participation in lifelong learning remains very low. General government expenditure on education as a share of GDP is among the lowest in the EU.

Box 1. The 2015 European Semester country-specific recommendation on education

The 2015 European Semester country-specific recommendations (CSRs) to Hungary (Council of the European Union 2015) included a recommendation on education:

CSR 5: Increase the participation of disadvantaged groups in particular Roma in inclusive mainstream education, and improve the support offered to these groups through targeted teacher training; strengthen measures to facilitate the transition between different stages of education and to the labour market, and improve the teaching of essential competences.

3. Investing in education and training

General government expenditure on education remained at the 2012 level as a share of GDP (4.7% in 2013), but it continued shrinking as a proportion of the total government expenditure on education (from 11.2% in 2010 to 9.5% in 2013, compared to the 10.3% EU average).¹²⁷ This is among the lowest in the EU on both indicators. Public expenditure on pre-primary and primary education as share of the GDP is only 0.9% (compared to the 1.6% EU average).

4. Tackling inequalities

The early school leaving rate has not changed significantly since 2011 and is around the EU average (11.4% compared to 11.1% in 2014). Regional¹²⁸ differences in early school leaving are prominent. In Central Hungary (*Közép-Magyarország*) and South Plains (*Dél-Alföld*), the rate stands at 7.2% and 8.4% respectively, while in North Hungary (*Észak-Magyarország*), it is 18.4%. Participation in early childhood education and care for children aged 4 is at 94.7%, which is above the EU average. National data show that participation is lower in the north-east regions of Hungary, where the proportion of disadvantaged children is higher. The proportion of 15-17 year-olds not in employment, education or training has risen from 1.9% in 2012 to 3.5% in 2014.

The average performance of 15-year-olds in Hungary in basic skills according to the 2012 OECD Programme for International Student Assessment (PISA) was below the EU average and the proportion of low achievers increased between 2009 and 2012, in particular in maths. The influence of the socio-economic backgrounds and school location (city vs rural area) on

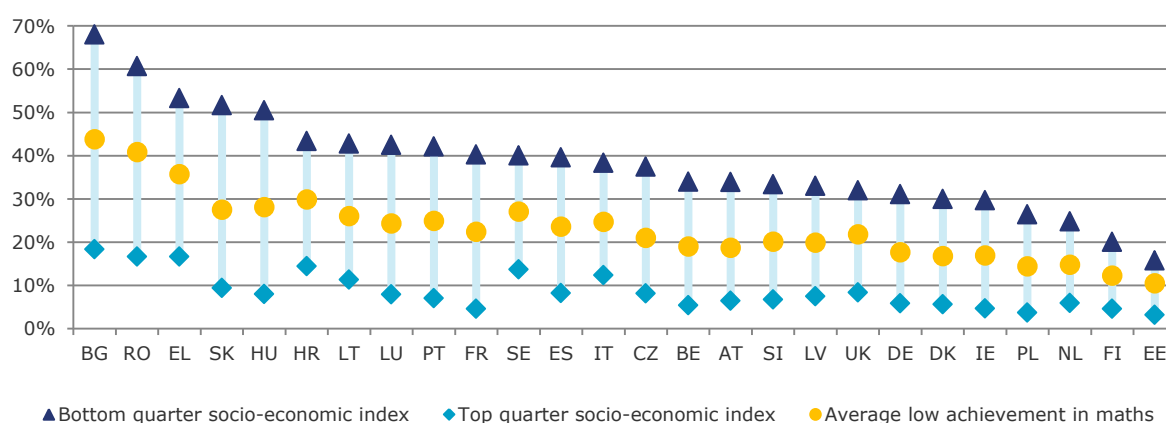
¹²⁷ Source: Eurostat, General government expenditure by function (COFOG) database

¹²⁸ Source: Eurostat, Early leavers from education and training by sex and NUTS 2 regions

children's educational performance is one of the highest in the EU (OECD 2013b). Among low achievers in reading, there is a higher than EU average gender gap between boys and girls — 26.9% of boys have poor reading skills compared to 13% of girls (OECD 2013c). The national competence measurement in 2014 (Education Authority 2015) reconfirms a high performance gap between different regions of the country and in tenth grade (16-year-olds) between different school types. Most of the low achievers live in the north-east part of Hungary, which is hit hardest by poverty. In these regions, the proportion of pupils from disadvantaged backgrounds (28-29%) is double the national average (Hungarian Central Statistical Office 2015).

Roma pupils' educational attainment is below the national average. 77.7% of Roma complete eight years of schooling (lower secondary) as their highest education level compared to the national average of 24.6%, and account for less than 1% of graduates from tertiary education compared to 18.5% in the adult population (Ministry of Human Capacities 2014). The European Union Agency for Fundamental Rights reports that the share of Roma who attend schools and classes where the half or majority of their classmates are Roma is high (European Agency for Fundamental Rights 2014).¹²⁹ National sources also confirm that due to the selectivity of the school system, the segregation index has risen further (Hungarian Academy of Sciences 2015).

Figure 2. Share of low achievement in maths by socio-economic status*



* Countries are ranked in descending order of the average share of low achievement amongst the bottom quarter of the PISA index for socio-economic status.

Source: OECD (2013b)

To improve educational performance, in particular of children from disadvantaged socio-economic backgrounds, participation in early childhood education and care becomes compulsory from the age of 3 as of September 2015. The former conditional one-off cash transfer for preschool attendance to disadvantaged families is being terminated and the regular family allowance will be conditional on mandatory preschool attendance. The government is taking steps to recruit a sufficient number of educational staff and an allocation of HUF 2.5 billion from the 2015 budget is planned to create 2 000 further capacities in 64 municipalities.

Several catching-up programmes and scholarships that aim to boost disadvantaged children's chances of acquiring better skills and educational attainment continue to be available. In 2014/15, around 4 000 secondary school students benefited from the 'Arany János programme'

¹²⁹ The survey was conducted in areas where Roma live in higher density than the national average. When the ethnic background of Roma children's classmates was examined, responses showed that 45% of Roma children attend classes with all or many Roma pupils. In areas where Roma live in majority, 59% of Roma study in Roma majority classes and schools. However, Roma majority classes are also frequent in mixed neighbourhoods, where 34% of Roma attends such classes.

(HUF 3 billion) (Hungarian Government 2015b). HUF 5.4 billion were spent on 174 'Tanoda'¹³⁰ (giving support to 4 000 disadvantaged and multiple disadvantaged pupils' learning)¹³¹ and a further HUF 4 billion are planned for the next three years (Hungarian Government 2015c). The Integrated Pedagogical System grant has reached 718 schools (Human Capacities Grant Management Office 2014). Besides, school text books are delivered free to disadvantaged pupils.

The first wave of pupils attending 'bridge' classes, which were introduced in 2013, has graduated this year (2015). Bridge classes offer second-chance programmes for those pupils who either were not able to complete primary school education or have not been accepted in any secondary schools. The share of pupils who are admitted to secondary school will show how successful this approach is in improving educational outcomes of low achievers.

In November 2014, the government adopted a mid-term school development strategy and a strategy on the prevention of early school leaving. For the period 2014-20, in the Human Resource Development Operational Programme of the European Structural and Investment Funds (ESIF), EUR 344 million have been allocated to fight against early school leaving and improve the quality of compulsory education (Hungarian Government 2015d). The Economic Development and Innovation Operation Programme of the ESIF foresees measures against early school leaving in vocational education and training (Hungarian Government 2015c). In January 2015, the Public Education Law defined the term 'student at risk of early school leaving', and introduced an early warning system. While declining educational performance¹³² as the only indicator may have a limited capacity in identifying potential drop-outs, the new legislation is a positive step. The current development of the early warning system can be an opportunity to extend the number of indicators. The implementation of the strategy also provides a framework for considering how schools could be empowered to intervene both in good time and flexibly, and which measures could most effectively be applied in vocational schools. In August 2015, the government requested the Minister for Human Capacities to take steps for the organisation of the education of refugee children – including providing Hungarian language classes (Ministry of Human Capacities 2015).

5. Modernising school education

Teachers earn less than 60% of the salary of other tertiary graduate professionals. On average, teachers reach their highest salary after 42 years in service (European Commission 2014), compared to the OECD average of 25 years. This salary increase is, however, around 90%, except for pre-primary teachers. Between 2008 and 2012, teacher salaries in Hungary suffered the largest cut in the OECD countries (OECD 2014). In 2013, teachers received an initial basic salary increase of 35% and a further annual 7% increase is due until 2017.

Trends show a shrinking teaching workforce. In 2013, more than 35% of the teachers were above 50 years old with only 7% below 30.¹³³ In order to reverse these trends and improve the career prospects of teachers, the government introduced a new teacher career system and made changes to initial teacher education in 2013 as part of the major reform of the school system. The new system consists of five career steps, which are also related to salary grades. Graduates with teacher qualification ('Trainees'), participate in a two-year induction programme. Having passed their qualification exam, they enter into step two ('Teacher I'), and

¹³⁰ Communities outside formal education that provide support to learning and development for pupils with a disadvantaged socio-economic background. These are usually run by NGOs in deprived settlements.

¹³¹ The terms 'disadvantaged students' and 'multiple disadvantaged students' are defined by the Hungarian Public Education Law. They refer students with severe socio-economic backgrounds.

¹³² The law determines that a students whose educational performance falls below grade 3 (in a 5 grade scale) or by 1.1 grade within one school year is at risk of dropping out.

¹³³ Source: Eurostat, Distribution of teachers at education level and programme orientation by age groups [educ_uae_perd01]

within seven years they are obliged to qualify in step three ('Teacher II'). Step four ('Master teacher') and five ('Researcher teacher') are optional for those who wish to carry out other activities besides teaching, such as mentoring trainees or carrying out pedagogical research.

When the new system was brought in, all teachers irrespective of their experience in the profession were regarded as qualified as Teacher I, which meant a salary loss for experienced teachers. By 2018, it is compulsory for all teachers who are already in the profession to qualify in the first two steps (Teacher I and Teacher II). The government sets annually the maximum number of teachers eligible to requalify. In 2015 and 2016, 30 000 teachers can requalify. For 2015, 80% (22 697) of the eligible teachers applied and 62% qualified to work temporarily on step two as of January 2015. 5519 teachers who had passed inspector exams qualified as Master teacher.¹³⁴ From January 2016, the career system will also apply to educational staff for children below the age of 3.¹³⁵ The number of possible re-qualifications will be determined by the Minister of Human Capacities in the annual national budget.

National policy strategies highlight the fact that teachers are not sufficiently equipped with skills needed to work in diverse classrooms and help pupils with learning difficulties (Hungarian Government 2014b; Ministry of Human Capacities 2014, pp. 82-84). At the moment, it is not possible to see what measures will be put in place to improve teachers' competence in this area and how the career system and the inspection procedure will promote better educational outcomes and inclusive education. In 2015, further changes made to the governance of the school system were partly due to the difficulties resulting from highly centralised management of schools. The Education Authority will take over the management of teacher qualification and pedagogical professional inspections (from Government Offices) and professional pedagogical support services (from the Klebelsberg Institution Maintenance Centre). In April 2015, a network of Pedagogical Education Centres was set up to provide pedagogical support in their vicinity. The Hungarian Institute for Educational Research has become responsible for the coordination of school text book development and publishing. Following testing in 2014, the new pedagogical professional inspection procedure was launched in 2015. Expert-level discussions about extending primary education from eight to nine years in order to allow more time for the development of basic skills have also started.

The number of foreign languages learnt by pupils in secondary school is below the EU average. At ISCED level 2, only 6% of students learn two or more foreign languages. This is the lowest value in the EU. All other students study only one foreign language. At ISCED level 3, this improves to 1.4 foreign languages per student in general upper secondary schools, but remains well below the EU average in pre-vocational and vocational schools (0.7 languages compared to the 1.2 EU average). As of 2015, foreign languages (English and German) became new elements in the national competence measurement. Students who study these languages as a first foreign language will be assessed in the sixth grade (12 years old) against A1 level standards in the Common European Framework of Reference for Languages and in the eighth (14 years old) grade against A2 level standards.¹³⁶

6. Modernising higher education

In 2014, Hungary raised its Europe 2020 national tertiary education attainment target among 30-34-year-olds from 30.3% to 34%. In the same year Hungary already reached its national target (tertiary attainment stood at 34.1% compared to the EU average of 37.7%). Between 2005/06 and 2011/12, the total number of students in Hungary fell by 13% (European Commission 2015a). The decline in applications (Figure 3) and enrolment rates among 18-year-olds for bachelor programmes in recent years¹³⁷ and high drop-out rates from higher

¹³⁴ Source: <http://mno.hu/belfold/tobb-mint-huszezer-tanar-kapott-emelt-bert-1271437>.

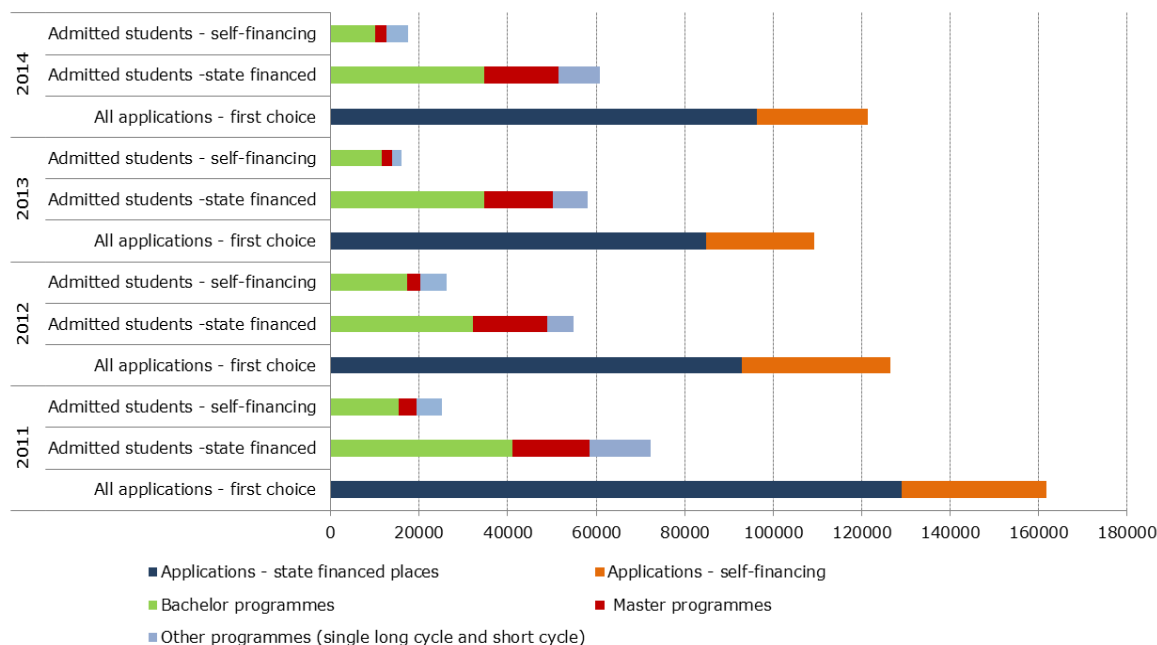
¹³⁵ It should be noted that currently 14% of the 0-3 early childhood education staff has tertiary level qualification.

¹³⁶ Students who attend bilingual schools are tested at levels A1 and B2 respectively.

¹³⁷ Source: <http://www.felvi.hu>

education¹³⁸ may, however, negatively affect tertiary attainment rates in Hungary over the next decade. The attainment rate of foreign-born 30-34-year-old students is 10.8 percentage points higher than for native-born students (44.7% compared to 33.9%). In 2013, 2.8% of all bachelor graduates and 7% of master graduates completed their prior education in another country, mainly in Slovakia, Romania, Germany and Asia. The employment rate of recent tertiary graduates¹³⁹ is catching up (85.7% in 2014) and exceeds the EU average of 80.5%.

Figure 3. Applications and admissions in higher education in Hungary 2011-14
(absolute numbers in thousands)



Source: felvi.hu

In December 2014, the Hungarian government adopted a higher education strategy (Box 2). As a way to improve the labour market relevance of tertiary education, dual programmes were introduced in five study fields — technical, informatics, economic sciences and natural sciences, agriculture. The dual programmes comprise academic studies provided at the participating university and 20-24 weeks/year work-based learning with a company. Students who apply for the first time for dual tertiary programmes accept a higher workload compared to usual university programmes in the field. The Dual Training Council, which is composed of government, university, chamber and company representatives, was set up in 2015 to coordinate dual programmes, engage and prepare companies and ensure quality assurance of the work-based learning component. Companies providing practical placements can deduct the cost of the trainee from their vocational training tax contribution and receive financial resources for training equipment. The National Reform Programme 2015 indicates that HUF 2.2 billion was allocated for this measure from the 2007-13 ESIF (Hungarian Government 2015b). The dual approach in higher education is innovative; it will be interesting to see its impact on the employability of graduates. For monitoring the employability of graduates, the first results of the graduate career tracking system were published in 2015. After several years of development, the tracking system links together the higher education information system, the student loan centre, the national tax office, the labour office and some other databases. The objective is to inform individual students' educational choices and higher education policy more generally.

¹³⁸ Drop-out rate from higher education was at 47% in 2011 according to UOE data collection in OECD (2013a).

¹³⁹ People aged 20-34 who left education between one and three years before the reference year.

Box 2. Higher education strategy 2015-2030

In October 2014, the Ministry of Human Capacities published a draft strategic document on the future of higher education 'A Change of Pace in Higher Education. Guidelines for Performance Oriented Higher Education Development' (Hungarian Government 2014a), and carried out a public consultation between 21 October and 5 November. In December, the strategy was adopted by the government and made public on the government website on 4 March 2015. The strategy sets the agenda for development of the Hungarian higher education system over the next 15 years, aiming to achieve a 35% tertiary attainment rate by 2023. Data and analysis underpinning the strategy is, however, not available.

The objectives of the strategy are: i) establish a performance-based higher education system and improve its quality; ii) boost the research element of higher education and research careers; iii) strengthen links between local/regional businesses and higher education.

The main points of the strategy are as follows:

- Rationalisation of the programme structure and content: based on the new Graduate Tracking System, which has been collecting data on graduate employment since 2006, the number of programmes will be cut by 15% by 2020. A government decree on the new programme structure was published in spring 2015 and work on the revision of learning outcomes requirements will be launched in the autumn. The scope and the potential impact of this measure cannot be assessed at this stage because data and analysis of the current programme structure and the needs of the society and the labour market for certain programmes are not available.
- Increasing entry and outcome requirements: increased admission requirements for state-funded places in individual programmes is defined; higher level upper secondary school leaving qualification (*emelt szintű érettségi*) is required for entry into several programmes; intermediate level foreign language examination will be a condition of university entry for all programmes except short cycle by 2020; a higher proportion of students who do not meet performance criteria set by institutions will be re-classified from state-funded places to self-financing places and successful self-financing students can be re-classified to state-financed places. Financial resources allocated to mentoring of disadvantaged students will be increased and skills development for low-achieving new entrants will be offered. Nevertheless, higher entry requirements may further limit the access of under-represented groups to higher education, including socio-economically disadvantaged young people.
- With a view to making higher education more accessible in regions without higher education institutions, a new type of institution, the 'higher education centre for community based studies' will be established. The management, financing and quality assurance of these colleges is still to be determined.
- Opening up pathways to higher education: it is envisaged that, besides upper secondary school leaving qualification (*érettségi*), access to higher education will be possible based on the recognition of relevant work experience or prior non-formal learning. This measure will not provide further opportunities for 18-year-olds, but may open universities to a broader range of the adult population.
- Quality assurance: launching new programmes will become easier, but checking on processes and outcomes will be stricter.
- Governance structures: aiming to strengthen the non-academic management of institutions, two new structures have been introduced. The 'rector' and the 'senate' remain responsible for the academic governance of universities. However, the 'chancellor', who is nominated by the Minister of Human Capacities, takes decisions on strategic and economic matters and represents the maintainer of the university (i.e. the State for state-financed universities.) A central 'chancellor's office' supporting the chancellors of all state-funded universities may be set up in two years. A 'consistory' with five or six external members delegated by the state and the rector will make strategic decisions.

- Cooperation with businesses and research will be facilitated through regulations promoting more flexible use of state funding and attracting private funding. There will be a career system for researchers and more opportunities for start-ups and participation in innovative projects.

As a first step in implementing the strategy, the new programme structure, higher education centres for community-based studies, and the chancellor and consistory systems were introduced with the amendment of the higher education law of 2011 and its implementing orders. Detailed planning of implementation and monitoring are not yet available.

7. Modernising vocational education and training and promoting adult learning

Participation in upper secondary vocational education and training (VET) is below the EU average (26.5% compared to the 48.9% EU average in 2013).¹⁴⁰ The share of VET students in work-based learning is about 70%, one of the highest in Europe.¹⁴¹ The employment rate of recent upper secondary graduates¹⁴² increased by 7.8 percentage points between 2013 and 2014 and is now above the EU average (72.6% compared to 70.8%). Youth unemployment decreased from 26.6% in 2013 to 20.4% in 2014, which is slightly below the EU average of 22.2%. The drop-out rate from VET remains a cause of concern (around 30% in 2013). The ageing of the teacher population and the proportion of teachers without proper qualifications is most noticeable in vocational schools and vocational schools for students with special educational needs ('special vocational schools') (Hungarian Academy of Sciences 2015). Adult participation in lifelong learning remains at one of the lowest levels in the EU (3.2% in 2014 compared to a 10.7% EU average).

Continuing its major reform for the promotion of VET paths, the government adopted a new concept paper in March 2015 and the VET law of 2011 has been amended accordingly. Vocational schools and vocational upper secondary schools will be managed by the Ministry of National Economy instead of the Ministry of Human Capacities with the aim of bringing VET closer to the labour market. The number of places has been increased in vocationally oriented upper secondary programmes. It is not known how these changes will influence the number of available study places in general upper secondary schools. The new teacher career system is planned also to apply to VET trainers and teachers.

The current vocational school types are being renamed without changes in the curricula. In the new system, *szakgimnázium* leads to a professional upper secondary school-leaving qualification (4+1 year), while the three-year *szakközépiskola*, in which pupils could enrol as of September 2012, offers a vocational qualification. A new decision is that pupils in *szakközépiskola* automatically continue their studies in the same school (unless they request it otherwise). They focus only on four study subjects for two extra years and can sit the upper secondary school-leaving examination in the same school. This is a positive development as it opens the door to further education and better employment opportunities for pupils in this programme. However, without boosting the basic skills content of the current 3-year curriculum, pupils will not be able to acquire the level of key competences necessary for mastering subjects usually required for the upper secondary school-leaving exam. While structural barriers have been removed, the increasingly strict admission criteria for higher education give little chance for students from this school type to enter into higher education.

The number of apprentices (students holding a training contract) increased in 'special vocational schools' (ISCED 2 and 3) from 487 in 2001/02 to 931 in 2013/14. An increase of apprentices

¹⁴⁰ Hungary has post-secondary vocationally oriented programmes leading to a qualification at ISCED 4. About one-third of 15 year-olds enrol in this kind of programmes.

¹⁴¹ It should be noted that this includes all programmes with a practical element regardless whether it takes place at a company or at a school.

¹⁴² People aged 20-34 who left education between one and three years before the reference year.

was also registered in post-secondary VET (ISCED 4), from 4 645 (2001/02) to 7661 (2013/14). However, in 2013/14 only 22% of students in special vocational schools and 9% of students in post-secondary VET schools participated in apprenticeship schemes. Financial benefits (tax credit, reimbursement of costs and tenders for the infrastructural development of the training sites) are important incentives for companies to provide company training. In several professions there are not enough training places and the training on offer thus does not reflect — nor is it adjusted to — actual labour demand (Cedefop 2015). The amendment of the VET law in June 2015 introduces the 'Chamber Guarantee', which prioritises company training over school based training and guarantees the help of the Chamber of Commerce and Industry for students in finding training places.

In November 2014, the government adopted a new lifelong learning strategy for the period 2014-20. The strategy aims at: i) increasing participation in and improving access to lifelong learning; ii) reinforcing the principles of lifelong learning in education and training systems as well as in adult learning; iii) ensuring visibility and acknowledgement of the value and results of lifelong learning. While the strategy presents ambitious policies that may have a positive impact across the population, an implementation plan is yet to be formulated. Without explicit planning, opportunities for efficient and effective implementation as well as coordination and increased synergies with other strategic interventions may be missed. In addition, the implementation of the new law on adult training (European Commission 2015b) provides for better organisation of training courses, enhancing the quality of their content and reinforcing their supervision.

References

- Cedefop (2015), Apprenticeship-type schemes and structured work-based learning programmes in Hungary, https://cumulus.cedefop.europa.eu/files/vetelib/2015/ReferNet_HU_2014_WBL.pdf
- Council of the European Union (2015), Council Recommendation of 14 July 2015 on the 2015 National Reform Programme of Hungary and delivering a Council opinion on the 2015 Convergence Programme of Hungary (2015/C 272/20), http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_hungary_en.pdf
- Education Authority (2015), Országos Kompetenciamérés. 2014. Országos jelentés, https://www.kir.hu/okmfit/files/OKM_2014_Orszagos_jelentes.pdf
- European Commission (2014), Teachers' and School Heads' Salaries and Allowances in Europe, http://eacea.ec.europa.eu/education/European_Commission/documents/facts_and_figures/salaries.pdf
- European Commission (2015), The European Higher Education Area 2015. Bologna Implementation Report, http://eacea.ec.europa.eu/education/European_Commission/documents/thematic_reports/182EN.pdf
- European Commission (2015b), Ongoing Reforms Ongoing Reforms and Policy Developments in Hungary, https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Hungary:Ongoing_Reforms_and_Policy_Developments
- European Union Agency for Fundamental Rights (2014), Education: the situation of Roma in 11 Member States, http://fra.europa.eu/sites/default/files/fra-2014_roma-survey_education_tk0113748enc.pdf
- Human Capacities Grant Management Office (2014), Integrációs Pedagógiai Rendszer, http://www.emet.gov.hu/hatter_1/integracios_pedagogiai_rendszer/
- Hungarian Academy of Sciences (2015), A közoktatás indikátorrendszere 2015.), <http://econ.core.hu/file/download/kozoktatasi/indikatorrendszer.pdf>
- Hungarian Central Statistical Office (2015), Statisztikai tükör. Oktatási adatok 2014/2015, <http://www.ksh.hu/docs/hun/xftp/idoszaki/oktat/oktatas1415.pdf>
- Hungarian Government (2014a), Change of Pace in Higher Education. Guidelines for Performance Oriented Higher Education Development, <http://www.kormany.hu/download/d/90/30000/fels%C5%91oktat%C3%A1si%20konceptci%C3%B3.pdf>

Hungarian Government (2014b), National Strategy for the Prevention of Leaving School without a Qualification, Budapest

Hungarian Government (2015a), National Reform Programme 2015 of Hungary, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_hungary_en.pdf

Hungarian Government (2015b), News. 30 May 2015, <http://www.kormany.hu/hu/emberi-eroforrasok-miniszteriuma/szocialis-ugyekert-es-tarsadalmi-felzarkozasert-felelos-allamtitkarsag/hirek/negymilliard-forint-a-tanodak-tamogatasara>

Hungarian Government (2015c), Economic Development and Innovation Operation Programme 2014-2020, http://ec.europa.eu/regional_policy/en/atlas/programmes/2014-2020/Magyarorsz%C3%A1g/2014hu16m0op001

Hungarian Government (2015d), Human Resources Development Operational Programme 2014-2020, http://ec.europa.eu/regional_policy/en/atlas/programmes/2014-2020/Magyarorsz%C3%A1g/2014hu05m2op001

Ministry of Human Capacities (2014), Hungarian Social Inclusion Strategy. The Situation of the Roma, http://ec.europa.eu/justice/discrimination/files/roma_hungary_strategy2_hu.pdf

Ministry of Human Capacities (2015), Állami kitüntetések és szakmai díjakat adott át Balog Zoltán, <http://www.kormany.hu/hu/emberi-eroforrasok-miniszteriuma/hirek/allami-kituntetesekek-es-szakmai-dijakat-adott-at-balog-zoltan-2015-08-19>

OECD (2013a), Education at a Glance 2013. OECD Indicators, [http://www.oecd.org/edu/eag2013%20\(eng\)-FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)-FINAL%2020%20June%202013.pdf)

OECD (2013b), PISA 2012 Results: Excellence through Equity. Giving Every Students a Chance to Succeed (Volume II), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-II.pdf>

OECD (2013c), PISA Results in Focus. What 15-year-olds know and what they can do with what they know, <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>

OECD (2014), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

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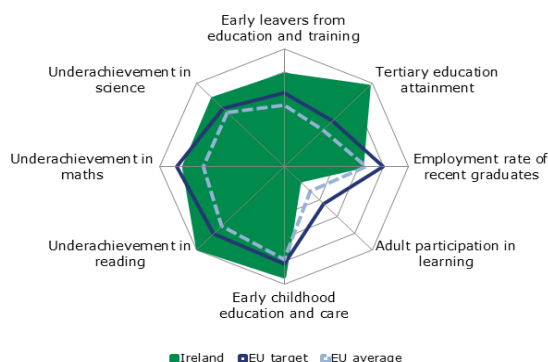
Ireland

1. Key Indicators and Benchmarks

		Ireland		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	:	9.6% ¹²	:	17.8% ¹²
	Maths	:	16.9% ¹²	:	22.1% ¹²
	Science	:	11.1% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP	4.7%	4.1% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure	10.1%	10.2% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men	12.8%	8.0% ^u	15.2%	12.7%
	Women	8.8%	5.7% ^u	11.5%	9.5%
	Total	10.8%	6.9% ^u	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men	43.1%	45.1%	31.0%	33.6%
	Women	56.0%	58.6%	38.7%	42.3%
	Total	49.7%	52.2%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		98.6%	97.2% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)	:	: ¹³	:	84.6% ¹³
	Special needs education	:	: ¹³	:	32.4% ¹³
	Multicultural settings	:	: ¹³	:	13.2% ¹³
	ICT skills for teaching	:	: ¹³	:	51.0% ¹³
Foreign language learning (Share of ISCED 2 students learning two or more foreign languages)		10.2%	9.2% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)		34.0%	1.5% ^{13,b}	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4	52.7%	56.8%	71.3%	70.8%
	ISCED 5-8	81.5%	83.7%	82.5%	80.5%
	ISCED 3-8 (total)	70.9%	73.9%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)	:	4.6% ¹³	:	: ¹³
	Inbound graduates mobility (master)	:	9.3% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)		6.8%	6.7%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor). * Ireland had previously a significant number of pre-vocational ISCED 97 level 3 programmes, which are now classified as general ones.

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Ireland's tertiary education attainment rate for 30- to 34-year-olds is one of the highest in the EU. Early school leaving has been falling consistently since 2009 and is well below the EU-28 average. There have also been positive developments in basic skills proficiency. Re-skilling and up-skilling are priorities for the education and training system. In a very difficult fiscal context and decreasing public spending on education, reforms have been put in place to achieve a system that is more responsive and relevant to labour market needs. Ireland is implementing a large-scale reform of the further education and training system to effectively provide the types of skills that the rebalanced Irish economy needs and to give unemployed people valuable and relevant re-skilling and up-skilling opportunities. Access to full-time childcare remains limited and expensive, which is a barrier to participation in the labour market by women and single parents.

3. Investing in education and training

General government expenditure on education as a share of GDP has constantly decreased from the pre-crisis peak of 2009, when it stood at 5%. The 2013 figure of 4.1% was one of the lowest in the EU-28.¹⁴³ The decrease in expenditure has had a negative impact on specific measures, in particular:

- increases in the student-teacher ratio in all schools (except for schools participating in the 'Delivering Equality of Opportunity in Schools' (DEIS) action plan);
- a reduction in the allocation of language support;
- the withdrawal of the Visiting Teacher Service and Resource Teachers for Travellers.

Despite this, a provision was made in the 2014 budget for the recruitment of over 1 400 teachers to meet demographic trends and additional resource teachers for children with special educational needs. Some additional funds were included in the 2014 budget for the continued roll-out of the national literacy and numeracy strategy and the implementation of the reforms in junior cycle education.

4. Tackling inequalities

Ireland's early school leaving rate has been falling for the last four years (Figure 2). In 2014 it reached 6.9%, which is one of the lowest rates in the EU-28. This means that Ireland has met its Europe 2020 national target of 8%. The 'Retention Rates of Pupils in Second Level Schools — 2008 entry cohort report', published in February 2015, indicates that 90.6% of students who entered secondary education in 2008 completed upper secondary education in 2013 or 2014. Participation in early childhood education by children aged four years and older stood at 98.1% in 2013. This was one of the highest rates in the EU-28.

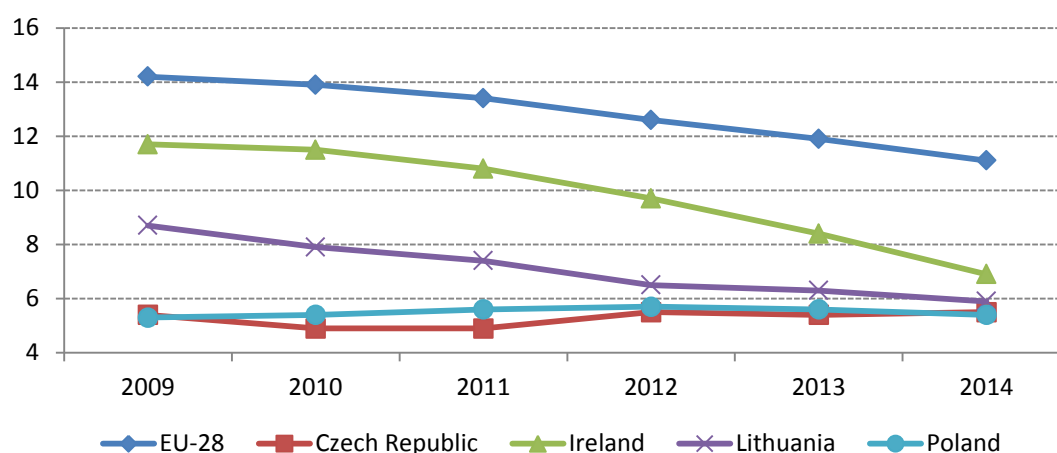
Ireland's 15-year-olds scored significantly above the OECD average in mathematics, science and reading according to the 2012 results of the OECD Programme for International Student Assessment (PISA). Results were significantly better in all areas than in 2009, when the country was witnessing a drop in performance (OECD 2009, 2013). The results were all the more impressive when we consider that the students who took the PISA tests in Ireland in 2012 came from considerably more diverse backgrounds than in previous years (with more migrants, more students with special needs and more students with a prior history of retention).

A professional support service involving early childhood specialists was established in 2014. Known as 'Better Start', the support service is working with existing childcare organisations to improve practices in early years' education. The quality improvement agenda includes the introduction of education-focused inspections in 2015. The Department of Education and Skills has run a public consultation on training and qualifications for practitioners in early years'

¹⁴³ Source: Eurostat, General government expenditure by function (COFOG) database.

education and training. In addition, funding has been made available for the provision of specialised programmes to train practitioners in the necessary skills, in order to work effectively with children with additional needs, as part of ongoing work to make early years settings inclusive for children with a disability.

Figure 2. Early school leaving rate



Source: Eurostat

An Early Years Education Advisory Group has been established by the Minister for Education and Skills; the Group includes representatives of further and higher education, county childcare committees, the Child and Family Agency, the Early Years Quality Support Service, parents, national childcare organisations, practitioner organisations and government departments. The role of the Group is as follows:

- to provide a forum for the exchange of ideas and best practice;
- to coordinate activities within the sector;
- to advise on how quality can be strengthened;
- to improve the integration of early years education within the overall education system

The 'Delivering Equality of Opportunity in Schools' (DEIS) action plan for educational inclusion is Ireland's policy instrument for addressing early school leaving and educational disadvantage. It is focused on addressing and prioritising the educational needs of children and young people from disadvantaged communities, from early childhood through to secondary education. There are currently 852 schools (658 primary and 194 post-primary) with an approximate enrolment of 166 000, participating in the DEIS School Support Programme. Measures include:

- a free year of early childhood education and care for children of preschool age;
- literacy and numeracy programmes;
- the school meals programme, which provides schools with funding for meals for disadvantaged children;
- partnerships between schools, family members and local statutory, community and voluntary agencies and the educational welfare services, to facilitate integrated work between different programmes.

At post-primary level, an evaluation of DEIS in secondary education was published in May 2014 (Weir et al. 2014). The evaluation found that overall performance in public examinations had improved since the introduction of the programme, and that literacy and numeracy rates and attendance rates were improving steadily. The rate of completion of upper secondary education in these schools increased from 68% to 80.4%. A further 2015 report found that there had been

a significant improvement in schools in planning for teaching and learning and setting targets for achievement (Smyth et al. 2015).

'Literacy and Numeracy for Learning and Life', Ireland's national strategy to improve literacy and numeracy among children and young people, runs during the period 2011–20. It addresses areas of weakness identified in recent national studies and sets ambitious targets covering early childhood, primary and secondary education. All primary and post-primary schools participate in the implementation of the strategy, and are required to set targets for the improvement of literacy and numeracy skills under an individual school improvement plan. Significant early progress has been made on the curricular and teacher education reforms set out in the strategy. The literacy and numeracy strategy also makes a number of commitments in relation to improving standards and performance levels.

National assessments of English reading and mathematics in second and sixth class were conducted in May 2014 by the Educational Research Centre within a sample of 150 schools (8 000 students), and compared with base line data gathered in 2009. The results show significant improvement in standards of reading and mathematics for the first time in over 30 years (Shiel et al. 2014). All of the targets in the national literacy strategy for primary education have been reached. As regards the progress in achieving the targets set out in the Literacy and Numeracy Strategy, a review, originally scheduled for 2016 has been brought forward to 2015.

Ireland invests some EUR 1.3 billion annually in education services for children with special needs. The funds are put towards the following:

- provision for students with special needs through additional learning support and resource teachers for schools;
- over 1 100 teachers in special schools;
- almost 11 000 special needs assistant posts in schools;
- enhanced capitation grants (payment based on the number of recognised pupils enrolled in the schools) for special schools and classes;
- special schools transport arrangements;
- grants for assistive technology;
- changes to school buildings;
- home tuition grants for students unable to attend school due to a significant medical condition, who have special needs and are awaiting a school placement, or children aged two and a half to three who have been diagnosed with autism;
- a National Educational Psychological Service, which provides advice, training and support to schools and, in certain cases, educational assessments for students with learning difficulties (National Council for Special Education 2013).

PISA results for 2012 showed that Traveller students scored significantly lower than their peers across all domains in the study. Some 2% of PISA students in Ireland indicated they were members of the Traveller community. A Traveller Education Strategy is being implemented for Traveller children to be integrated into mainstream education through special education provision, DEIS and the national literacy and numeracy strategy. As part of the development of a new primary student database and ongoing improvements to the secondary student database, an analysis of data sources is ongoing to improve, identify and track the progress of Traveller children. At present, there is a voluntary self-identification process as part of the annual statistical returns made by schools to the Department of Education and Skills. A Traveller Education Strategy Advisory and Consultative Forum, representing all stakeholders in the education sector as well as Traveller representative groups monitors the implementation of the Strategy.

5. Modernising school education

A framework for the reform of the curriculum in lower secondary education ('A framework for Junior Cycle') has been designed to encourage greater innovation and independent active learning and to make sure that key skills are acquired (see Box 1 below). The key skills are literacy, numeracy, 'managing myself', staying well, communicating, being creative, working with others, and managing information and thinking. A revised specification in junior cycle English began in September 2014 for students due to complete the junior cycle in 2017. Revised specifications for Science and Business Studies will be introduced for implementation in September 2016 and the remainder of subject specifications will be revised and implemented on a rolling basis up until September 2019. As part of the overall approach, schools are being encouraged to ensure that students do not take too many subjects. In this way, schools can address curriculum overload and provide time for more in-depth learning and a focus on key skills.

The national strategy on literacy recommended higher entry standards to initial education for primary teachers. The Bachelor of Education programme for primary teachers was extended from three to four years with effect from 2012. Concurrent programmes for post-primary teachers were extended in 2013, and post graduate teacher education programmes were extended from one to two years with effect from 2014. The reconfigured programmes provide for:

- a substantial school placement (e.g. at least one year for a primary teacher) as part of training;
- mandatory elements on literacy and numeracy, teaching learning and assessment, differentiation strategies, behaviour management, ICT and inclusive learning.

The changes were designed to ensure that student teachers gain more practical teaching experience during their studies and to put a greater focus on literacy, numeracy and assessment.

From 2013 to 2016, Ireland's Teaching Council is piloting a new model of induction and probation for newly-qualified teachers called *Droichead*. This is supported by the National Induction Programme for Teachers (www.teachinginduction.ie) and school principals, on the basis that experienced fellow professionals are best placed to promote teaching and learning in their schools.

Box 1. Implementation of the reformed Junior Cycle (lower secondary) education

A significant reform is underway in Ireland's junior cycle (lower secondary) education. The new model addresses the very nature of teaching, placing the needs of students at the core and promoting greater independent learning and a move away from the dependence on external examinations. It is intended that the reform will reduce early school leaving rates and raise the performance of young people, particularly those from disadvantaged backgrounds. The new junior cycle Framework attempts to address a range of weaknesses in the nature and focus of secondary education, in particular concentrating on substantial curricular and assessment reforms.

All subjects are to be redesigned, starting with English for the 2014/15 academic year. Teachers' unions challenged the reforms, arguing that school-based assessment would make it hard to maintain standards and result in grade inflation and inter-school inconsistencies.

Following further consultation between the unions and the Department of Education and Skills, (Department of Education and Skills 2015), a revised Framework was published in August 2015. This Framework, together with the Joint Statement on Principles and Implementation which was agreed in May 2015 will now be balloted on by the teacher unions in September 2015.

The reformed Junior Cycle will deliver a modernised curriculum across all subjects; and both classroom-based assessment and examinations will help to ensure a learner experience

appropriate to the needs of the 21st century:

- through the new Junior Cycle Profile of Achievement students, parents and guardians will receive a much broader picture of the young person's learning achievements throughout the Junior Cycle.
- there will be a high-quality CPD programme for teachers and dedicated professional time to support implementation.
- teachers will have the necessary professional time and resources to implement the new Junior Cycle successfully and the agreement with the teacher unions reinforces that commitment.

Teachers' unions emphasise the difficulties involved in teachers assessing their own students for the purposes of state certification. Given the ongoing challenges from teachers' unions, it is unclear whether the revised proposals will be implemented.

The junior cycle reform provides a significant opportunity to transform teaching and learning to provide a more engaging experience for students and reduce the disengagement resulting from the current centrally-set, standardised and exam-focused system. Although the ongoing discussions on implementing the reform are focusing on the issue of assessment, a number of other challenges also need to be addressed. These include:

- the difficulties in moving from a teacher-centred system to a genuinely student-centred one;
- the tension between reducing the subject load for students and providing them with the appropriate learning opportunities, in order to maximise their options for the future;
- the difficulties in providing an engaging learning experience at junior cycle in the absence of significant senior cycle reform;
- the potential dilution of the aims and objectives of junior cycle reform through concessions over the continued role of external assessment.

6. Modernising higher education

Ireland's tertiary education attainment (30-34 year-olds) is well above the EU average (52.2% in 2014, compared to 37.9% for the EU as a whole). It steadily increased until 2013 before decreasing slightly (by 0.4 percentage points) in 2014 (Figure 3). There is still some way to go to reach the ambitious Europe 2020 national target of 60%. Women outperform men by a substantial margin (13 percentage points), as shown by the 2014 figures of 58.6% and 45.1% respectively. The employment rate of recent tertiary graduates¹⁴⁴ currently stands at 83.7% in 2014, which is slightly above the EU-28 average of 80.5%.

A structural reform agenda has been set out for the Irish higher education sector, under the direction of the Department of Education and Skills and the Higher Education Authority (HEA). The National Strategy for Higher Education to 2030, published in 2011, sets out a new vision for higher education in Ireland and implementation is now underway with purpose of:

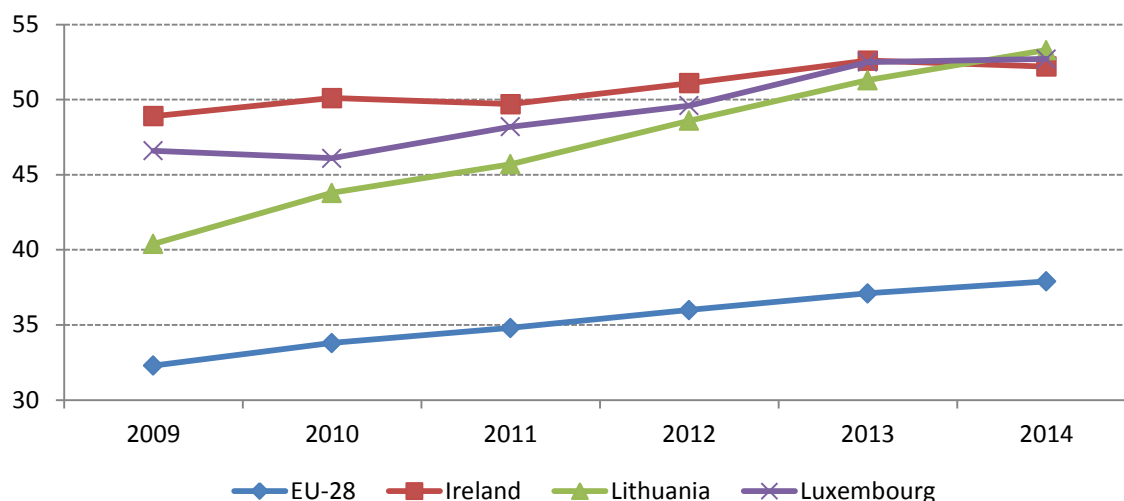
- providing for a more flexible system, with a greater choice of provision and modes of learning for an increasingly diverse cohort of students;
- improving the quality of the student experience, the quality of teaching and learning and the relevance of learning outcomes;
- ensuring that higher education connects more effectively with wider social, economic and enterprise needs through its staff, the quality of its graduates, the relevance of its programmes, the quality of its research and its ability to translate that into high value jobs and real benefits for society.

The HEA is responsible for aligning institutional strategies and national priorities focusing on economic renewal, social cohesion, public sector reform and improving Ireland's international image in the context of the 2014-2016 Higher Education System Performance Framework (HEA

¹⁴⁴ People aged 20-34 who left education between one and three years before the reference year.

2014). The Department of Education and Skills and the HEA are leading on the implementation of an ongoing structural reconfiguration of the sector, including the establishment of regional clusters of higher education institutions, the evolution of the institute of technology sector and the reform of institutional governance structures.

Figure 3. Tertiary education attainment rate



Source: Eurostat

A new national plan for equity of access to higher education expected to be published in autumn of 2015. The new plan will address a number of key issues, which include:

- developing a broader definition of what disadvantage means;
- taking a system-wide approach to access (in particular secondary education and improved linkages with further education and training);
- consideration of future options in relation to part-time students (in the context of the low level of part-time study options, part-time students' ineligibility for the 'free fees' scheme and student maintenance grants, and competing demands for scarce resources);
- financial barriers to accessing third level education;
- strengthening links between higher education institutions and disadvantaged communities to promote an appreciation in those communities of the value of higher education;
- measures to promote the student voice in access measures;
- mainstreaming access measures across higher education institutions.

In 2015, a package of reforms entitled 'Supporting a Better Transition from Second Level to Higher Education' was presented. The reforms provide for:

- a new grading structure for the Leaving Certificate examination;
- a revised common points scale for entry into higher education;
- broader undergraduate entry.

The measures implemented in higher education have contributed to progress on large-scale structural reform, but resource constraints in a context of increasing student numbers may present challenges in maintaining the quality of provision and improving student outcomes.. With the sustainability of higher education a growing challenge, the HEA has identified developing and implementing a comprehensive policy on the funding of higher education as an urgent national priority. As a response, the Minister for Education and Skills established an

expert group to examine current funding arrangements and to make recommendations in relation to a long-term sustainable funding model for the sector.

7. Modernising vocational education and training and promoting adult learning

In 2014, the 56.8% employment rate of recent upper secondary graduates¹⁴⁵ was well below the EU average of 70.8%. However, this must be seen in the context of the high rate of students going on to higher education and a concentration of VET at post-secondary rather than secondary level. The participation rate in lifelong learning was down to 6.9% in 2014 from 7.3% in 2013, deviating from the positive trend of previous years and still well below the EU average of 10.7%.

Re-skilling and up-skilling are a challenge for the education and training system. Ireland's further education and training system has been unable to provide the types of skills that the rebalanced Irish economy needs and has failed to give the unemployed valuable and relevant re-skilling and up-skilling opportunities. In this context, the authorities have recognised the need to reform further education and training (FET). Reforms have been put in place to ensure the creation of a system that is more responsive and relevant to labour market needs.

Ireland's Further Education and Training Authority SOLAS (*An tSeirbhís Oideachais Leanúnaigh agus Scileanna*), which was set up in 2013, has produced a national five-year strategy for further education and training (SOLAS 2014). The overall aims of the strategy, which was presented at the end of March 2014, are as follows:

- to ensure that programmes are efficient and relevant;
- to link the provision of training to labour market needs;
- to facilitate the movement of the long-term unemployed back into work.

This includes setting up referral protocols between education and training boards and 'Intreo' offices (the latter being single points of contact for all employment and income support). A sound oversight system has also been included in the strategy. 16 education and training boards were established in 2013. By July 2014, all training centres operating under SOLAS were transferred to one of the education and training boards. In May 2014 SOLAS published its three-year corporate strategy and a five-year strategy to develop and deliver an integrated further education and training system.

SOLAS published its first annual further education and training services plan in May 2014. It shows how each education and training board will be delivering the overall budget to make provision for learners. The document clearly presents data relating to the local demographics of each of the 16 education and training boards and details the programmes and courses it will deliver, as well as target learner profiles and the National Framework of Qualifications levels that will be achieved. This annual service planning also involves consultation with employers and local Intreo offices.

Following on from the review of the apprenticeship system in 2013, a new Apprenticeship Council was established in November 2014 as part of the implementation plan. The Council is enterprise-led and has representatives from business, trade unions, further education bodies and the Department of Education and Skills. As a result, ongoing reforms to the apprenticeship system will continue to be employer-led and should ensure that education and training provision is aligned with the needs of the labour market.

The Apprenticeship Council has been given the task of extending apprenticeship opportunities to new sectors of the economy. Traditionally, the apprenticeship system in Ireland was essentially

¹⁴⁵ People aged 20-34 who left education between one and three years before the reference year.

confined to technical occupations in construction, engineering and motor mechanics, covering 28 occupations in all. In recent years, apprenticeship numbers have declined, in particular due to the contraction of the construction sector during the economic crisis. In January 2015, the Apprenticeship Council issued a call for proposals from employers and education and training providers. Bidders are being asked to develop new apprenticeships in areas outside the current apprenticeship specialities, in new sectors of the economy and across a range of qualification levels, and to advise on how to implement these new apprenticeships. Over 80 separate proposals were received all of which were evaluated by the Council. Following the evaluation process, the Council assigned Category 1 status to 25 new programmes in a range of sectors, meaning they are both sustainable and ready to move into a detailed development phase. The Council are working with the proposers to develop these proposals into sustainable new apprenticeships as soon as possible.

References

- Department of Education and Skills (2015), Junior Cycle Reform: The Way Forward, <https://www.education.ie/en/Publications/Education-Reports/Junior-Cycle-Reform-A-Way-Forward-2-Travers-Report.pdf>
- HEA (2014), Higher Education System Performance, First Report 2014-2016, http://www.heai.ie/sites/default/files/final_volume_i_system_report_with_cover_letter_.pdf
- National Council for Special Education (2013), Supporting Students with Special Educational Needs in Schools, http://ncse.ie/wp-content/uploads/2014/09/Supporting_14_05_13_web.pdf
- OECD (2009), PISA 2009 key findings, <http://www.oecd.org/pisa/keyfindings/pisa2009keyfindings.htm>
- OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>
- Shiel G. et al. (2014), The 2014 National Assessments of English Reading and Maths, http://www.erc.ie/documents/na14report_vol1perf.pdf
- Smyth E., McCoy S. and Kingston G. (2015), Learning from the Evaluation of DEIS, ESRI Research Series N. 39, <http://www.esri.ie/UserFiles/publications/RS39.pdf>
- SOLAS (2014), Further Education and Training Strategy 2014-2019, Dublin: SOLAS and Department of Education and Skills
- Weir S., McAvinue L., Moran E. and O'Flaherty A. (2014), A Report on the Evaluation of DEIS at Second Level, <http://www.education.ie/en/Publications/Education-Reports/A-report-on-the-evaluation-of-DEIS-at-second-level.pdf>

Comments and questions on this report are welcome and can be sent by email to:
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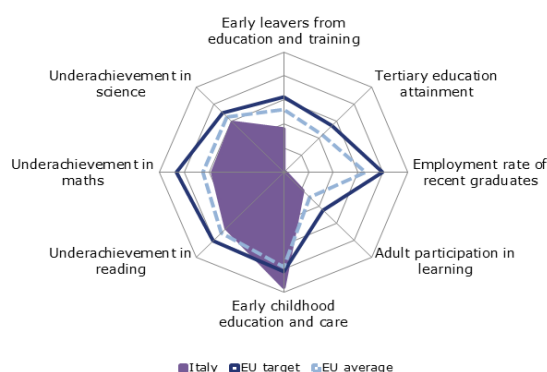
Italy

1. Key Indicators and Benchmarks

		Italy		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	•	: 19.5% ¹²	:	17.8% ¹²
	Maths	•	: 24.7% ¹²	:	22.1% ¹²
	Science	•	: 18.7% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		4.1% 4.1% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		8.3% 8.0% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men		20.6% 17.7%	15.2%	12.7%
	Women		14.9% 12.2%	11.5%	9.5%
	Total	•	17.8% 15.0%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		15.9% 18.8%	31.0%	33.6%
	Women		24.8% 29.1%	38.7%	42.3%
	Total	•	20.4% 23.9%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	99.1% 98.7% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		: 75.4% ¹³	:	84.6% ¹³
	Special needs education		: 44.3% ¹³	:	32.4% ¹³
	Multicultural settings		: 14.9% ¹³	:	13.2% ¹³
	ICT skills for teaching		: 53.2% ¹³	:	51.0% ¹³
Foreign language learning (Share of ISCED 2 students learning two or more foreign languages)			99.4% 98.8% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			60.0% 59.4% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		50.6% 38.3%	71.3%	70.8%
	ISCED 5-8		66.2% 52.9%	82.5%	80.5%
	ISCED 3-8 (total)	•	57.7% 45.0%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		: 2.9% ¹³	:	: ¹³
	Inbound graduates mobility (master)		: 5.1% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)		•	5.7% 8.0%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Italy has made progress in improving its education system over the last few years. A school evaluation system is being implemented, basic skills proficiency in international surveys has improved, the early school leaving rate is falling and participation in early childhood education is almost universal for 4-6 year-olds. Moreover, the recent reform of the school education system could further improve school outcomes.

Nevertheless, the Italian education and training system is still affected by long-standing problems. The early school leaving rate remains well above the EU average. There are marked regional differences in basic skills proficiency. The tertiary education attainment rate for young people is the lowest in the EU and many students still drop out of tertiary education. Work-based learning is not sufficiently well-developed and entry into the labour market is difficult for young people, including the high-skilled. General government expenditure on education as a proportion of GDP is among the lowest in the EU, particularly at tertiary level.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Italy (Council of the European Union 2015) included a recommendation on education and training:

CSR 5: [...] As part of efforts to tackle youth unemployment, adopt and implement the planned school reform and expand vocationally-oriented tertiary education.

3. Investing in education and training

General government expenditure on education, both as a proportion of GDP (4.1% in 2013) and as a proportion of total general government expenditure (8.0% in 2013), is among the lowest in the EU. This applies in particular to expenditure on tertiary education, which is the lowest in the EU at only 0.4% of GDP and 0.7% of total general government expenditure in 2013.¹⁴⁶

Between 2009 and 2013, overall public funding for higher education was cut by approximately 20% in real terms. This went in parallel with staff cuts, especially in the number of permanent teaching staff (which fell by 15% between 2009 and 2013 after having increased by 28% between 1997 and 2008), and a salary freeze (ANVUR 2014). On a positive note, the 2015 Stability Law reduced the cuts to public funding for higher education envisaged in previous legislation. It also created a specific fund to finance the ongoing reform of the school system (see Box 2), into which EUR 1 billion will be invested in 2015 and EUR 3 billion from 2016.

4. Tackling inequalities

Although the early school leaving rate has been on a downward trend since 2008, it remains well above the EU average (15% in 2014 compared with the EU average of 11.1%), especially among foreign-born students (32.6% in 2014 compared with the EU average of 20.1%) and in southern areas. Moreover, there is a significant gender gap as the rate is 17.7% for boys, compared with 12.2% for girls. Italy however, achieved the largest decrease in the early school leaving rate in the EU between 2013 and 2014 (1.8 percentage points) and has now reached the Europe 2020 national target of 16%. Participation in early childhood education for four- to six-year-olds, which can help prevent early school leaving, is almost universal.

Italy's performance in the 2012 OECD Programme for International Student Assessment (PISA) was mixed, although basic skills attainment has been improving since 2006. Overall, the proportion of low achievers in Italy is somewhat higher than the EU average for reading, maths

¹⁴⁶ Source: Eurostat, General government expenditure by function (COFOG) database.

and science. However, although performance is in line with or above the EU average in the northern regions, students in the south perform significantly worse. The influence of socioeconomic status on students' performance is below the EU average. Although the performance gap between natives and first-generation immigrants is large, second-generation immigrants partially catch up (OECD 2013b). Integrating students with an immigrant background is a relatively recent issue in Italy, but is becoming more and more significant: the proportion of foreign pupils¹⁴⁷ rose rapidly from 2.2% of the total number of school students in 2001/02 to 9% in 2013/14 (Fondazione ISMU 2015).

The 2015 school reform, outlined in Box 2, includes measures relating to early school leaving, early childhood education and care and basic skills attainment. In addition, in the 2014-20 period, Italy allocated around EUR 780 million from the European Social Fund to reducing early school leaving and promoting access to quality education.

5. Modernising school education

With regard to teaching practices, according to the 2013 OECD Teaching and Learning International Survey (TALIS), the percentage of teachers assigning different work to students based on their individual needs is above the EU average (58% compared with 46%). The proportions of teachers using information and communication technologies (ICT) for student projects or class work (31%) and participating in ICT training (53%) are around the EU average, but the overall proportion of teachers undertaking some professional development activities in the previous 12 months is below the EU average (75% compared with 85%) (OECD 2014c).

The teacher career system offers only a single career pathway with fixed salary increases based solely on seniority. Italian teachers' statutory salary levels are lower than the OECD average at every career stage¹⁴⁸ and, owing to the seniority-based career system, the maximum salary can only be reached after 35 years of service, while the OECD average is 25 years (OECD 2014a). Teachers' salaries relative to other workers with tertiary education are also rather low (Figure 2). Limited career prospects, coupled with relatively low salaries compared with other high-skilled professions, may make it difficult to attract the best-qualified graduates into the teaching profession (European Commission 2012).¹⁴⁹ According to recent surveys, the status of the teaching profession is perceived as rather low, both by the general public (Dolton and Marcenaro-Gutierrez 2013) and teachers themselves (OECD 2014c).

The ongoing school reform (Box 2) is the main initiative aimed at modernising education in schools. In addition, the implementation of the National System for Evaluation of schools (SNV) started in 2014/15. The key to the success of this system is ensuring that all relevant actors and stakeholders are involved. The SNV follows a three-year cycle:

1) In spring 2015, each school was provided with a wide set of data on its resources, processes and outcomes, and was then asked to produce a self-assessment report identifying strengths and weaknesses, based on a standardised template from the National Agency for School Evaluation (INVALSI). Each school also had to identify areas to be improved and targets to be met over the following years. These reports also include the results of the annual INVALSI standardised student tests and are to be published by end-September 2015, also as a means to help parents make an informed choice when selecting a school. Unfortunately, in 2015 the

¹⁴⁷ Students who do not have Italian citizenship.

¹⁴⁸ It is not possible to compare hourly salaries because the teachers' collective agreement in Italy does not stipulate the total statutory working time for teachers, but only the number of teaching hours. In Italy the annual number of teaching hours is somewhat below the OECD average, especially at lower secondary level.

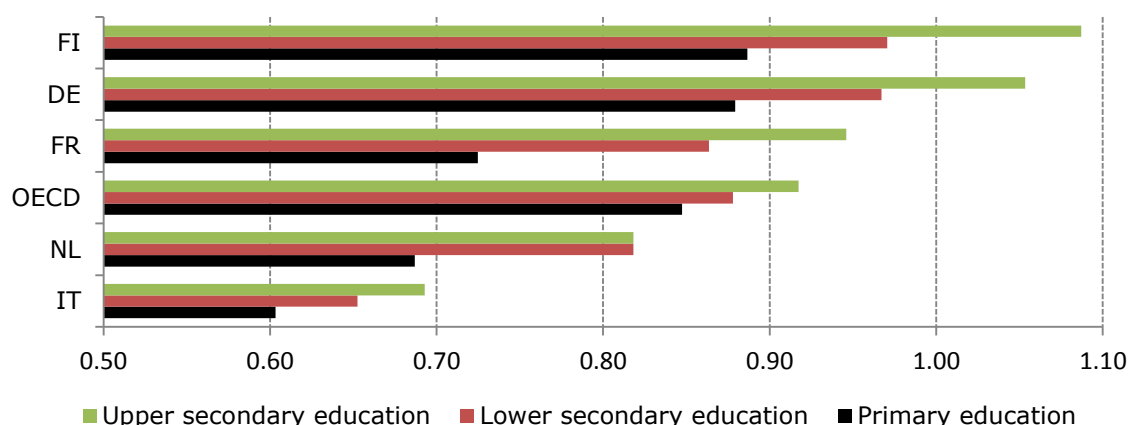
¹⁴⁹ Some evidence is available for prospective primary teachers, who in Italy have to follow a specific 5-year tertiary cycle named *Scienze della formazione primaria*. There is a negative correlation between the share of upper secondary graduates enrolling in *Scienze della formazione primaria* and the mark obtained at the State examination at the end of upper secondary education (Ministero dell'Istruzione, dell'Università e della Ricerca 2015).

participation in INVALSI tests was rather low in some Southern regions, partly owing to a protest against the school reform (INVALSI 2015, pp. 9-15). As a consequence, data on INVALSI tests will be lacking for many schools in those regions.

2) Evaluation by external teams, coordinated by an inspector, will start from the 2015/16 school year. The external teams aim to visit up to 10% of all schools each year.

3) Public reporting starts with the publication of the self-assessment report and continues with the results of the improvement process during the three-year cycle, with a view to offering stakeholders greater transparency.

Figure 2. Ratio of teachers' salaries to earnings for full-time workers with tertiary education (2012)



Source: OECD (2014a)

Box 2. The school reform

On 3 September 2014 the Italian government published 'La buona scuola', a set of guidelines for a comprehensive reform of the school education system. The plans were subject to a public consultation from 15 September to 15 November 2014. On 13 March 2015, the Italian government presented the reform as a draft law, which was approved by parliament on 9 July 2015 (Law 107/2015). Projections in the 2015 National Reform Programme suggest that, of all the ongoing reforms in Italy, the school reform is likely to have the largest positive impact on GDP in the long-term (Ministero dell'Economia e delle Finanze 2015, pp.110-111).

The main points of the reform concern:

- **Introduction of merit-based components for teacher salaries:** each year, the best-performing teachers in each school will receive a one-off bonus. The school head will identify the best-performing teachers using criteria established by the school's teacher evaluation committee. The committee will be comprised of: (i) the school head; (ii) three teachers; (iii) an external evaluator (a teacher or head from another school, or an inspector); (iv) two parent representatives (in pre-primary, primary and lower secondary schools) or one parent representative and one student representative (in upper secondary schools). In 2018, based on an assessment of the first three years of implementation, the Ministry of Education, University and Research will establish national guidelines for teacher evaluation. EUR 200 million per year have been allocated to this measure. This is a positive step, as it introduces the principle of assessing teachers' work and rewarding good performance. However, this might have only a limited impact on increasing teachers' motivation and the financial attractiveness of the profession, as the reform does not modify the teacher career system.
- **Teacher recruitment:** over 100 000 teachers, who have until now been employed on short-term contracts, will be recruited on a permanent basis in 2015/16. While around half of these teachers will be filling existing positions, the other half will be entering new

posts. Their role will be to strengthen the educational programme offered by each school, both in terms of subjects taught and other aspects, including reducing early school leaving and improving foreign students' proficiency in Italian. The recruitment plan is intended to fix the long-standing problem of 'waiting lists' of qualified teachers. Overall, it is a positive measure, provided the government honours its commitment to only allow access to the profession via open competitions from 2016 onwards. A potential issue is that it is unclear to what extent the competences of the additional teachers will really fit individual schools' needs.

- **School autonomy:** school heads will have greater autonomy in managing human, technological and financial resources and will be subject to external evaluation every three years. In addition, from 2016/17 onwards they will have the freedom to select new teachers¹⁵⁰ from within the specific subject area, according to their school's needs.¹⁵¹ These measures are potentially far-reaching, as they relax certain constraints that have so far limited the development of real school autonomy. International evidence shows that autonomy only works if coupled with accountability (Hanushek and Woessmann 2011), and higher school management quality is strongly associated with better educational outcomes (Bloom et al. 2015). The success of this measure will depend on the proper implementation of the planned evaluation system of school heads in order to increase their accountability (Cecchi and De Paola 2015).
- **Curriculum:** some subjects may be introduced or strengthened: music, arts, economics, law and sports. In particular, introducing/strengthening economics may help raise Italian students' financial literacy levels, which are very low by international standards (OECD 2014b). Upper secondary schools will have some flexibility to set their own curriculum by introducing optional subjects.
- **Digital and language skills:** the reform includes: (i) a national three-year plan ('Piano Nazionale Scuola Digitale') to strengthen digital competences among teachers and students, and improving internet connections in schools; (ii) opportunities for introducing the 'content and language integrated learning' (CLIL) methodology from primary level onwards.¹⁵²
- **Work-based learning:** traineeships are to become compulsory for students in the last three years of upper secondary education (at least 400 hours for students in vocational education and 200 hours for students in general education). They can take place either in the private sector or in the public administration. This measure will be financed with EUR 100 million per year from 2016 and is a step in the right direction, as it could help education and training to better meet the labour market needs.

The school reform makes provisions for further legislative decrees, empowering the government to legislate on a number of issues in the 18 months following adoption of the reform. The most significant issues are initial teacher education and the creation of a single integrated system of early childhood education and care for children aged 0-6.

6. Modernising higher education

Italy's tertiary education attainment rate is the lowest in the EU (23.9% in 2014 for 30-34 year-olds), and remains below the Europe 2020 national target of 26-27%. The attainment rate is particularly low among foreign-born people (12.8% compared with an EU average of 35.6%). Also inbound graduate mobility is quite low compared to the most economically advanced EU countries, especially at master's level. However, international students' credit mobility is steadily increasing. According to ANVUR (2014), although the transition rate from school to university is close to the EU average, the completion rate is low (55% for 3-year bachelor's

¹⁵⁰ New teachers include the ones asking to move from the school they work in to another one, teachers in the waiting lists and winners of future competitions.

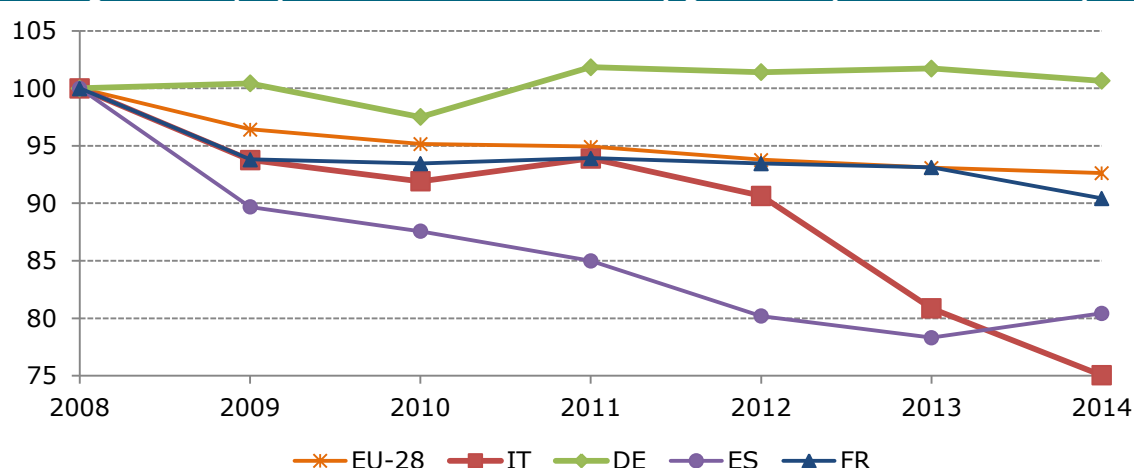
¹⁵¹ So far teachers have been allocated to schools by the Ministry of Education, University and Research through a system of lists ranking teachers according to a number of criteria.

¹⁵² At present the CLIL methodology is only compulsory in the last year of upper secondary education.

degrees in 2012).¹⁵³ On the positive side, the proportion of students completing a bachelor's degree within the statutory 3-year period has increased in recent years.¹⁵⁴

Entry to the labour market is also difficult for highly-skilled people (Montanari et al., 2015). For example, the employment rates of recent tertiary graduates¹⁵⁵ fell sharply during the economic crisis (Figure 3) to only 52.9% in 2014, compared with an EU average of 80.5%.¹⁵⁶ Staff mobility between universities is very low: between 2007 and 2013, 94% of all promotions (i.e. from assistant professor to associate professor and from associate professor to full professor) took place in the university the person was already working in (ANVUR 2014, p.228).

Figure 3. Employment rates of recent tertiary graduates (index 2008 = 100)



Source: European Commission calculations based on Eurostat data

Under the 2010 reform, an increasing proportion of public funding for universities should be allocated on the basis of research and teaching performance. However, until 2013 this proved difficult to implement owing to cuts in higher education funding and restrictive rules that limited the annual changes to the amount of funding each university could receive. In 2014, the share of performance-related public funding to universities rose from 13.5% to 18% (with less restrictive implementing rules compared with 2013) and standard costs were established and are being rolled out gradually until 2018 as a criterion for allocating the remaining share of public funding.¹⁵⁷ In 2015, the share of performance-related funding rose to 20% of total funding¹⁵⁸ and the National Reform Programme confirmed the government's intention to gradually increase this to 30% (Ministero dell'Economia e delle Finanze 2015, p.85). The Ministry of Education, University and Research is going to publish a set of indicators on the financial situation of each higher education institution to facilitate benchmarking and peer-learning among universities. The Ministry also started the third round of evaluation of research results (Valutazione della Qualità dei prodotti della Ricerca) for the period 2011–2014, in cooperation with ANVUR, in order to monitor the results achieved by universities and public research institutes since 2011.

¹⁵³ Calculation based on the true cohort method for entrants in 2003/04. This can be compared with an OECD average of 70% (OECD 2013a).

¹⁵⁴ From 18.4% of students enrolled in 2003/04 to 23.2% of students enrolled in 2009/10 (ANVUR 2014, p.71).

¹⁵⁵ People aged 20–34 who left education between one and three years before the reference year.

¹⁵⁶ However, national data (Consorzio Interuniversitario AlmaLaurea 2015) show a differentiated picture, according to the different cycles. First-cycle graduates (ISCED 6) have an employment rate of 54%, but many of them continue their studies. Second-cycle graduates' (ISCED 7) employment rate, instead, is at 70%. Single-cycle programmes, like medicine, have a lower employment rate (50%), which could be explained by the fact that in many cases graduates are expected to continue their studies.

¹⁵⁷ See Ministerial Decree 815 of 4 November 2014.

¹⁵⁸ See Ministerial Decree 335 of 8 June 2015.

To support student mobility, EUR 150 million were allocated for the period 2014-2016. Moreover, students' mobility indicators are among the criteria for calculating performance-related funding to universities.¹⁵⁹ New criteria to facilitate accreditation of international study programmes are under development. These trends are also supported by a national project aiming at consolidating the implementation of higher education reforms.¹⁶⁰

With regard to vocationally-oriented tertiary education, a quality-rewarding financing model for the Higher Technical Institutes (ITS) was introduced in 2015, with 10% of funding allocated on the basis of performance indicators. The 2015 school reform also includes the following measures to boost the ITS: (i) the share of performance-related funding is to rise to 30% in 2016; (ii) students with only a four-year upper secondary vocational qualification will also be able to access the ITS after completing a foundation year; (iii) permeability between the ITS and academically-oriented higher education will increase; (iv) administrative procedures will be simplified. These are positive steps, although the ITS remain a niche provider of education. Only around 8 000 students were studying there at the end of 2014, although data on the employability of recent graduates are encouraging: 78% were in employment one year after graduating (Ministero dell'Istruzione, dell'Università e della Ricerca and INDIRE 2015).

In addition, EUR 3 million in 2013 and EUR 7 million in 2014 were spent to support study placement for students in universities, ensuring that placement experiences are embedded in study curricula and recognised in terms of credits. The use of apprenticeship contracts, especially for doctoral studies, is being promoted through 'industrial doctorates'¹⁶¹ and business-university cooperation.

These measures show that more attention is being paid to the quality of higher education and that the framework for allocating public funding is improving significantly, although the overall level of public funding remains very low (see section 3). In the medium- to long-term, adequate funding will be key to improving the performance of Italy's tertiary education sector and also addressing the issue of ageing teaching staff. The average age is 52 (although it varies from 46 for assistant professors to 59 for full professors) and around 17% of current staff could retire between 2014 and 2018 (ANVUR 2014, pp.233-234). This calls for an increase in the recruitment of younger staff members. The 2015 National Reform Programme outlines some ongoing and planned measures to promote the hiring of young Italian and foreign researchers, for instance via specific 'tenure-track' positions (Ministero dell'Economia e delle Finanze 2015, pp.88-89), but those measures are rather small in scope.

7. Modernising vocational education and training and promoting adult learning

While the participation of upper secondary students in vocational education and training remains above the EU average (59.4% compared with 48.9% in 2013), the employment rate of recent upper secondary graduates¹⁶² is the lowest in the EU (38.3% in 2014). This is partly due to insufficiently developed work-based learning: only 10.7% of upper secondary students participated in traineeships in 2013/14, although this figure has been on an upward trend in the last few years (INDIRE 2014). Italy has the second highest proportion of young people not in education, employment or training in the EU (26.2% of 15-29 year-olds in 2014) after Greece (26.7%). Adult participation in lifelong learning increased by 1.8 percentage points in 2014, but remains below the EU average (8.0% compared with 10.7%, in 2014). This is due to very low participation among people with low educational attainment (2.2% compared with an EU

¹⁵⁹ In 2015 they account for 7% of the performance-based funding quota. See Ministerial Decree 335 of 8 June 2015.

¹⁶⁰ The project "Consolidating Higher Education Experience of Reform: norms, networks and good practice in Italy (CHEER)", managed by the Ministry of Education, University and Research and by the Conference of Italian University Rectors (CRUI), is co-funded by the European Commission within the Erasmus+ programme.

¹⁶¹ In 2015, 35 "industrial doctorate" programmes were running, involving 406 students and 64 enterprises.

¹⁶² People aged 20-34 who left education between one and three years before the reference year.

average of 4.4%). The participation rate of adults with medium or high educational attainment levels are in line with the corresponding EU averages.

In the area of work-based learning, in addition to the measures included in the school reform (see Box 2), the recent labour market reform aims to overhaul the apprenticeship system. In particular, it enables students to use apprenticeships to gain upper secondary qualifications and simplifies training requirements for apprenticeship contracts.

Italy directly referenced its formal qualifications to the European Qualifications Framework. This includes qualifications awarded by the central level (general education, initial VET and higher education qualifications) and by the regions. Other vocational qualifications awarded at regional level, licences for regulated professions, and private qualifications were not included and will be added at the second stage of referencing. A 2015 state-regions agreement provided for a register of regional vocational qualifications that will become operational in 2016, as part of a national register of education, training and professional qualifications (*Repertorio nazionale dei titoli di istruzione e formazione e delle qualifiche professionali*), to be developed as a single framework for skills certification.

References

- ANVUR (2014), Rapporto sullo stato del sistema universitario e della ricerca 2013, http://www.anvur.org/attachments/article/644/Rapporto%20ANVUR%202013_UNIVERSITA%20e%20RICE RCA_integrale.pdf
- Bloom N., Lemos R., Sadun R., Van Reenen J. (2015), Does Management Matter in Schools?, *The Economic Journal*, Vol. 125 Issue 584, pp. 647-674
- Checchi D. and De Paola M. (2015), Buoni dirigenti per la buona scuola, *lavoce.info*, 20 March, <http://www.lavoce.info/archives/33786/buoni-dirigenti-per-la-buona-scuola>
- Consorzio Interuniversitario AlmaLaurea (2015), Condizione occupazionale dei laureati. XVII Indagine 2014, https://www.almalaurea.it/sites/almalaurea.it/files/docs/universita/occupazione/occupazione13/almalaurea_condizione_occupazionale_indagine-2014.pdf
- Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Italy and delivering a Council opinion on the 2015 Stability Programme of Italy, 2015/C 272/16, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_italy_en.pdf
- Dolton, P. and Marcenaro-Gutierrez O. (2013), 2013 Global Teacher Status Index, <https://www.varkeyfoundation.org/sites/default/files/documents/2013GlobalTeacherStatusIndex.pdf>
- European Commission (2012), Supporting the Teaching Professions for Better Learning Outcomes, SWD(2012) 374, http://ec.europa.eu/education/policy/school/doc/teachercomp_en.pdf
- Fondazione ISMU (2015), Alunni con cittadinanza non italiana. Tra difficoltà e successi: Rapporto nazionale A.s. 2013/2014, http://www.ismu.org/wp-content/uploads/2015/03/Rapporto_CNI_Miur_Ismu_2013-14.pdf
- Hanushek E. A. and Woessmann L. (2011), The economics of international differences in educational achievement. In Hanushek E. A., Machin S., Woessmann, L., *Handbook of the Economics of Education*, Vol. 3, Amsterdam: North Holland, pp. 89-200
- INDIRE (2014), Alternanza Scuola Lavoro: esiti monitoraggio 2013/14, <http://www.flcgil.it/files/pdf/20141121/monitoraggio-indire-alternanza-scuola-lavoro-a-s-2013-2014-sintesi.pdf>
- INVALSI (2015), Rilevazioni nazionali degli apprendimenti 2014-15. Rapporto Risultati, http://www.invalsi.it/invalsi/doc_evidenza/2015/034_Rapporto_Prove_INVALSI_2015.pdf
- Ministero dell'Economia e delle Finanze (2015), Documento di Economia e Finanza. Sezione III Programma Nazionale di Riforma, http://www.dt.tesoro.it/modules/documenti_it/analisi_programmazione/documenti_programmatici/SEZIONE_III_-_PNR_10_Aprile_xdeliberatox_on-line.pdf
- Ministero dell'Istruzione, dell'Università e della Ricerca (2015), Focus "Gli immatricolati nell'anno accademico 2014/2015", http://www.istruzione.it/allegati/2015/focus_giugno2015.pdf

Ministero dell'Istruzione, dell'Università e della Ricerca and INDIRE (2015), L'innovazione negli Istituti Tecnici Superiori, http://www.indire.it/lucabas/lkmw_img/ITS/sintesi_ITS_cartellina-3.pdf

Montanari M., Pinelli D., Torre R. (2015), From tertiary education to work in Italy: a difficult transition, *ECFIN Country Focus*, Vol. 12 Issue 5, European Commission, Directorate-General for Economic and Financial Affairs,

http://ec.europa.eu/economy_finance/publications/country_focus/2015/pdf/cf_vol12_issue5_en.pdf

OECD (2013a), Education at a Glance 2013. OECD Indicators, [http://www.oecd.org/edu/eag2013%20\(eng\)-FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)-FINAL%2020%20June%202013.pdf)

OECD (2013b), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b), PISA 2012 results: Students and Money. Financial Literacy Skills for the 21st Century (Volume VI), <http://www.oecd.org/pisa/keyfindings/PISA-2012-results-volume-vi.pdf>

OECD (2014c), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

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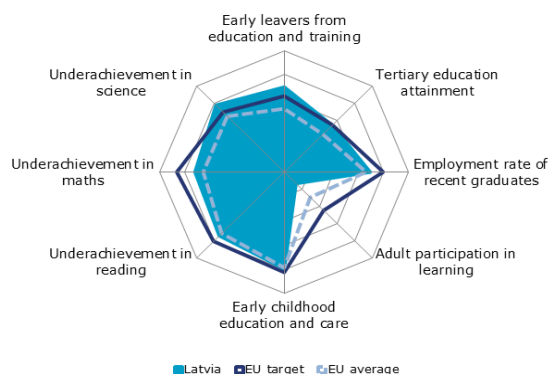
Latvia

1. Key Indicators and Benchmarks

			Latvia		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	●	:	17.0% ¹²	:	17.8% ¹²
	Maths	●	:	19.9% ¹²	:	22.1% ¹²
	Science	●	:	12.4% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		5.9%	5.7% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		15.2%	15.7% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		15.8%	11.7%	15.2%	12.7%
	Women		7.5%	5.1%	11.5%	9.5%
	Total	●	11.6%	8.5%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		25.0%	27.8%	31.0%	33.6%
	Women		46.7%	52.3%	38.7%	42.3%
	Total	●	35.9%	39.9%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		●	92.7%	94.1% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	96.1% ¹³	:	84.6% ¹³
	Special needs education		:	31.1% ¹³	:	32.4% ¹³
	Multicultural settings		:	21.4% ¹³	:	13.2% ¹³
	ICT skills for teaching		:	72.1% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		72.3%	71.6% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			37.8%	39.1% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		55.4%	65.2%	71.3%	70.8%
	ISCED 5-8		84.0%	86.0%	82.5%	80.5%
	ISCED 3-8 (total)	●	71.6%	77.0%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	1.7% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	3.0% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	●	5.1%	5.5%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

In recent years Latvia has made remarkable progress in reducing its early school leaving rate, raising its tertiary education attainment rate, and improving basic skills attainment. It is now outperforming the EU average in all these indicators. Nevertheless, issues remain to be addressed to further improve the quality of vocational education and training (VET) and higher education. The main challenge for the VET system is to provide labour-market relevant skills for the workforce. In higher education, there is significant scope to help raise the innovation potential of the Latvian economy. Although public funding for higher education has so far lacked a performance-oriented component, promising reforms in this area are ongoing. Finally, the gender gap in education is a challenge across the board, with women significantly and persistently outperforming men both in terms of qualifications and basic skill proficiency.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Latvia (Council of the European Union 2015) included a recommendation on education and training:

CSR 2: Improve vocational education and training, speed up the curricula reform and increase the offer for work-based learning. Ensure that the new financing model of the higher education system rewards quality. [...].

3. Investing in education and training

Latvia's general government expenditure on education is well above the EU average, both as a share of GDP (5.7%, compared to 5.0% in 2013) and as a share of total public expenditure (15.7%, compared to 10.3% in 2013).¹⁶³

So far, Latvia's financing model for higher education has lacked performance-oriented components. A new quality-targeting financing model of higher education has been developed in 2015, based on the recommendations from a recent World Bank study (World Bank 2014). The new funding model includes three pillars:

- 1) base funding allocated per study place and per full-time equivalent of academic staff;
- 2) performance-oriented funding (with a number of indicators for performance in research and internationalisation);
- 3) targeted funding for innovation and development, currently supported mainly by the EU funds.

For the second pillar, the Latvian Government made EUR 5.5 million in performance-oriented funding available on a pilot basis in 2015; for 2016 and 2017, the government has allocated EUR 6.5 million per year. This is a welcome step, although the amounts are lower than those required for the optimal model of development suggested by the World Bank study.

4. Tackling inequalities

Latvia's early school leaving rate has been steadily decreasing since 2008 and reached 8.5% in 2014. Women perform more than twice as well as men: in 2014 the figures were 5.1% and 11.7% respectively. Having exceeded the Europe 2020 national target of 13.4%, Latvia has set a new 2020 target of 10%. Participation in early childhood education has somewhat increased in recent years and is now slightly higher than the EU average (94.1% compared to 93.1% in 2012).

¹⁶³ Source: Eurostat, General government expenditure by function (COFOG) database.

In terms of basic skills, 15-year-olds' performance in the 2012 OECD Programme for International Student Assessment (PISA) in reading, mathematics and science improved compared to 2009 and continues to outperform the EU average. While the influence of socioeconomic status on pupils' performance is weaker than the EU average, Latvia shows a very high gender gap in reading, where 25.7% of boys are low achievers compared to just 8.2% of girls (OECD 2013). The 2012 PISA results also show a significant difference in performance between schools in urban areas and schools in rural areas (Kangro et al. 2014).

To identify causes of early school leaving and thus improve the evidence base for policy actions, a number of studies were carried out in 2014 and 2015. In the area of special needs education, the planned measures include working with schools and teachers to provide a teaching approach that is more tailored to the needs of individual students, both in special and mainstream schools.

Piloting of the new competence-based curriculum will start in September 2015 and will be followed by gradual introduction of the competence-based curriculum in all school grades. Diagnostic tests in science, technology, engineering and mathematics (STEM) subjects will be introduced for ninth- to eleventh-grade students starting from the 2015/16 school year, while tests for eighth-grade students already started from 2014/15. An optional pilot exam in physics, chemistry or natural sciences for twelfth-grade pupils is to be introduced from 2015/16.

5. Modernising school education

According to the 2013 OECD Teaching and Learning International Survey (TALIS), a very high proportion of teachers took part in some professional development activities in the previous 12 months (96%) and, more specifically, in ICT training (72%). As for teaching practices, the proportion of teachers assigning different work to students based on their individual needs was above the EU average (53%, compared to 46%). The same applies to the proportion of teachers using ICT for students' projects or class work: 41%, compared to the EU average of 34% (OECD 2014b).

Latvia is introducing a new teacher remuneration model (see Box 2). During the 2014-20 programming cycle of the European Structural and Investment Funds, the EU will provide Latvia with support for education research to help implement an education quality monitoring system. Latvia will receive assistance to participate in international education quality research and to develop monitoring tools. The Ministry of Education and Science, jointly with the National Centre for Education, has begun to develop a new ICT study programme for schools, which includes an integrated teaching and learning approach.¹⁶⁴ In the frame of a pilot project, five different education programmes will start from September 2015. They aim at contributing to the development of digital competences as part of a comprehensive curriculum standard, based on learning outcomes, by 2018.

Box 2. The new teacher remuneration model

After being piloted in the 2014/15 school year, a new teacher remuneration model is to enter into force provisionally from 1 September 2016.

Under the previous system, according to the 'money follows student' principle, municipalities were allocated government funding on the basis of the number of students enrolled at the beginning of the school year. Municipalities then distributed the funds for teachers' salaries to schools. Municipalities and school principals had substantial room for manoeuvre in how they handled the funds: e.g. municipalities could add money from their budget to top up teachers' salaries and school heads could distribute the salary unevenly between teachers based on how many contact hours each teacher was given. Moreover, teachers' tasks outside contact hours

¹⁶⁴ The approach consists in ICT teachers cooperating with other teachers and integrating ICT approaches into the teaching of their subjects.

(e.g. marking homework, working as a class supervisor) were paid separately, with a complex system of tariffs going into the salary formula.

As a result, the remuneration system was not transparent, and teachers' salaries varied considerably from municipality to municipality and depending on the size of school, with other factors also playing a role. For instance, the salary paid to two teachers with the same workload in terms of teaching hours and other tasks could vary by as much as 60% (Ministry of Education and Science and LIZDA 2015).

The OECD noted a number of weaknesses of the teacher remuneration system. These included:

- (i) low salaries and a flat pay scale, sending a message that teaching is a low-status profession unlikely to attract the best graduates or to retain a quality, motivated workforce;
- (ii) a formula based on the minimum salary (rather than actual or average salary) which did not recognise seniority;
- (iii) insufficient sensitivity to different student needs (i.e. the pay system did not recognise effort put into working with students individually);
- (iv) a narrow understanding of teachers' duties, which failed to recognise preparation time, marking and feedback to students as integral parts of quality teaching (OECD 2014).

The new model addresses many of these issues. It does away with the non-transparent formula for calculating individual teachers' salaries by introducing:

- a unitary salary base, calculated based on the average number of students in class in a given school and based on a 36-hour week;
- a clear scale of teacher's base salaries depending on the size of school/class, irrespective of which municipality the school is located in, recognising the actual differences in class sizes in Latvian schools (e.g. taking into account the rural-urban divide).

Municipalities no longer play a role in redistributing the money earmarked for teacher salaries, thus eliminating, at least in theory, the difference in salaries between municipalities. Quality-related additional remuneration based on teachers' assessment has also been put in place. It remains to be seen to what extent it will improve motivation, as so far most teachers have been assessed at an average level (OECD 2014, p.61), which entailed a rather small monetary incentive.

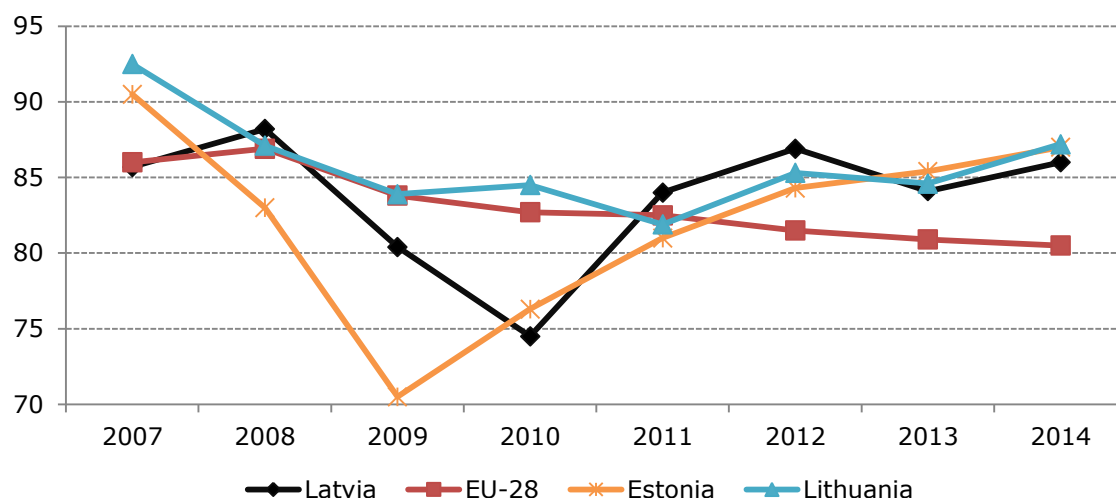
Overall, the reform is an important step towards making teachers' remuneration more transparent and fairer, and reducing salary differences currently penalising teachers in smaller schools. However, the level of most teachers' salaries, even after the reform, remains relatively modest and may make it difficult to attract the best-qualified graduates into the teaching profession.

6. Modernising higher education

Latvia's tertiary education attainment rate slightly decreased between 2013 and 2014 (from 40.7% to 39.9%) after significant increases in previous years, but remains well above the national Europe 2020 target of 34-36%. Women strongly outperform men, with the figures for tertiary education attainment in 2014 being 52.3% and 27.8% respectively. Inbound graduate mobility is rather low, both at bachelor's and master's level. The overall number of tertiary students decreased by 34.5% between 2005/06, when it reached its maximum level, and 2014/15. This was mainly the result of adverse demographic trends and the outward migration flows triggered by the economic crisis in 2008-10. The employment rate of recent tertiary graduates¹⁶⁵ quickly recovered after the 2008-10 crisis. It has fluctuated somewhat over the last three years, although remaining above the EU average (Figure 2).

¹⁶⁵ People aged 20-34 who left education between one and three years before the reference year.

Figure 2. Employment rate of recent tertiary graduates



Source: Eurostat

To improve the accreditation system, the government has designated the Academic Information Centre¹⁶⁶ as the independent national accreditation agency starting from July 2015. The Centre aims to be included in the European Quality Assurance Register for Higher Education in 2018 at the latest, i.e. before the next big accreditation round, which is scheduled for 2019. EUR 1.5 million will be invested in capacity building of the accreditation agency, of which EUR 1.27 million will come from the European Structural and Investment Funds (Government of Latvia 2015).

To improve the quality of academic staff, the rules for assessing professors' qualifications are being amended. Under the new compulsory criteria, professors will have to have a minimum number of international publications and sufficient knowledge of foreign languages. In order to achieve a better balance in the supply of places in higher education, Latvia is gradually increasing the number of publicly financed study places in STEM fields and cutting it in social sciences. This should help steer the demand towards study fields linked to high-value added economic sectors.¹⁶⁷

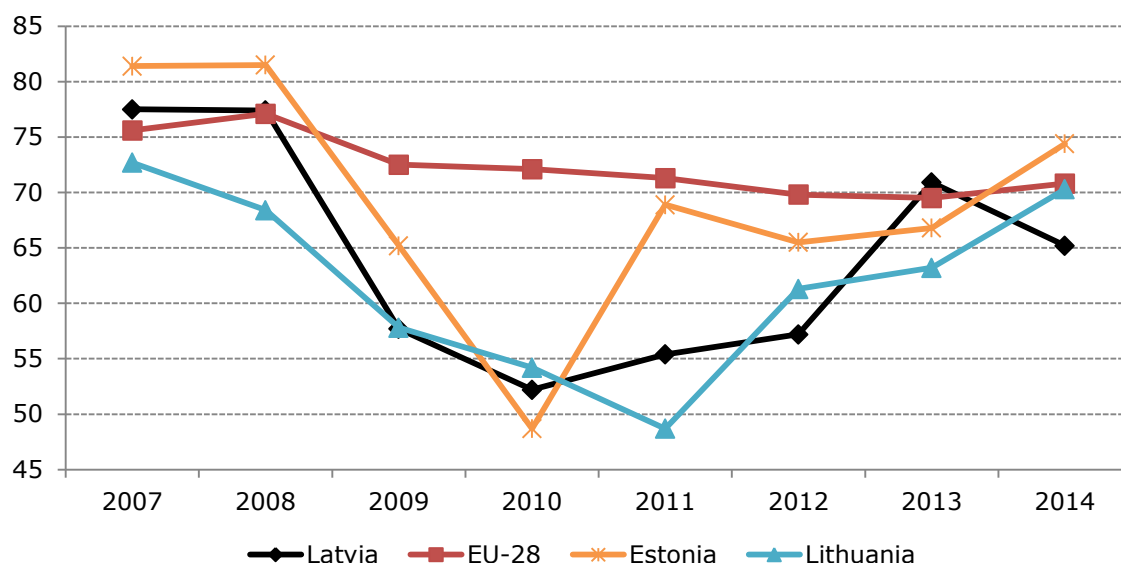
7. Modernising vocational education and training and promoting adult learning

Participation of upper secondary students in VET is slightly increasing, but remains below the EU average (39.1% compared to 48.9% in 2012). Since 2010, in the aftermath of the economic crisis, the proportion of young people not in education, employment or training has decreased. The 2014 figure of 12% of 15-24 year-olds was just below the EU average of 12.4%. After a strong increase between 2012 and 2013, the employment rate of recent upper secondary graduates¹⁶⁸ decreased by almost 6 percentage points in 2014 to well below pre-crisis levels (Figure 3). Adult participation (25-64 year-olds) in lifelong learning is low (5.5% in 2014, compared to 10.7% for the EU as a whole). For adults with high educational attainment, the gap is particularly large (9.4% compared to 18.8%).

¹⁶⁶ The Academic Information Centre is in charge of recognising diplomas and professional qualifications and referencing the national framework to the European qualifications framework.

¹⁶⁷ According to Eurostat data, the proportion of university graduates in STEM fields remains below the EU average (18.8% compared to 22.8% in 2012), although it has increased significantly in the last five years.

¹⁶⁸ People aged 20-34 who left education between one and three years before the reference year.

Figure 3. Employment rate of recent upper secondary graduates


Source: Eurostat

Making vocational education and training and its work-based learning component attractive remains a challenge. Eurobarometer surveys have shown that VET in Latvia has a negative image overall (European Commission 2011, 2014). In addition, the apprenticeship component is not completely developed. For example, there is no proper legislative framework regulating relationships between apprentices and companies (e.g. on pay and training requirements) and incentives for companies to provide work-based learning or practical training placements are still being developed.

While the consolidation of the vocational education and training network is in its final stages, reforms of curricula are still a work in progress. So far almost half of the profession standards, planned modular programmes and content for qualification exams have been updated and the reform is due to continue until 2023. The Latvian Parliament approved amendments to the Vocational Education Law, which came into force in May 2015. The amendments clearly set out the role of sectoral expert councils in developing curricula, examination content and organising work-based learning. They also bring in new frameworks to strengthen the role of employers and other stakeholders in VET governance. The amendments also link VET qualification levels to the national and European qualification levels.¹⁶⁹

The project “National Authorities for Apprenticeships: Implementing Work Based Learning in Latvia, Lithuania and Estonia (WBL-Balt)”, where the Ministry of Education and Science of Latvia is a project coordinator, has been ongoing since 1 December 2014. It aims at supporting development of work-based learning in the Baltic States and enhancing their cooperation in implementing VET reforms.

The take-up of work-based learning, piloted in 2013, is expected to increase further. For example, the number of schools that applied to take part in the work-based learning pilot project in 2014/15 was four times higher than the previous year, and the number of enterprises taking part increased six-fold compared to 2013/14 (CEDEFOP 2015, p.25).

To address the challenge of low adult participation in learning, the Ministry of Education and Science is implementing in 2014-15 the Erasmus+ project ‘National coordinators for the

¹⁶⁹ The 2015 legislative amendments propose to award VET students separate diplomas: one for general education skills and one for professional skills. This could have an ambiguous impact on student performance in basic skills and calls for careful monitoring.

implementation of the European agenda for adult learning'. The project aims to increase adult participation in lifelong learning by achieving better coordination of adult education policies that target different sectors of the economy. One major challenge of the project is to reach adults with no motivation for learning and adults from risk groups.

References

- CEDEFOP (2015), Vocational education and training in Latvia. Short Description, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/4134>
- Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Latvia and delivering a Council opinion on the 2015 Stability Programme of Latvia, 2015/C 272/17, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_latvia_en.pdf
- European Commission (2011), Special Eurobarometer 369. Attitudes towards vocational education and training, http://ec.europa.eu/public_opinion/archives/ebs/ebs_369_en.pdf
- European Commission (2014), Special Eurobarometer 417. European Area of Skills and Qualifications, http://ec.europa.eu/public_opinion/archives/ebs/ebs_417_en.pdf
- Government of Latvia (2015), National Reform Programme of Latvia for the Implementation of the 'Europe 2020' Strategy, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_latvia_en.pdf
- Kangro A. et al. (2014), The Quality of Education in Latvian Schools in International Comparison, http://www.ipi.lu.lv/uploads/media/LU_72_Kangro_uc.pdf
- Ministry of Education and Culture and LIZDA (2015), Pedagogu darba samaksas jaunais modelis un tā aprobācija, presentation given on 27/03/2015, http://www.slideshare.net/IZM_gov_lv/prezentacija-lizda-27032015?ref=http://www.izm.gov.lv/lv/pedagogiem/visparizglitojoso-skolu-pedagogu-darba-samaksas-jauna-modela-projekts
- OECD (2013), PISA 2012 Results, <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>
- OECD (2014a), Teacher Remuneration in Latvia: An OECD Perspective, http://www.oecd.org/edu/OECD%20Review%20of%20Teacher%20Remuneration%20in%20Latvia_OPS_FIN_AL.pdf
- OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing
- World Bank (2014), Higher Education Financing in Latvia: Final Report, http://viaa.gov.lv/files/news/24067/lv_hef_r3vsub_190922014_c_final.pdf

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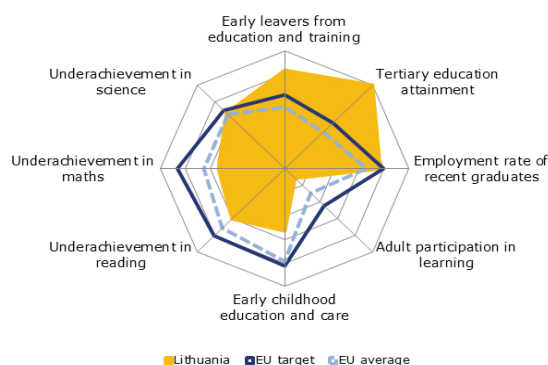
Lithuania

1. Key Indicators and Benchmarks

		Lithuania		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	:	21.2% ¹²	:	17.8% ¹²
	Maths	:	26.0% ¹²	:	22.1% ¹²
	Science	:	16.1% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP	6.1%	5.6% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure	14.3%	15.7% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men	10.0%	7.0%	15.2%	12.7%
	Women	4.6%	4.6% ^u	11.5%	9.5%
	Total	7.4%	5.9%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men	38.2%	44.0%	31.0%	33.6%
	Women	52.9%	62.7%	38.7%	42.3%
	Total	45.7%	53.3%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		84.2%	86.5% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)	:	: ¹³	:	84.6% ¹³
	Special needs education	:	: ¹³	:	32.4% ¹³
	Multicultural settings	:	: ¹³	:	13.2% ¹³
	ICT skills for teaching	:	: ¹³	:	51.0% ¹³
Foreign language learning		79.6%	79.6% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)		28.4%	27.6% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4	48.7%	70.3%	71.3%	70.8%
	ISCED 5-8	81.9%	87.2%	82.5%	80.5%
	ISCED 3-8 (total)	69.5%	80.7%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)	:	1.2% ¹³	:	: ¹³
	Inbound graduates mobility (master)	:	2.2% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)		5.7%	5.0%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

With low early school leaving and high tertiary education attainment rates, Lithuania is performing well vis-à-vis the Europe 2020 headline target in education. Students' educational outcomes may be boosted by recent policy measures, such as making early childhood education and care compulsory for all from the age of five, the development of a nation-wide student competence measurement system, induction training and more professional support to teachers.

At the same time, skills acquired in secondary and tertiary education often do not meet the needs of the labour market. Underachievement in reading and maths is high and participation in initial vocational education and training relatively low. Only a small percentage of adults participate in learning. Finally, the teaching workforce is ageing and there are difficulties in attracting young people to the profession.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Lithuania (Council of the European Union 2015) included a recommendation on education and training:

CSR 2: Address the challenge of a shrinking working-age population by improving the labour-market relevance of education, increasing attainment in basic skills [...]

3. Investing in education and training

Lithuania's general government expenditure on education, both as a share of GDP (5.6%) and as a percentage of total government expenditure (15.7%), remains above the EU average (5% as a share of GDP and 10.3% of total government expenditure in 2013).¹⁷⁰ Government expenditure on education as a share of the GDP has been on a downward trend since 2009 against the backdrop of the economic crisis. Public expenditure on higher education suffered a 9% cut between 2012 and 2013.

4. Tackling inequalities

The early school leaving rate is decreasing (from 7.4% in 2011 to 5.9% in 2014) and is significantly lower than the EU average of 11.1%. Early school leaving is more common among boys (7% compared to 4.6% among girls) and in thinly populated rural areas, where 8.4% of pupils leave school without an upper secondary qualification. National statistics show that a higher than national average proportion of pupils drop out of vocational education and training. An urban-rural divide is also visible in participation in early childhood education and care and in education quality.

Participation of 4-year-olds in early childhood education and care is among the lowest in the EU (86.5% in 2013, compared to the EU average of 93.1%). According to national statistics, the difference in participation rates between urban and rural settlements is almost 50 percentage points (92.2% in urban areas and 42.8% in rural areas) (Statistics Lithuania 2014). This is partly due to a lack of sufficient transportation to school in rural areas. Early childhood education is financed through three major sources — the 'pupils' basket' (i.e. the allocation of funds per student), municipal authorities and parents. As municipalities have varying financial capacities, resources for early childhood education and care are allocated unevenly, accentuating regional differences in the quality of provision. Most participating 1- to 4-year-olds are enrolled in public institutions, although enrolment rates in private institutions have recently

¹⁷⁰ Source: Eurostat, General government expenditure by function (COFOG) database.

been increasing. Lithuania will have to work hard to reach its national intermediate target¹⁷¹ of 90% by 2017.

In terms of basic skills, the performance of 15-year-olds in the OECD Programme for International Student Assessment (PISA) in 2012 was rather modest (OECD 2013b). The proportion of top performers in the three basic skills was below the EU average, while the proportion of low achievers was higher than the EU average in reading (21.2% compared to 17.8%) and maths (26% compared to 22.1%), and close to the EU average in science (16.2% compared to 16.6%). Compared with the EU average, there is less of a link between educational performance and socio-economic status in Lithuania. In fact, differences in student performance within schools are higher than between schools. However, the difference in performance in maths between children studying in rural and urban areas is estimated to be 57 points in Lithuania, which is among the highest in the EU (OECD 2013a). These findings were also confirmed by national research.

Improving access to and the quality of early childhood education and care remains on Lithuania's policy agenda. National studies show that an increasing proportion of municipalities provide transport services to enable children in rural areas to go to school — 67% provided such services in 2012 and 88% in 2014. The 'Requirements for Teacher Qualifications' (adopted in 2014) lay down the qualifications requirement for early childhood teachers and makes specific pedagogical and psychological training obligatory for all teaching staff in early childhood education. As outlined in the Ministry of Education and Science's 2015-17 strategic action plan, the government plans to make participation in pre-primary education compulsory for 5-year-olds.¹⁷² The legislative proposal has been presented to parliament but implementation is postponed until September 2016 due to an insufficient number of school places in some municipalities. Financial resources have been allocated to create 6 000 preschool and pre-primary places and modernise childcare or education infrastructure that provide altogether 112 300 places by 2020, with the support of European Structural and Investment Funds (ESIF). This is an important step towards improving access. However, detailed information is not yet available on how Lithuania is going to ensure that it has sufficient well-prepared teaching staff, pedagogical support and smaller class sizes to achieve high-quality provision.

5. Modernising school education

Lithuania's education system is facing a markedly ageing teacher population and difficulties in attracting young people in the profession. Due to the decreasing number of children, Lithuania's student-teacher ratio is currently the lowest in the EU. At the same time, 25.2% of teachers at ISCED level 1 are below 40 years old, compared to 37.1% over 50, while for ISCED levels 2-3, 27.7% of teachers are below 40 and 42.4% over 50.¹⁷³ The number of graduates with a teaching degree is also decreasing: in 2012, 22% fewer students obtained a teaching degree than three years earlier.¹⁷⁴ The minimum and maximum basic gross annual statutory salaries of teachers in general lower secondary education in Lithuania as a share of GDP per capita is the lowest in the EU (minimum salary: 32.3%, maximum salary: 59.4%). Between 2009 and 2014, the minimum basic statutory salary of teachers (at ISCED levels 1, 2 and 3) was frozen in real terms. Obligatory in-school practice accounts for 30 ECTS (European credit transfer and accumulation system) points out of 230 on a bachelor's degree and there is no formal induction

¹⁷¹ The 2013-2022 National Education Strategy set Lithuania's national target for the proportion of 4-year-olds in early childhood education and care at 90% by 2017 and 95% by 2022.

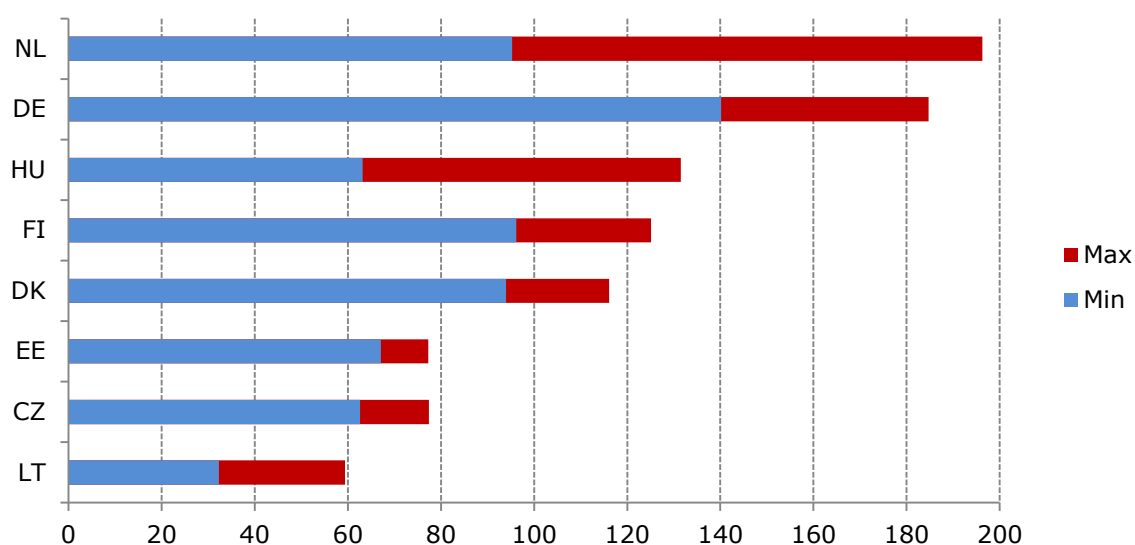
¹⁷² According to Eurostat data on enrolment in education, in 2012, 77% of 5-year-olds participated in early childhood education and care.

¹⁷³ Source: Eurostat, Teaching staff, 2012 data.

¹⁷⁴ Source: Eurostat, Graduation at first and second stage of higher education (ISCED 5 and ISCED 6) by field, Teaching and education science.

programme for newly qualified teachers. Teachers are evaluated only within schools and there is not yet any external evaluation in place¹⁷⁵.

Figure 2. Minimum and maximum basic gross annual statutory salary of full-time fully qualified teachers in general lower secondary education (ISCED 2), as a percentage of GDP per capita, 2013/14



Source: European Commission (2015)

Lithuania's ongoing 2014-16 action plan for general education includes action to improve the competences and qualifications of teaching staff. The plan is for support and mentoring to be made available to all newly qualified teachers in their first year of employment. Competences acquired by teachers in non-formal learning contexts will also be recognised; in this way teachers can gradually accumulate credits at higher education institutions and ultimately acquire a master's degree. Support is also planned to help teachers who plan to resign from practical teaching in order to take up duties in related roles, for example as consultant teachers or mentors. Mentoring will be available for teachers to acquire or improve their knowledge and skills in using ICT tools in teaching and psychological support. Financial resources have been allocated from the 2014-20 ESIF in order to implement these measures.

As part of its 2013-22 national education strategy, Lithuania has brought in several measures to encourage and monitor schools' ability to improve students' educational outcomes. In 2014, the future national system for evaluating students' learning outcomes in general education was tested by 81 schools. The system will be fully rolled out in 2017 and schools will be able to choose which competences they test. Changes in the school year will include increased time allocated for social activities within teaching hours.

6. Modernising higher education

Lithuania's tertiary education attainment rate in the 30-34 age group (53.3% in 2014) is the highest in the EU (the EU average is 37.9%) and the country has already achieved its Europe 2020 national target of 40%. Women (62.7%) outnumber men (44%) in having completed tertiary education. The proportion of graduates obtaining a degree in maths, science or technology remains stable and is around the EU average (22.1% compared to 22.8%). The

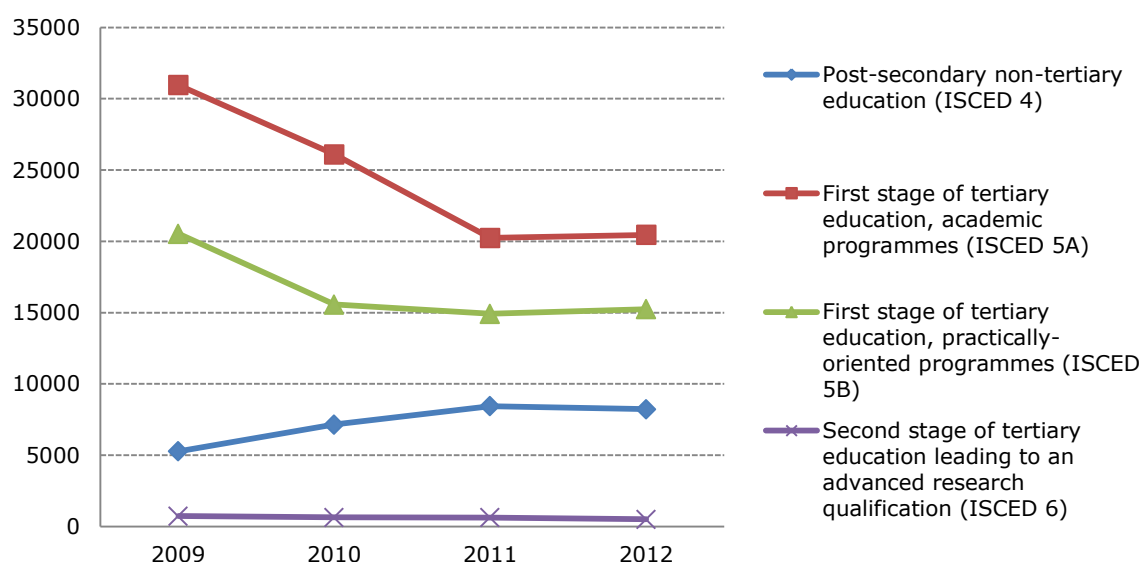
¹⁷⁵ The National Agency for School Evaluation performs external evaluation of school leaders and school activities. The Agency monitors the lessons and gives feedback to teachers, but it is not an individual teacher evaluation.

employment rates of recent graduates from tertiary education was higher than the EU average in 2014 (87.2% compared to 80.5%) and is increasing.¹⁷⁶

Between 2009 and 2012, the number of enrolments in post-secondary non-tertiary education increased by 55.7%, in particular among young people. In the same period, the total number of students at tertiary level decreased by 16%. The absolute number of new entrants to professionally oriented first-cycle tertiary programmes dropped by 25.7%. In first and second cycle academic programmes, the figure dropped by 34%, in particular among people aged 20 and above and there was a 31% drop in doctoral studies.

43% more Lithuanian students studied abroad in 2012 than in the previous year (5.8% in 2011 and 8.3% in 2012). At the same time, Lithuania is not attracting foreign students: only 0.2% of all tertiary students were foreigners in 2013, the lowest proportion in the EU. 1.2% of bachelor graduates and 2.2% of master graduates are inbound mobile students. Most of them completed their prior studies in Europe outside the EU.

Figure 3. New entrants to ISCED 4 to 6 in Lithuania*



* According to the ISCED 1997 classification
Source: Eurostat

In a 2014 study (MOSTA 2014), the Lithuanian Government and stakeholders identified the main challenges on the quality of higher education and the relevance of tertiary students' skills to the labour market. In response, in January 2015 the government presented a proposal to amend the law on higher education and research (Lithuanian Government 2015). The proposal includes the following main measures: i) performance contracts will be brought in between higher education institutions and the State governing the activities of higher education institutions and student admission requirements for a three-year period; ii) state-financed student places will be planned for each field of study, based on the skills needs identified by the government; iii) centrally determined minimum admission requirements will be set. These will apply both to public (both state-financed and self-financed higher education places) and to private institutions (until now universities could set their own admission requirements); iv) the total duration of bachelor's and master's programmes¹⁷⁷ can be reduced by one year; v) career guidance will become obligatory for institutions; vi) higher education institutions will be managed by a Senate composed of external members.

¹⁷⁶ People aged 20-34 who left education between one and three years before the reference year.

¹⁷⁷ The bachelor plus master programmes are capped at five years of total duration.

In response to increased interest among students for professionally oriented programmes, pathways will be opened up from these programmes towards traditional master's programmes. Lithuania also plans to make higher education programmes more relevant to the labour market by promoting cooperation on study content development with social partners and by helping employers to offer more work-based learning opportunities to students in tertiary education.

Besides these possible changes, Lithuania plans to carry out various measures using the 2014-20 ESIF. These will mainly modernise infrastructure, introduce or review information and management tools and improve external quality assurance in higher education.

7. Modernising vocational education and training and promoting adult learning

The proportion of students in upper secondary vocational education and training has remained below the EU average (27.4% compared to 48.9% in 2013), notwithstanding the increasing share of new vocational education entrants with upper secondary qualification or higher education diploma. Despite the relatively low national early school leaving rate, national statistics show that a higher proportion of students who drop out of vocational education and training (Cedefop 2014). In 2011/12, 15.7% of pupils from VET dropped out, while over 20% of pupils dropped out of ISCED 3C programmes, and 13% from ISCED 3A programmes.¹⁷⁸ The reasons for the VET drop-out rate have not yet been analysed. The employment of recent upper secondary graduates¹⁷⁹ was more affected by the economic crisis in Lithuania than in other parts of the EU. However, this is now returning to pre-crisis levels, which are around the EU average (70.3% in 2014 compared to the EU average of 70.8%). Participation of adults in lifelong learning remains well below the EU average (5% in 2014, compared to the EU average of 10.7%) and decreased compared to 2013 (5.7%).

Lithuania is facing challenges to make vocational education and training and adult education more attractive, to make VET programmes and qualifications relevant to the labour market and to improve cooperation with businesses. The Lithuanian Industrialists Confederation claimed that 44% of businesses in the country did not hire new employees in 2012 because they were not able to find skilled specialists. At the same time, even though Lithuania put in place a legal framework for apprenticeships in 2007, apprenticeship places are scarce. To address these challenges, the government adopted an action plan for the development of vocational training for 2014-16 (Ministry of Education and Science 2013). The plan identifies six overall goals: i) optimising the network of VET institutions and using the infrastructure effectively; ii) rationalising the supply of VET programmes (20% of all VET programmes to be modularised by 2016) and improving their quality; iii) improving the assessment of students' learning outcomes (including making validation of non-formal and informal learning available in 7% of the public VET institutions by 2016 compared to 5.5% in 2014); iv) making VET teacher training and continuing professional development more efficient; v) improving the management of VET institutions and the quality of teaching, including implementing EQAVET¹⁸⁰, and introducing quality assurance in 80% of institutions, compared with the current figure of 40%; vi) increasing the attractiveness of VET.

The related measures will be implemented as part of Lithuania's Operational Programme for ESIF 2014-20. Following the testing of various organisational and funding models for apprenticeship training in 2007-13, the new funding programme provides incentives to employers to offer apprenticeship places and train company staff to become professional trainers. Financial resources are also planned for the roll-out of external and internal quality

¹⁷⁸ Programmes for students having completed lower secondary education and not leading to upper secondary general education (ISCED 3C), and programmes for students leading to completion of upper secondary general education (ISCED 3A).

¹⁷⁹ People aged 20-34 who left education between one and three years before the reference year.

¹⁸⁰ European Quality Assurance for Vocational Education and Training.

assurance for vocational institutions, developing career guidance services and awareness raising and promotion of vocational education and training opportunities.

On adult education, the National Audit Office of Lithuania and the European Employment Policy Observatory came to similar conclusions. The Audit Office, which examined the state of play in non-formal adult education in 2013, flagged up the significant problems regarding weak coordination at national, regional and local levels, the lack of a system for the recognition of non-formal and informal learning, insufficient information on learning opportunities and unclear funding priorities (although the funding has been increased, not enough attention is given to the education of disadvantaged groups, such as early school leavers, the long-term unemployed and older adults). Lithuania has also made only limited provision for the unemployed as part of active labour market policies (ALMPs). VET programmes are used by only 2.2% of the registered unemployed. This is partly due to insufficient funding for ALMPs (only 20% of the registered unemployed are covered by them) and limited availability of VET programmes, in particular in rural areas following cuts during the 2008 crisis. Likewise, there are only few VET programmes suitable for unemployed university graduates. This means that the supply of VET programmes is not well adapted to the needs of different groups of unemployed.

Box 2. Action plan to develop non-formal adult education

In October 2014, Lithuania adopted an action plan to develop non-formal adult education for 2014-16 (Ministry of Education and Science 2014), as provided for in its 2013-22 national education strategy. The aim of the action plan is to set up an adult learning system, which promotes social inclusion, labour market participation, active citizenship and personal development. It sets annual targets for adult learning participation rates of 5.7% for 2014, 6.3% for 2015 and 7% for 2016.

Concrete objectives, related targets and actions in the action plan include:

- Supporting adults in acquiring general competencies and develop positive attitudes towards learning. Concrete targets: between 2014 and 2016, 2 000 adults every year should acquire or improve basic competencies; between 2014 and 2016, 10 000 adults every year should study in formal adult education programmes. Concrete actions include provision of training opportunities, awareness raising, developing and improving training programmes, with a EUR 44.3 million investment planned until 2016.
- Improving access and quality of adult learning in VET and higher education institutions. Concrete targets: to create or update five modular VET training programmes open for adults by 2016; to finance 25 projects to provide adult learning services, based on inter-institutional partnership, to provide adult learning services; to increase the proportion of public VET institutions which evaluate and recognise competencies acquired through non-formal and informal learning from 1% in 2014 to 7% in 2016; to increase the proportion of public higher education institutions that have implemented systems for recognising and validating competences acquired through non-formal and informal learning. Concrete actions include increasing the supply of adult learning in VET schools and adult learning guidance (EUR 0.7 million by 2016); implementing partnership-based projects to provide adult learning services (EUR 4.9 million by 2016) and implement the systems for recognition and validation of skills and competencies acquired through non-formal or informal learning (EUR 4.2 million by 2016).
- Developing a financial and organisation support system for adult learning. Concrete target: by 2016 1000 adults should be using the financial support system for adult learning. Concrete actions include inter-institutional coordination of adult learning (EUR 0.1 million by 2016); developing a financial instrument to support the participation in adult learning by under-represented groups (EUR 1.7 million by 2016) carrying out studies and surveys, including the Programme for the International Assessment of Adult Competencies (PIAAC).

References

2012 metų Nacionaliniai mokinių pasiekimų tyrimai, Apžvalga (National research on student achievement in 2012, Report) http://nec.lt/failai/4681_Apzvalga_NMPT2012.pdf

Cedefop (2014), Early school leaving from vocational education and training, https://cumulus.cedefop.europa.eu/files/vetelib/2014/ReferNet_LT_ESL.pdf

Council of the European Union (2015), Council Recommendation of 14 July 2015 on the 2015 National Reform Programme of Lithuania and delivering a Council opinion on the 2015 Stability Programme of Lithuania (2015/C 272/18), http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_lithuania_en.pdf

European Commission (2015), Teaching Profession in Europe. Practises, Perceptions and Policies. https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Publications:The_Teaching_Profession_in_Europe:_Practices,_Perceptions,_and_Policies

Lithuanian Government (2015) Government proposal of 29 January 2015 to amend the 2011 law on higher education and research, http://www.lrs.lt/pls/proj/dokpaieska.showdoc_l?p_id=1006783&p_org=85&p_fix=y&p_gov=y

Ministry of Education and Science (2013), Profesinio Mokymo Pletros 2014–2016 metu veiksmu planas, http://www.smm.lt/uploads/lawacts/docs/586_4f6500babcf40acafdb70999adcac4c2.pdf

Ministry of Education and Science (2014), Neformaliojo suaugusiųjų Svetimo Pletros 2014-2016 metu veiksmu planas, http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=484731&p_tr2=2

MOSTA (2014) Studijų kokybė Lietuvoje: suinteresuotų šalių požiūris (Quality of Studies in Lithuania: Stakeholders Opinion), http://www.mosta.lt/images/leidiniai/Studiju_kokybe_suinteresuotuju_saliu_poziuris._Santrauka.pdf

OECD (2013a), PISA 2012 Results: Excellence through Equity. Giving Every Students a Chance to Succeed (Volume II), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-II.pdf>

OECD (2013b), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

Statistics Lithuania (2014), Švietimas 2013, <http://osp.stat.gov.lt/services-portlet/pub-edition-file?id=3070>

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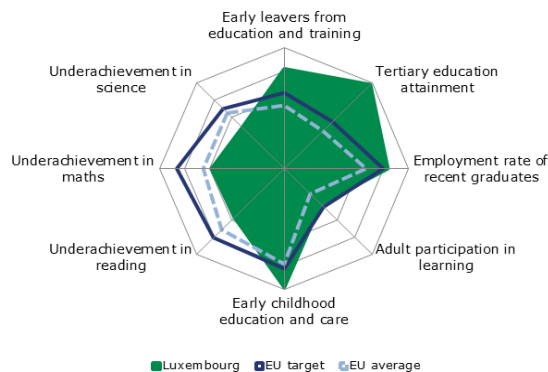
Luxembourg

1. Key Indicators and Benchmarks

			Luxembourg		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	•	:	22.2% ¹²	:	17.8% ¹²
	Maths	•	:	24.3% ¹²	:	22.1% ¹²
	Science	•	:	22.2% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		5.1%	5.6% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		11.8%	12.7% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		7.6%	8.3%	15.2%	12.7%
	Women		4.8%	3.7% ^u	11.5%	9.5%
	Total	•	6.2%	6.1%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		49.1%	49.8%	31.0%	33.6%
	Women		47.4%	55.4%	38.7%	42.3%
	Total	•	48.2%	52.7%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	95.6%	99.4% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	: ¹³	:	84.6% ¹³
	Special needs education		:	: ¹³	:	32.4% ¹³
	Multicultural settings		:	: ¹³	:	13.2% ¹³
	ICT skills for teaching		:	: ¹³	:	51.0% ¹³
Foreign language learning			100.0%	100.0% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			61.4%	59.9% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		78.5%	78.2%	71.3%	70.8%
	ISCED 5-8		90.7%	86.4%	82.5%	80.5%
	ISCED 3-8 (total)	•	86.1%	83.8%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	20.6% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	58.6% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	13.6%	14.0%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Luxembourg is a trilingual country and this plurality of languages (Luxembourgish, German and French) is well reflected in the education system. Luxembourg provides significant resources to the system and has seen very high growth as regards tertiary education attainment rates over the last 10 years. However, socio-economic status plays a significant role in influencing educational outcomes. In particular, pupils from an immigrant background generally achieve significantly worse results than non-immigrant pupils. On aggregate, Luxembourg scores well in early school leaving rates, but the percentage of early school-leavers is relatively high among the population with an immigrant background. Furthermore, despite high spending for primary and secondary education, PISA results for 15 year-old students show performance somewhat below the OECD average in all three components, mathematics, reading and science. Luxembourg is also the country with the second highest retention rates in secondary education in the EU. Progress on the planned school reform will be key for further improvement.

3. Investing in education and training

General government expenditure as a share of GDP has steadily increased over the last three available years, from 5.1% in 2011 to 5.6% in 2013 (above the European average of 5.0%).¹⁸¹ Luxembourg devotes the highest level of resources to education among OECD countries in terms of spending per student for primary and secondary education (OECD 2014). Efficiency of investment is discussed against the background that a significant financial investment in secondary education, compared to other OECD countries, does not translate in equally high school results.

The government continues to implement a strong policy regarding higher education and research in terms of financial resources. The State's allocations for Luxembourg University increased from EUR 72 million in 2009 to EUR 145.4 million in 2015 (Government of Luxembourg 2015).

4. Tackling inequalities

The early school leaving rate in Luxembourg was 6.1% in 2014, meeting the Europe 2020 national target of less than 10%. However, national statistics suggest that the early school leaving rate is high among the migrant population. In addition, boys have a significantly higher rate of early school leaving than girls (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse 2014).

Also the OECD 2012 PISA survey shows a proportion of low achievers that is significantly higher than the EU average in reading and science and somewhat higher in maths (OECD 2013). There is a strong relationship between socio-economic background and performance, and children from migrant families perform only slightly better than those who moved to Luxembourg as children themselves. There is a large gender gap in maths, and boys also significantly outperform girls in science.

Luxembourg has a very high participation rate for early childhood education and care (97.9% for the 4+ age group), which is facilitated by the fact that school attendance is compulsory as of the age of 4.

Luxembourg's 2015 national education report focused on multilingualism and social inequality and emphasised how parents' socio-economic status and educational attainment substantially affect student achievements (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse 2015). In February 2015, the government presented a draft bill on youth, which, if adopted by the parliament, will introduce mandatory quality standards for all childcare services, parental

¹⁸¹ Source: Eurostat, General government expenditure by function (COFOG) database.

assistants and youth centres. This quality management system will be completed in a second phase by a free access to early childhood education and care as from September 2016. A particular focus will be on the development of language skills for children from 1 to 3 years. Special welcome lessons (elementary school) or welcome classes (secondary schools) are organised for foreign pupils between the ages of 0 and 12 years with the aim to have a better integration of the pupil in the appropriate education level.

The 2015 National Reform Programme announced a draft law establishing an Academic Retention Observatory which should allow a more systematic monitoring of children leaving school and regular coordination of the entities involved (Government of Luxembourg 2015). This builds on a special Guidance and Psychology Centre launched as a pilot project in 2013-2014, whose pillars are identifying students at risk of dropping out in intermediate school, providing individualised assistance for a sampling of volunteer high-risk students and specific measures prepared in collaboration with staff of participating schools.

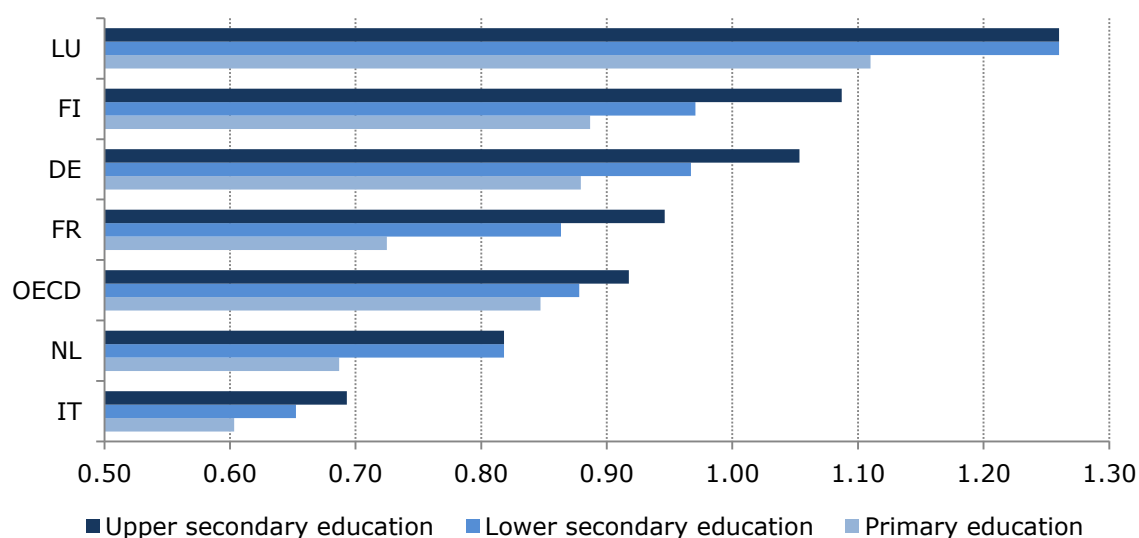
Box 1. Multilingualism and social inequalities in Luxembourg

- Luxembourg's trilingual tradition is a particular asset and challenge for the national education system. It is often identified as one of the main obstacles for migrant children to succeed well in education. OECD PISA as well as national data show a strong relationship between both between socio-economic and migration background, in the one hand, and performance, on the other hand. School students with an immigrant background in the Luxembourgish education system fail to comply with the high standards in German language instruction, while students with Luxembourgish background are often struggling with high expectations in French in secondary schools (in particular in "Gymnasien") (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse 2015). What is more, "Difficulties with the language of instruction lead to failure in other disciplines for numerous students, thus comprising their chances for academic success." (Government of Luxembourg 2015, p.50)
- The 2015 National Education Report (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse 2015) shows that the problems with regard to inequality and education are not only connected to multilingualism, but is also connected to the socio-economic status of the families. This does not only concern immigrants, but equally concerns families speaking Luxembourgish at home. The language issue of migrants do aggravate issues of inequality, but are not the only problems at its origin.
- Data on school success reveal that students from the suburbs of the city of Luxembourg and from privileged districts of the city of Luxembourg have a significantly higher access to the more prestigious secondary school track – the so-called *classical Lycee* – than students from other parts of the country. Among students in economically privileged communes such as Reckange, between 70% and 75% will be recommended to enter the more prestigious secondary school track, whereas students from rural communes such as Wincrange (in the far north of the country) will be recommended five times less to the same track, namely between 10% and 20%. The difference between these two compared communes is not linguistic, but the International Socio-Economic Index of Occupational Status (ISEI); in Wincrange the ISEI-index is between 35-40, whereas in Reckange it is between 50 and 55 (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse 2015, pp.42-46).
- Policies such as promoting the development of language skills for children from 1 to 3 years and reflections on diversifying the language profiles of different schools are pivotal. Given the above findings, the education report recommends complementing them by other policies addressing the impact of socio-economic status on educational success, such as quality of ECEC, improved guidance impacting on the practices determining pupils' retention and transitions between different school stages, and working in partnership with parents.

5. Modernising school education

Luxembourg has a relatively young teaching force with almost half of primary and lower secondary teachers under the age of 40. The high level of teachers' pay in Luxembourg certainly explains the attractiveness of the profession (Figure 2). Luxembourg has the highest teacher salary in the EU (EUR 86 745 per year for upper secondary teachers, in purchasing power standard). However, in response to poor results in the PISA tests, there are initiatives to increase the professionalisation of teachers.

Figure 2. Ratio of teachers' salaries to earnings for full-time workers with tertiary education (2012)



Source: OECD (2014)

Due to the particular national situation, the share of ISCED 2 students learning two or more foreign languages in Luxembourg is 100% compared to a 65% European average. State schools require virtually all teaching staff to speak Luxembourgish as well as German, French and English.

In December 2014, the government decided to create in 2015 a national training institute for teachers (*Institut de formation de l'Éducation nationale* (IFEN)). This institute will accompany newly certificated teachers in their first three years as teachers and will, in addition, offer a large choice of courses in continuous education (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse 2014).

The reform of the primary school level is ongoing. A new model of intermediary assessment reports (*bilans intermédiaires*) will be finalised on the basis of teachers' feedback. In 2015/16 the experiences will be taken into account for the general application of the new intermediary assessment report models.

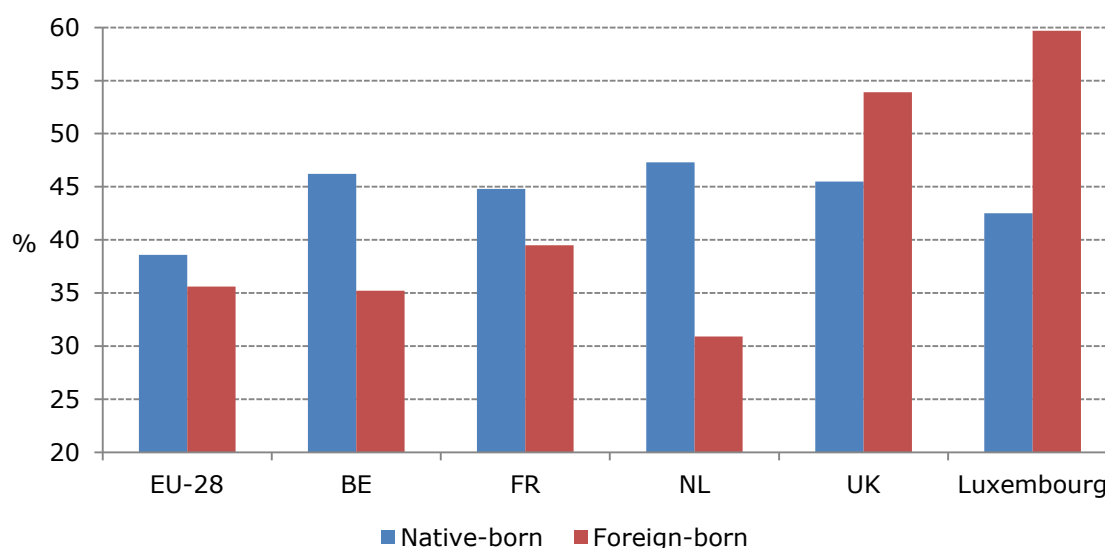
The reform of secondary education (first tabled in 2009 and reintroduced in 2013) is however still blocked at Governmental level because of complex technical and legal reasons. The Ministry of Education is currently reintroducing parts of this reform. One of these measures concerns the introduction of a concept around better "school and professional guidance". The new Minister of education also declared increasing school autonomy for both primary and secondary levels as one of the eight priorities for the year 2015 (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse 2014). These plans still need to be implemented.

The recently created Centre for Educational Testing (LUCET) aims to strengthen assessment and evidence-based policy and to advise the government on reform in the educational field. The government is also set to unveil a *Digital for Education* strategy to give students the tools to find their place in the labour market in a modern digitalised world. The government's commitment to education and research is also underlined by plans to invest EUR 300 million per year in the University of Luxembourg, the National Research Fund and other research institutions (Government of Luxembourg 2014).

6. Modernising higher education

The proportion of 30-34 year-olds with tertiary education increased to 52.7% in 2014 which is amongst the highest in Europe and progressing towards the very high Europe 2020 national target of 66%. The rate reflects to a large degree the highly educated foreign-born population living and working in the country, but not necessarily the outcome of the Luxembourg's education system. In fact almost 60% of foreign-born people aged 30-34 have a tertiary education level compared to only 43% of native-born (Figure 3). The employment rate for recent tertiary graduates¹⁸² is higher than in the EU as a whole (86.4 compared to 80.5% in 2014).

Figure 3. Tertiary education attainment rate of people aged 30-34 by country of birth (2014)



Source: Eurostat

The reform of the State financial aid scheme for higher education was carried out in the 2014/15 academic year. The system has a modular structure which ensures the independence of the students in a fair and just way; considers the actual costs incurred by the students; takes into account their socio-economic background for the calculation of the grant amount; encourages international mobility and allows the students to freely choose their place of study.¹⁸³ Children of cross-border workers are also eligible for financial support (Government of Luxembourg 2015).

¹⁸² People aged 20-34 who left education between one and three years before the reference year.

¹⁸³ Every student has the right to an annual bursary of € 2,000, combined with a basic loan of € 6,500. The second module is a € 2,000 grant consisting of a mobility bursary attributed to students studying in a country other than their home nation who pay rent in that country. The third module, known as the social criteria bursary, amounts to a maximum of € 3,000, with the weighting of the bursary amount and the loan portion within that sum depending on the taxable income of the household the student belongs to.

A further way of achieving the national target in tertiary attainment is to expand the offer of public and private higher education programmes. Financial contributions for the operational side of the University of Luxembourg have increased considerably. The number of students also increased from 4 934 in 2009/10 to 6 277 in 2014/15. The final move of the Belval site is planned for the 2015/16 academic year. Over the medium and long terms, accommodations for a total of 7 000 students and 3 000 teachers and researchers are being planned.

7. Modernising vocational education and training and promoting adult learning

The share of secondary level students (ISCED 3) in vocational education and training (VET) is 59.9% in 2013, compared to an EU average of 48.9%. In upper-secondary vocational education, dual learning with work-based elements account for 23.5% of enrolments, which is below the EU average (26.5%) (Cedefop 2015). The employment rate of recent upper secondary graduates lies above the EU average, at 78.2% in 2014.¹⁸⁴ However, the youth unemployment rate is relatively high (18.9%) compared to the low overall unemployment rate (6%).

The overall rate of adult participation in lifelong learning (14% in 2014) is clearly above the EU average (9%). However, more adult participation in lifelong learning is needed for keeping skills of older adults up-to-date and to help prevent early retirement (European Commission 2014). This is in particular the case for adults with lower educational attainment (ISCED levels 0-2), whose participation in lifelong learning stands at only 7.3%, compared to 12% of adults with medium level educational attainment (ISCED 3-4) and 18.2% of people with high attainment (ISCED 5-8).

Despite recent increases, there is still scope to increase the numbers of people in vulnerable groups that take part in vocational education, especially low-skilled people, migrants and older workers. It should be noted that the choice for technical/vocational programmes is a kind of 'co-decision' by school and learners with their family, which takes place at the entry into the lower cycle and again after the orientation phase.

Luxembourg has vocational training paths based on the dual principle, but some are offered as a mainly school-based track (such as *Diplôme d'aptitude professionnel*). Following the VET reform in 2008 it was recognised that readjustments were needed, in particular due to organisational problems encountered with the modular system. A draft law for VET was submitted to Parliament in early 2015 and it is set to take effect at the end of summer 2015 (Government of Luxembourg 2015). It aims at addressing the aforementioned challenge and at ensuring quality learning outcomes.

Luxembourg launched implementation of the Youth Guarantee in June 2014. The youth guarantee ensures that all registered young jobseekers receive a good quality offer of employment, continued education, an apprenticeship or a traineeship within four months of leaving formal education or becoming unemployed. For low skilled and difficult-to-place young people a project was developed to address their specific requirements. In this "Job-Elo!" programme young people follow a specific two-month training programme in the Social-Professional Guidance Centres, followed by an introductory period of one month in companies. In 2014, the success rate of the programme was 77.9%. The project's success is also due to the involvement of numerous companies (Government of Luxembourg 2015).

Since 2013, the government has provided more financial support for companies that invest in lifelong learning for their employees. This financial support for training begins at 20% and rises

¹⁸⁴ Upper secondary and post-secondary non-tertiary education (levels 3 and 4). People aged 20-34 who left education between one and three years before the reference year.

to 35% to support workers aged over 45 and workers with low qualifications (European Commission 2015). To tackle the problem that around 7% of adults leaving the school system do not have sufficient basic skills to fully participate in professional, civic, cultural or social life, a campaign has been started to raise public attention to this phenomenon, to create a positive image of basic instruction, and to encourage participation in adult education programmes. Complementary actions promoting the acquisition of basic skills in professional context have been implemented in cooperation with the social partners (Government of Luxembourg 2015, p.53).

References

- Cedefop (2015), On the way to 2020: data for vocational education and training policies. Country statistical overviews, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5545>
- European Commission (2014), Assessment of the 2014 national reform programme and stability programme for Luxembourg, SWD(2014) 417 final, http://ec.europa.eu/europe2020/pdf/csr2014/swd2014_luxembourg_en.pdf
- European Commission (2015), Adult Education and Training in Europe: Widening access to learning opportunities, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/179en.pdf
- Government of Luxembourg (2014), Déclaration du gouvernement sur la situation économique, sociale et financière du pays 2014, <https://www.gouvernement.lu/3642384/09-edn-fr>
- Government of Luxembourg (2015), National Reform Programme of the Grand Duchy of Luxembourg under the European Semester 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_luxembourg_en.pdf
- Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse (2014), Dossier de presse: Rentrée 2014-2015, <http://www.men.public.lu/fr/publications/systeme-educatif/dossiers-presse/2014-2015/140911-rentree/index.html>
- Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse (2015), Bildungsbericht Luxemburg 2015, <http://www.men.public.lu/fr/publications/systeme-educatif/statistiques-analyses/bildungsbericht/2015-band-2/index.html>
- OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>
- OECD (2014), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

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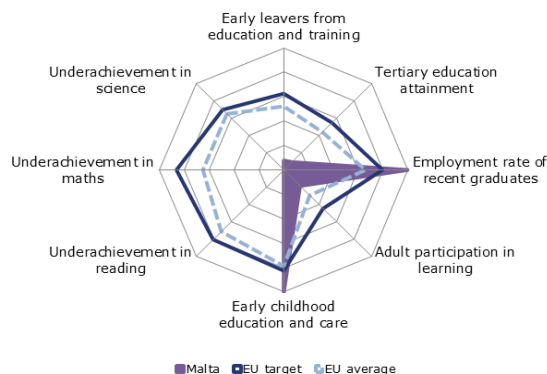
Malta

1. Key Indicators and Benchmarks

			Malta		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	•	:	: ¹²	:	17.8% ¹²
	Maths	•	:	: ¹²	:	22.1% ¹²
	Science	•	:	: ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		5.7%	5.9% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		13.9%	13.9% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		28.8%	22.3%	15.2%	12.7%
	Women		16.3%	18.3%	11.5%	9.5%
	Total	•	22.7%	20.4%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		22.6%	22.9%	31.0%	33.6%
	Women		24.2%	30.5%	38.7%	42.3%
	Total	•	23.4%	26.6%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	100.0%	100.0% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	: ¹³	:	84.6% ¹³
	Special needs education		:	: ¹³	:	32.4% ¹³
	Multicultural settings		:	: ¹³	:	13.2% ¹³
	ICT skills for teaching		:	: ¹³	:	51.0% ¹³
Foreign language learning			89.8%	95.5% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			12.3%	12.8% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		86.8%	86.8%	71.3%	70.8%
	ISCED 5-8		94.2%	94.6%	82.5%	80.5%
	ISCED 3-8 (total)	•	91.4%	91.7%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	3.2% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	12.6% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	6.4%	7.1%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Malta has been investing significantly in its education and training system in recent years. The transition from education to the labour market is easier than in most other EU countries. However, skill levels in the workforce will not improve in the long term without addressing some bottlenecks in the education and training system. Firstly, despite recent progress, the early school leaving rate remains high. Secondly, basic skills proficiency is poor by international comparison. Lastly, the supply of skills from the vocational education and training system has not yet adjusted to labour market requirements.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Malta (Council of the European Union 2015) included a recommendation on education and training:

CSR 2: Take measures to improve basic skills and further reduce early school-leaving by promoting the continuous professional development of teachers.

3. Investing in education and training

General government expenditure on education, both as a share of GDP (5.9% in 2013) and as a share of total public expenditure (13.9% in 2013), is well above the respective EU average (5.0% and 10.3%).¹⁸⁵ In the 2015 budget, the Maltese government increased expenditure on education by nearly 10% (i.e. EUR 41 million) compared to 2014 (Ministry for Finance 2014, p. 57).

4. Tackling inequalities

After falling significantly in previous years, the early school leaving rate was steady between 2013 (20.5%) and 2014 (20.4%) and is still the second highest in the EU and well above the ambitious Europe 2020 national target of 10%. The gender gap (male rate minus female rate) is slightly above the EU average, at 4 percentage points compared to 3.2 percentage points. Participation in early childhood education for children aged 4-5 is universal, which may help prevent early school leaving in the long term.

Available international studies show that basic skills attainment is rather poor. The performance of 15 year-olds in the OECD Programme for International Student Assessment (PISA) 2009+ tests was among the worst in the EU.¹⁸⁶ This was coupled with the largest gender gap among EU countries, with girls strongly outperforming boys in all fields tested (reading, mathematics and science). Similarly, the performance of 10 year-olds in the 2011 Progress in International Reading Literacy Study (PIRLS) and Trends in International Mathematics and Science Study (TIMSS) was very weak, especially in reading (Figure 2) and science.

The proportion of migrant pupils is on the rise. According to data from the Ministry for Education and Employment, in 2014/15 they made up 7.4% of total pupils in primary schools and 4.9% in secondary schools;¹⁸⁷ they came from around 70 different countries, the largest communities being from the UK, Italy, Libya and Bulgaria.

Implementation of the 2014 Early School Leaving Strategy (Ministry for Education and Employment 2014b) is ongoing. To improve cooperation between the Ministry for Education and Employment and relevant stakeholders, an Early School Leaving Working Group was set up in December 2014. Its role is to help schools and other entities at local level to determine the

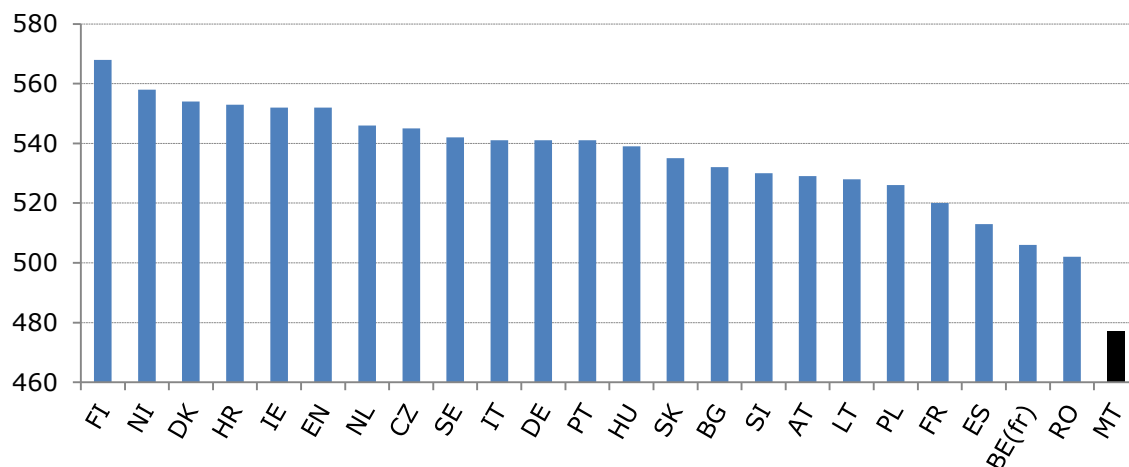
¹⁸⁵ Source: Eurostat, General government expenditure by function (COFOG) database.

¹⁸⁶ Malta did not participate in PISA 2012.

¹⁸⁷ Data include both state and non-state (i.e. Church and independent) schools.

needs of children and young people and to develop prevention measures tailored to local conditions.

Figure 2. Average score of 10-year-old pupils in reading in PIRLS 2011



Source: IEA (2012)

An Alternative Learning Programme has been developed to cater for students who, towards the end of compulsory education, show no interest in sitting the final examinations and would therefore leave education with no qualifications. The second edition of the programme ran in 2014/15 and targeted 272 students. The major component is vocational education, but the programme also includes Maltese and English literacy, numeracy and modules to develop information and communication technology (ICT) skills. This programme is innovative in the Maltese context, as it provides students with some work experience and uses informal and non-formal learning approaches in contrast to the traditional direct teaching approach of the school system.

The main ongoing measure in the area of basic skills is the National Literacy Strategy for All (Box 2). The government is also implementing the Learning Outcomes Framework. Learning outcomes are to be determined for early childhood education and care and in all areas of the compulsory curriculum and are being developed through an international tender and in collaboration with local curriculum development experts. The project is presently under way and will begin to be implemented during the 2016/17 year.

The biggest challenge for integrating migrant pupils concerns those groups whose first language is not English. As from the 2015/16 school year, non-English-speaking students are being offered a one-year induction course in basic functional English and Maltese. Work is being done by trained teachers, language support assistants and parent leaders, who support both students and parents.

Box 2. The National Literacy Strategy for All

The National Literacy Strategy for All (Ministry for Education and Employment 2014a) was launched in June 2014. Its overall purpose is to promote and enhance high quality literacy practices among children, youths, adults, non-EU nationals and people with learning difficulties, as well as to improve literacy competence in both the Maltese and English languages.

The Literacy Strategy is being implemented through the National Literacy Agency, created in 2014. College literacy teams are in place in every state college in Malta. These are led by the heads of department for literacy and bring together the literacy-related staff of that college to work as a team. The literacy team conducts both literacy assessment and intervention procedures for the college in collaboration with classroom teachers.

The Literacy Strategy includes a wide number of measures. The main ones are:

- The 'Read with Me' programme: this provides for early literacy and targets children of 0 to 3 years and their parents. The objective of the programme is to promote reading books through playful activities, partly through the active involvement of parents;
- 'Reading Ambassadors': prominent local people are involved to encourage children and young people to read by means of a number of events held in local schools;
- The 'Book Gifting' project: this aims to give each new-born child a book every month until the age of 4 or 5;
- The 'Malta Writing Programme': this promotes writing process methodology in an interactive setting for children and their families.

Proper implementation of the National Literacy Strategy, supported by appropriate funding, may help address literacy problems. Bringing different initiatives under a single National Literacy Agency was a positive move, as it helps consolidate the work already done and makes the strategy's approach more comprehensive. Ensuring appropriate collaboration between the Agency and the different educational stakeholders will be key to making the strategy effective.

5. Modernising school education

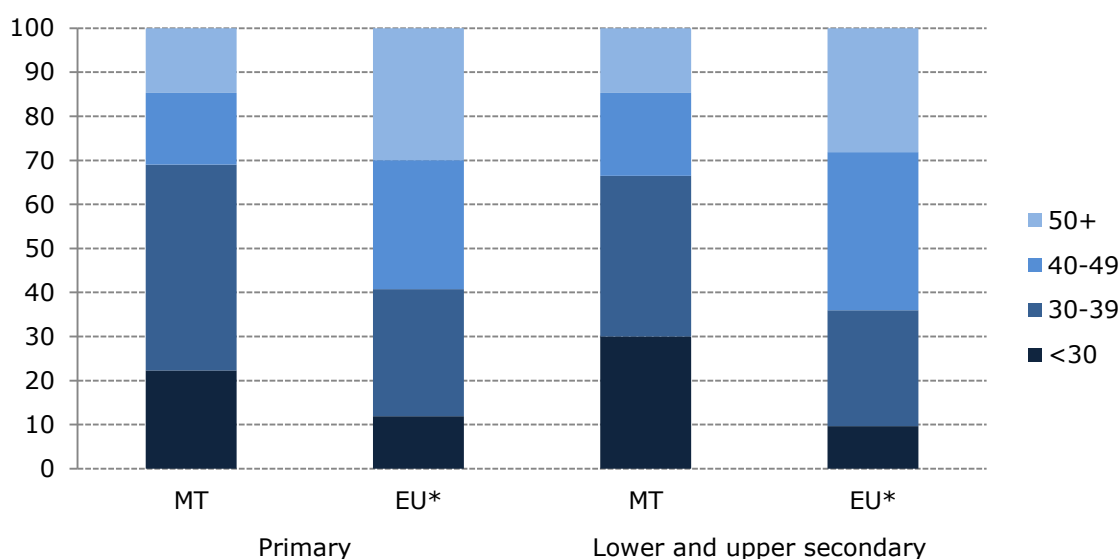
Further progress in reducing early school leaving, and in basic skills attainment, will strongly depend on quality of teaching (European Commission 2012). As some major changes have been going on in the school sector in Malta (e.g. the introduction of mixed ability classes, benchmarking examination and e-learning tools), staff professional development is required in these areas, so as to promote student-centred learning. Both the Early School Leaving Strategy and the Literacy Strategy acknowledge the need to improve professional development of teachers at all stages of their career. So far, the main measure envisaged is setting up an institute for continuous professional development of teachers in 2015. The government also plans to reform initial teacher training by introducing a two-year Master's degree in Teaching and Learning, which will represent the route towards obtaining a teacher's warrant and which may be pursued after obtaining a first-cycle degree in a subject area or a related area of the curriculum.¹⁸⁸ Lasting commitment in the coming years will be key, as measures to improve quality of teaching necessarily require a long-term policy perspective. The fact that the teaching force is quite young (Figure 3) may facilitate the task.

On digital competences, in 2014 the government published the National Digital Strategy 2014-20 (Digital Malta 2014). The strategy aims to promote ICT within education by:

- investing in comprehensive ICT infrastructure for teachers, students and parents;
- encouraging a digital mind-set;
- widening learning opportunities;
- supporting teachers in using e-learning platforms and other digital learning technologies.

A pilot project aiming to provide tablets to fourth-grade pupils in primary schools took place between March 2014 and March 2015 and involved 340 students in 20 schools. The project is currently being assessed to determine what kind of tablet should be adopted and how it should be mainstreamed to all primary schools in 2016/17, starting from grade 4.

¹⁸⁸ The current initial teacher training involves a Bachelor of Education degree in Primary Education for primary teachers. For secondary level teachers, there are currently two routes: a Bachelor of Education degree over four years or a one-year postgraduate Certificate in Education (still level 6 on the Malta Qualifications Framework) following a Bachelor's degree in the subject area.

Figure 3. Distribution of teachers by age group at different education levels (2012)


* Unweighted average

Source: European Commission calculations based on Eurostat data

6. Modernising higher education

The tertiary education attainment rate of people aged 30-34 is still among the lowest in the EU (26.6% in 2014) and well below the Europe 2020 national target of 33%, although the trend is moderately increasing (at + 3.2 percentage points over the last 3 years). The gender gap (female rate minus male rate) is slightly below the EU average: 7.6 percentage points compared with 8.7 percentage points. Inbound graduate mobility is rather high at master's level. The employment rate of recent tertiary graduates¹⁸⁹ increased by 1.5 percentage points between 2013 and 2014 and is now the highest in the EU (94.6%).

Malta has created a quality assurance framework for further and higher education. Several measures to raise participation in tertiary education are ongoing. In order to encourage more students to embark on a career in priority sectors for the Maltese economy, the government issued calls under the Malta Government Scholarship Schemes, both at undergraduate and postgraduate level, and the 'Master it!' scholarship scheme at postgraduate level. Moreover, in 2015 the government plans to introduce a post-doctoral grant scheme called 'Reach High Scholars Programme' (Ministry for Finance 2015, p. 25). Additionally, the government has also introduced further tax incentives for students when continuing their education at tertiary level. All these measures may increase the number of highly skilled workers and help make Malta's economy more competitive in the medium term.

7. Modernising vocational education and training and promoting adult learning

As the economic crisis had only a limited impact on Malta's economy, both the youth unemployment rate (11.8% in 2014) and the share of young people not in employment, education or training (11.5% of 15-24 year-olds in 2014) are well below the EU average. The employment rate of recent upper secondary graduates¹⁹⁰ decreased by about 4 percentage points between 2013 and 2014, but remains among the highest in the EU (at 86.8% in 2014). Participation of students in vocational education and training (ISCED 3 level) seems to have declined substantially in recent years. However, this is because, as from 2011, part-time

¹⁸⁹ People aged 20-34 who left education between 1 and 3 years before the reference year.

¹⁹⁰ People aged 20-34 who left education between 1 and 3 years before the reference year.

courses are excluded from the indicator.¹⁹¹ Adult participation in lifelong learning is quite low (7.1% compared to an EU average of 10.7% in 2014). This is due to very low participation by people with low educational attainment (2.8%), who still represent the majority (57.8% in 2014) of the Maltese adult population. By contrast, the participation rates of adults with medium and high educational attainment are in line with the corresponding EU averages.

The supply of skills has not yet fully adjusted to the labour market's requirements. Bottlenecks have been identified across the entire skills spectrum (European Commission 2014). Due to the small size of the economy, employers face a structural challenge in recruiting specialised people with relevant work experience. Among the highly-skilled sectors, healthcare, finance and information technology stand out as those where demand considerably exceeds supply. Maltese employers have resorted to recruiting skilled workers from abroad, but foreign labour tends to be more difficult to retain. Moreover, despite increased take-up of work-based learning,¹⁹² there remains scope for strengthening governance and partnerships between providers and employers. Malta has not yet developed an integrated information system, where systematic data on vacancies across the whole economy could be collected, nor a clear framework for monitoring and anticipating skills needs.¹⁹³ Participation in lifelong learning, still limited, also constrains the employability of Maltese residents, in particular among low-skilled workers and among older workers whose skills are often outdated, jeopardising their employability.

A variety of measures in the area of vocational education and training have started being implemented. Having consulted social partners, the government is creating a single national apprenticeship scheme to raise quality and improve its responsiveness to the needs of the labour market. The scheme will cover a larger number of qualification levels and also includes a system of tax deductions introduced by the 2014 budget (Ministry for Finance 2013). More vocational courses with apprenticeship components are being introduced, covering additional subjects, and the number of apprenticeships has gone up in order to meet the high demand. Business involvement in the design of more attractive and higher quality apprenticeships can still be further developed and, so far, demand for apprenticeships exceeds supply.

The National Commission for Further and Higher Education has introduced the first system and structures for validation of informal and non-formal learning consistent with the Malta Qualifications Framework. Malta also plans to set up a Skills Council to better align educational outcomes with labour market relevance (Ministry for Education and Employment 2014c), while a 'virtual labour market' is meant to make it easier to match skills with work placements. By end-2015 the government will be launching an employability index, which will offer new guidelines on available work opportunities. The authorities have also designed a lifelong learning strategy with a view to increasing participation and have set aside specific funding for employers to train their employees through the European Social Fund. The policy response seems to be moving in the right direction.

References

Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Malta and delivering a Council opinion on the 2015 Stability Programme of Malta, 2015/C 272/21, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_malta_en.pdf

Digital Malta (2014), National Digital Strategy 2014-2020, <https://digitalmalta.gov.mt/en/Pages/Content/DMDownload.aspx>

¹⁹¹ This change is in line with Eurostat recommended methodologies.

¹⁹² According to national information, 75% of graduates find full-time employment after completing an apprenticeship.

¹⁹³ Coverage of vacancies by the Maltese public employment service is only partial. However, the positive labour market outcomes currently being obtained by the public employment services have led Malta to decide not to introduce an obligation for employers to notify all their vacancies to the public employment service. At the same time private sector employees are free to use the recruitment sources that best suit them including those provided by private employment services.

European Commission (2012), Supporting the Teaching Professions for Better Learning Outcomes, SWD(2012) 374, http://ec.europa.eu/education/policy/school/doc/teachercomp_en.pdf

European Commission (2014), Mapping and Analysing Bottleneck Vacancies in EU Labour Markets – Malta, <http://ec.europa.eu/social/main.jsp?catId=993&langId=en&newsId=2131&moreDocuments=yes&tableName=news>

IEA (2012), TIMSS and PIRLS 2011: Achievement Results in Reading, Mathematics, and Science, <http://timssandpirls.bc.edu/data-release-2011/pdf/Overview-TIMSS-and-PIRLS-2011-Achievement.pdf>

Ministry for Education and Employment (2014a), A national literacy strategy for all in Malta and Gozo 2014-2019, <http://education.gov.mt/en/Documents/Literacy/ENGLISH.pdf>

Ministry for Education and Employment (2014b), A strategic plan for the prevention of early school leaving in Malta, <http://education.gov.mt/ESL/Documents/School%20Leaving%20in%20Malta.pdf>

Ministry for Education and Employment (2014c), The national employment policy, <http://education.gov.mt/employment/Documents/EMPLOYMENT%20POLICY%20DOC%20sml.pdf>

Ministry for Finance (2013), Budget Speech 2014, https://mfin.gov.mt/en/TheBudget/Documents/The_Budget_2014/Budget2014_Speech_EN.pdf

Ministry for Finance (2014), Budget Speech 2015, https://mfin.gov.mt/en/The-Budget/Documents/The_Budget_2015/final-budget_speech_eng.pdf

Ministry for Finance (2015), Malta National Reform Programme, https://mfin.gov.mt/en/Library/Documents/NRP/nrp_2015_en.pdf

OECD (2009), PISA 2009 key findings, <http://www.oecd.org/pisa/keyfindings/pisa2009keyfindings.htm>

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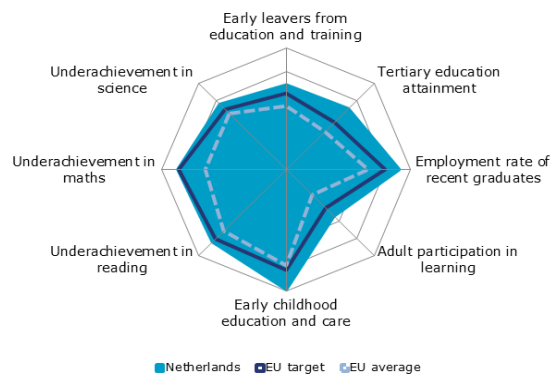
Netherlands

1. Key Indicators and Benchmarks

		Netherlands		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	:	14.0% ¹²	:	17.8% ¹²
	Maths	:	14.8% ¹²	:	22.1% ¹²
	Science	:	13.1% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP	5.6%	5.5% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure	11.8%	11.8% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men	10.8%	10.3%	15.2%	12.7%
	Women	7.2%	6.8%	11.5%	9.5%
	Total	9.1%	8.6%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men	37.3%	41.3%	31.0%	33.6%
	Women	44.8%	47.9%	38.7%	42.3%
	Total	41.1%	44.6%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		99.6%	99.5% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)	:	93.2% ¹³	:	84.6% ¹³
	Special needs education	:	35.8% ¹³	:	32.4% ¹³
	Multicultural settings	:	13.0% ¹³	:	13.2% ¹³
	ICT skills for teaching	:	48.1% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages	78.8%	73.6% ¹²	63.0%	:
Share of ISCED 3 students in vocational education and training (VET)		69.1%	67.1% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4	89.1%	83.4%	71.3%	70.8%
	ISCED 5-8	94.4%	90.6%	82.5%	80.5%
	ISCED 3-8 (total)	92.2%	87.3%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)	:	9.4% ¹³	:	:
	Inbound graduates mobility (master)	:	20.4% ¹³	:	:
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	16.7%	17.8%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The Netherlands has a high tertiary education attainment rate and made good progress in reducing the number of early school leavers, which can in part be attributed to the implementation of a comprehensive strategy on early school leaving. The proportion of secondary level students in vocational education and training (VET), the employment rate of recent upper secondary graduates and adult participation in lifelong learning are all significantly above the EU average. The results of international surveys show educational performance in the Netherlands to be good, but, in contrast to other countries, not to have improved in recent years. Action is taken in particular to improve numeracy skills in primary, secondary and vocational schools. The other main challenges for the Netherlands are the ageing teaching population and a shortage of well-qualified teachers, in particular for teaching languages, maths and science and for teaching students with special needs.

3. Investing in education and training

General government expenditure on education as a proportion of GDP is higher than the EU average (5.5% compared to 5.0% in 2013).¹⁹⁴ General government expenditure on education is expected to remain constant as a percentage of GDP in the coming years. Funding per student in primary, secondary education and secondary vocational education is expected to increase slightly in nominal terms between 2014 and 2018. An additional EUR 650 million is budgeted for quality improvement at all levels of education, research and innovation in 2015. For the years 2016 to 2019, an additional EUR 600 million per year has also been set aside for specific aspects of education, such as preventing students from repeating years, better tailoring teaching methods to students' needs, improving the quality of technical vocational education and strengthening the international aspect of higher education.

The current, partly grant-based, student finance system for tertiary education is being replaced. As of September 2015, students will be able to take out low interest loans provided by the government to finance their studies. Repayment of these loans will depend on the students' income after graduation. The system includes special provisions for students from low-income families. Savings resulting from this measure are to be re-invested in education, particularly in measures designed to improve the quality of higher education.

4. Tackling inequalities

The Netherlands has made good progress in reducing the number of early school leavers. In 2014, early school leaving stood at 8.6%, an improvement on the rate of 9.2% recorded in 2013 and a continuation of the falling trend seen in recent years. The Netherlands' early school leaving rate is now moving closer to its Europe 2020 national target of 8%. Early school leaving is somewhat higher among foreign-born students (10.4% compared to 8.3%). There are also substantial differences between different regions in the Netherlands, with rates ranging from 6.7% in Utrecht to 14.3% in Zeeland.

Almost all children participate in early childhood education and care (ECEC) from age 4 at the latest (99.5% in 2014 compared to an EU average of 93.1%). High participation in ECEC is known to be one factor that can help prevent early school leaving. National data show that in 2013, 39% of all children aged 0 to 4 were attending some form of childcare (including nursery schools), a fall from the participation rate of 44% recorded in 2011 (CBS 2014a).

The Netherlands generally achieved relatively good scores in the OECD PISA 2012 survey compared to the EU average (OECD 2013b). Contrary to a number of other countries, however, educational performance has not improved further in recent years. The competence level in

¹⁹⁴ Source: Eurostat, General government expenditure by function (COFOG) database.

mathematics has decreased somewhat since 2009. On the positive side, the proportion of low-achieving students is relatively low in all three areas tested (reading, mathematics and science).

The Netherlands' success in reducing early school leaving can, at least partially, be attributed to the Ministry of Education's programme on dropping-out (*Aanval op Uitval*). This programme involved a variety of measures designed to reduce early school leaving. According to the 2015 National Reform Programme (Ministry of Economic Affairs 2015), reducing early school leaving rates will become part of the quality agreements concluded between the Ministry of Education and the institutes for secondary vocational education. Although the early school leaving rate in secondary vocational education has fallen significantly throughout recent years, the highest numbers of early school leavers are still in this area.

The most important reform to primary and secondary education in recent years was the introduction of inclusive education (*passend onderwijs*) for children with special educational needs in August 2014. The main change is that schools now have a duty of care (*zorgplicht*). This means that the school has the responsibility to find a place for the child in a suitable educational setting. This can be either in a school for children with special educational needs or in a mainstream school that is able to provide additional support and guidance.

The quality of early childhood education (in childcare facilities and nursery schools and through intervention programmes) will be improved by further integration of childcare and nursery schools. The main focus lies on (1) providing children aged 2.5 to 4 with a more stimulating environment that will further their development, by giving childcare professionals more training and by employing better qualified teachers and/or child minders; (2) improving the transition from early childhood education to primary education by setting development goals and stimulating the use of a system for monitoring children's progress; (3) developing a uniform quality assessment framework and financing structure for working parents to cover all types of early childhood education and care; (4) allowing local authorities to develop solutions that are adapted to local needs.

In reaction to the stagnation of performance in particular in numeracy, measures have been introduced to improve education in this area. One of these is the national numeracy test for secondary and vocational education officially introduced in 2013-14. While first results confirmed the concerns previously voiced at national level about students' skills this area, the results have recently been improving (College voor Toetsen en Examen 2015). The test is compulsory for secondary school students (except for the 'basic vocational')¹⁹⁵ track as of the 2015-2016 school year. Students are required to pass the national numeracy test in order to receive their secondary school certificate. This also means that all students entering higher education have a guaranteed level of numeracy skills. Schools receive intensive support by a dedicated service (*Steunpunt taal en rekenen vo*).

5. Modernising school education

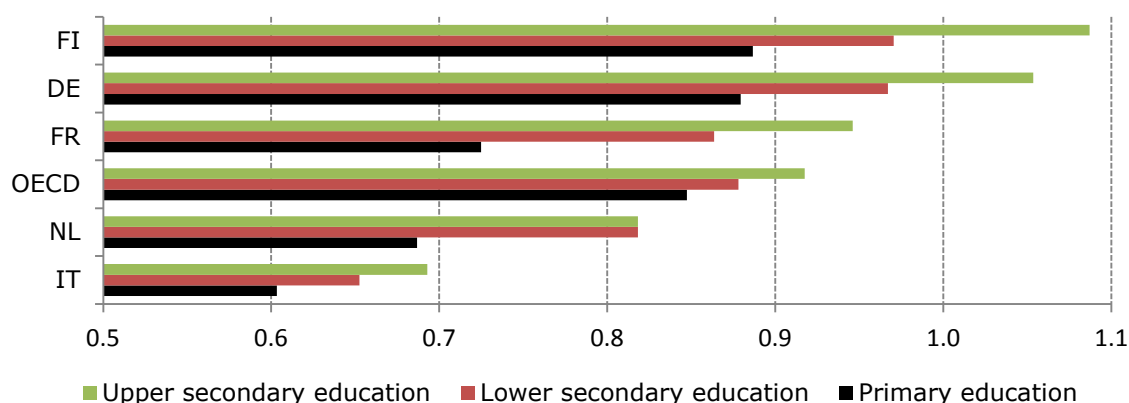
According to the 2013 OECD Teaching and Learning International Survey (TALIS), Dutch teachers display a professional attitude, are satisfied with their jobs and feel reasonably valued in their work (OECD 2014b). The survey also highlights a number of significant challenges the Netherlands is facing – more needs to be done to attract the best candidates into the teaching profession and to improve students' motivation. A further, serious challenge is the ageing teaching population and the shortage of qualified, high-quality teachers for specific subjects (in particular languages, maths and science). Around 70% of Dutch head teachers report that the quality of education provided is being compromised by shortages of qualified and/or high-quality teachers and of teachers able to teach students with special needs. Only 20% of Dutch teachers state that they give different work to students with learning difficulties and/or to those with the

¹⁹⁵ vmbo-b: voorbereidend middelbaar beroepsonderwijs – basis.

potential to progress more quickly. Teachers in the Netherlands are slightly less likely to express a positive view on the value of ICT for teaching and learning than are teachers in OECD countries on average. The average student score in computer and information literacy is, however, high as stated in the International Computer and Information Literacy Study (IEA 2014).

Compared to the OECD average, teachers in the Netherlands are, on the one hand, less well paid. On the other hand, the maximum achievable salary is one of the highest in the OECD. The difference between a teacher's earnings and the average earnings of an individual with tertiary education is, proportionally, larger than average (Figure 2). Teachers in the Netherlands also have a slightly higher than average number of hours to teach. The average class size in primary education in the Netherlands was 23 children in 2012 (compared to an OECD average of 21). Also the ratio of students to teaching staff in secondary education was slightly higher than the OECD average (17 to 13). There is a shortage of secondary school teachers, but no corresponding shortage of primary school teachers.

Figure 2. Ratio of teachers' salaries to earnings for full-time workers with tertiary education (2012)



Source: OECD (2014a)

Since the 2014/15 school year, all students in the final year of primary school (i.e. in the eighth grade) have been required to sit a final exam designed to help identify the most appropriate type of secondary education. The school's opinion, however, takes precedence over the test results. This opinion is to be based on the aptitude and talents of a student, their academic performance, the progress they have made throughout their time at that school and their concentration, motivation and perseverance.

Teachers can access resources and guidance on using ICT for learning from Knowledge Net (*Kennisnet*). This is a non-government organisation but receives government funding. Professional development relating to ICT is available to teachers, but there is no documented support for such courses from the Ministry of Education.

The Teachers Agenda 2013-2020 includes plans and actions to improve the career prospects for teachers and to make the teachers profession more attractive. In order to address the shortage of secondary school teachers for languages, maths and science, the government has introduced more flexibility in teacher training programmes and has also added extra coaching, with the aim of reducing the number of teachers dropping out of training (see Box 1).

As part of the modernisation of school education, measures are also being introduced to make the education system, and in particular secondary education, more flexible (*flexibiliseren van het onderwijssysteem*). In particular, more flexibility will be offered in relation to the levels of

exams and alternatives to grade retention will be examined. The government asked the Interministerial policy research group (IBO) to prepare a report on this issue, with a view to discussing the outcome in Parliament (Ministry of Education, Culture and Science 2015a).

Box 1. Teacher education and employment conditions

Teacher training programmes have come in for considerable criticism in recent years. It has been claimed that the methods used to train teachers no longer provide teachers with the skills they need in the classroom. In response, the government has introduced measures to improve the knowledge and expertise of teachers, has put greater emphasis on core subjects and has increased the number of teaching hours. These plans are set out in the 2013-2020 Teachers Agenda (Ministry of Education, Culture and Science 2013). The agenda includes measures designed to improve the quality of teaching and teacher training and to improve career prospects. It has been developed on the basis of existing policies, in consultation with schools, teachers and teacher trainers.

The main changes proposed in the agenda are: raising entry requirements for teacher training programmes; improving teacher training; promoting attractive and flexible learning pathways; giving teachers embarking on their careers a better start; transform schools into learning organisations which also facilitate the learning of teachers; offering teachers more training ensuring that all teachers are capable and competent; and creating a strong professional body for the teaching profession.

EUR 115 million is being made available in 2015 for grants to teachers to follow training. The freeze put on teachers' salaries comes to an end in 2015, and salaries will progress in line with the overall market. The government has begun modernising the general education curriculum.

The teaching profession's register will be granted legal status in 2017, meaning that only teachers who are registered and have recognised qualifications will be allowed to teach. Registration will allow teachers to demonstrate that they are competent and capable, and will also give them opportunity to maintain and further develop their skills.

The measures taken to improve the quality of teaching appear to be delivering positive results. The Inspectorate of Education's 2015 report (Inspectorate of Education 2015) states that the quality of primary school teachers has improved in recent years (2011-14). According to the report, 75-80% of those completing teacher training programmes say that the programme has given them sufficient knowledge and skills in arithmetic and mathematics and in Dutch language. The Dutch/Flemish organisation responsible for the accreditation of higher education has also recognised the increase in quality of the training offered by the institute for teachers' education.

6. Modernising higher education

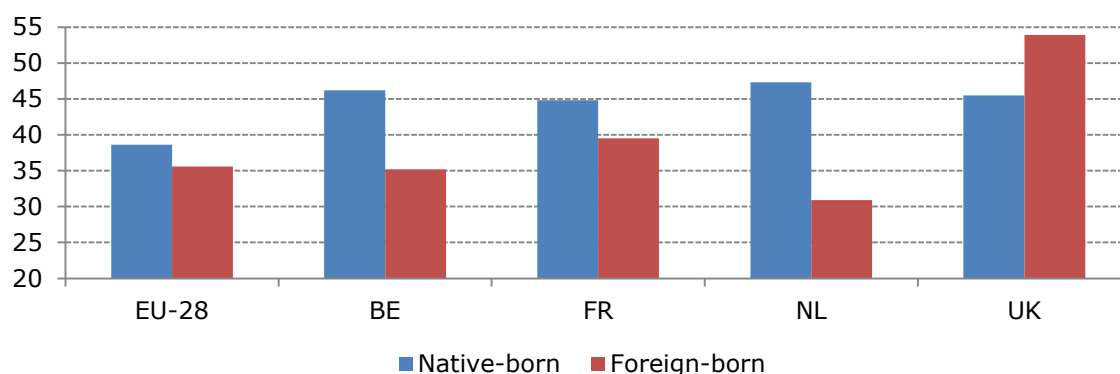
The tertiary education attainment rate, for which the Europe 2020 national target is 40%, had already reached 44.6% in 2014. The increase in tertiary education attainment has partly been achieved by providing guidance to improve students' choice of courses and by encouraging students to complete their studies. The employment rate of recent tertiary graduates¹⁹⁶ is also still very high, at 90.6% in 2014.

The gap between the tertiary education attainment rate (ISCED levels 5-8) of native- and foreign-born people aged 30-34 is considerably larger in the Netherlands than the European average (Figure 3), with the rate for foreign-born people 16 percentage points lower than that for the native-born population in 2014. These figures have to be interpreted with care, as migration patterns differ between countries. The composition of the migrant population as well as language barriers vary. Nevertheless, this point is recognised as a challenge in the Netherlands and addressed in the 2015-2025 Strategic Agenda for Higher Education and

¹⁹⁶ People aged 20-34 who left education between one and three years before the reference year.

Research (*Strategische Agenda Hoger Onderwijs en Onderzoek*) that was launched in July 2015 (Ministry of Education, Culture and Science 2015b).

Figure 3. Tertiary educational attainment rate of people aged 30-34 by country of birth (2014)



Source: Eurostat

The ambition in this strategy for 2025 is that higher education will enable all students to achieve their full potential. This calls for a greater focus on all-round development. The aim is not merely to instil sufficient knowledge to allow the student to obtain a qualification, but to provide a sound basis for personal development and socialization. The key role in this process falls to the professors and teaching staff. Good higher education must be embedded within 'communities of learning' in which there is ample opportunity for critical discussion and reflection. The increasing diversity among students demands an educational approach that is more tailored to students' needs. Institutes must be able to offer greater differentiation in both educational content and teaching methods. This requires them to identify their target groups and to define clearer and more readily recognizable profiles. They must be mindful of the different needs of specific groups of students.

A main policy initiative in higher education in recent years has been the establishment of performance agreements between the Ministry of Education and (research) universities as well as universities of applied sciences. The agreements cover: quality of education and student achievement; profiling of education; focus areas in research; and knowledge utilisation and valorisation. Approximately 7% of the total budget for higher education is linked with the performance agreement. The largest part of these resources (5%) is 'conditional financing'. This means that for the 2013-16 period, institutions receive the funds if there is a performance agreement. For the 2017-20 period, they receive the funds only if they have achieved the targets agreed on the quality of education and student achievement. The other 2% are called 'selective funding', meaning that the allocation of this part of the budget is based on competition between higher education institutions and that those with a better plan receive a larger part of the budget.

In its first evaluation (mid-term review 2014) following the introduction of the performance agreements, the Review Committee for Higher Education, which monitors the agreements, concluded that most universities have made substantial progress, as measured by the indicators of student achievement and quality of education. In some cases, the targets have already been achieved. What is more, all universities have made progress in profiling and developing focus areas. The review committee is more concerned of the performance of the universities of applied sciences. Improvement of performance is a challenge for universities of applied sciences as they need to increase the level of their study programmes. Preliminary results show that a large number of universities applied sciences have made little or, in some cases, even no

progress towards improving student achievement and the quality of education since the introduction of the agreements.

The government has adopted legislation on higher education (*Kwaliteit in verscheidenheid hoger onderwijs*), designed to offer prospective students, including the most talented, a more differentiated range of courses (Ministry of Education, Culture and Science 2014). The internationalisation of higher education has also received special attention. The Government encourages international exchange programmes and has ensured the student aid system allows students to go abroad. Students who qualify for a grant in the Netherlands may transfer this support to any other country in full. In addition to grants, students may apply for scholarships for pursuing their education, completing an internship or conducting research abroad.¹⁹⁷

Universities and universities of applied science (VSNU) have voiced their dissatisfaction with the accreditation system currently in place, mainly due to the administrative burden it creates and the bureaucratic procedures. The Ministry of Education is currently carrying out a review of the higher education accreditation system (*accreditatiestelsel 3.0*), with a new system to be introduced in 2017.

7. Modernising vocational education and training and promoting adult learning

The proportion of secondary-level students (ISCED 3) participating in vocational education and training (VET) stood at 67.1% in 2013, compared to an EU average of 48.9%. The employment rate of recent upper secondary graduates¹⁹⁸ is also well above the EU average, at 83.4% in 2014 (EU average: 70.8%). Adult participation in lifelong learning was 17.8% in 2014, whilst the EU average for this measure was 10.7%. The Survey of Adult Skills (PIAAC) showed the literacy and numeracy skills of Dutch adults to be significantly above the EU average. While the proportion of low-skilled adults is comparatively low, the gap between the educational level and numeracy and literacy skills of native- and foreign-born adults is, however, larger than the EU average (OECD 2013a).

In 2014, several initiatives were launched to further improve the 'match' between vocational education and training and the needs of regional labour markets. Particular focus has been given to improving the general quality of education, offering incentives for employers to provide more and better quality internships and providing more opportunities for students' personal development, including by doing more to avoid students dropping out. Further changes still need to be made to increase the amount of work-based learning in vocational education and training programmes. EUR 400 million will become available as of 2015 from investment and performance budgets created as part of the quality agreements in secondary vocational education. The aim of these agreements is to give institutes for secondary education an incentive to invest in the quality of education.¹⁹⁹ Information about the performance of each institute for secondary vocational education will also be made publicly available.

An independent advisory committee on education and the labour market will monitor whether institutions offering vocational education and training are well connected to the regional labour market. Young people wishing to start vocational education and training courses should have a better overview of the quality of education, the employment prospects and the content and organisation of the education being offered by different providers. As of August 2015, institutions for vocational education and training are therefore legally required to provide prospective students with comprehensive information. In extreme cases, the Minister of

¹⁹⁷ Rijksoverheid: <http://www.rijksoverheid.nl/onderwerpen/onderwijs-en-internationalisering/financiering-studie-en-stage-in-het-buitenland>.

¹⁹⁸ People aged 20-34 who left education between one and three years before the reference year.

¹⁹⁹ Kwaliteitsafspraken MBO: <http://www.kwaliteitsafsprakenmbo.nl/beleid/financien>.

Education is authorised to intervene if providers of education and the regional labour market actors are not fulfilling their responsibilities.

Although the level of skills mismatches in the Netherlands is relatively low, a shortage of ICT professionals is limiting the potential of the digital economy to generate growth and create new jobs. This problem is being addressed through a range of programmes that aim to better align education with the labour market, including the *Techniekpact*, which is designed to increase the number of students following technical education.

With regard to improving literacy and numeracy levels of adults with low levels of basic skills, the 2012-15 Action Plan focussed on improving the quality of basic skills training, developing better testing and monitoring instruments and reaching out to new target groups. Pilot action will be launched in 2016 to strengthen lifelong learning at the level of higher education and to counter the decreasing participation of adults in formal part time education (i.e. courses leading to diploma). To meet the needs of the adult target group, the pilots will improve the flexibility of curricula, facilitate the validation of knowledge and skills, and strengthen work-based and online learning. Student vouchers will be tested in a few selected bachelor programmes concerning sectors such as health care and technology for which employer organisations have indicated an important demand for highly educated employees.

References

CBS (2014), Jaarrapport Integratie 2014, <http://www.cbs.nl/NR/rdonlyres/E6878ED8-0347-4ED0-8A8D-360AB79022B2/0/jaarrapportintegratie2014pub.pdf>

IEA (2014), International Computer and Information Literacy Study ICILS, http://www.iea.nl/icils_2013.html

Inspectorate of Education (2015), 2015 report, <http://www.onderwijsinspectie.nl/nieuws/2015/03/pabo-s-leggen-voldoende-basis-voor-het-leraarsvak.html>

Ministry of Education Culture and Science (2013), 2013-2020 Teachers Agenda, <http://www.rijksoverheid.nl/onderwerpen/werken-in-het-onderwijs/lerarenagenda-2013-2020>

Ministry of Education Culture and Science (2015a), Interdepartementaal Beleidsonderzoek (IBO) Effectieve leerroutes funderend onderwijs, <http://www.rijksbegroting.nl/system/files/10/taakopdracht-ibo-effectieve-leerroutes-funderend-onderwijs.pdf>

Ministry of Education Culture and Science (2015b), Strategische Agenda Hoger Onderwijs en Onderzoek, <https://www.rijksoverheid.nl/documenten/beleidsnotas/2015/07/07/de-waarde-n-van-weten-strategische-agenda-hoger-onderwijs-en-onderzoek-2015-2025>

Ministry of Education Culture and Science (2014), Ruim baan voor toptalent 33 400 Nr. 166 Brief van de Staatssecretaris van onderwijs, cultuur en wetenschap

Ministry of Economic Affairs (2015), National Reform Programme 2015. The Netherlands, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_netherlands_en.pdf

OECD (2013a), OECD Survey of Adult Skills (PIAAC), <http://www.oecd.org/site/piaac/>

OECD (2013b), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

VSNU (2015), Accreditatiestelsel 2017, <http://www.vsnu.nl/files/documenten/Domeinen/Onderwijs/Accreditatie%202017.pdf>

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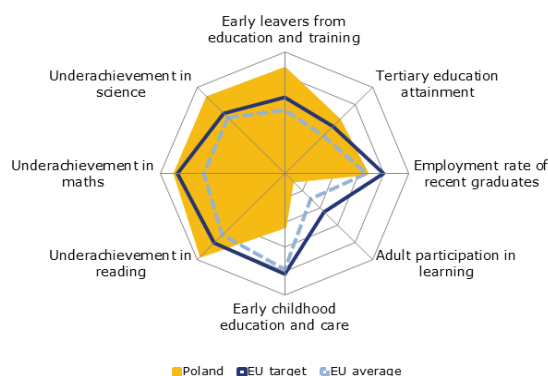
Poland

1. Key Indicators and Benchmarks

			Poland		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	●	:	10.6% ¹²	:	17.8% ¹²
	Maths	●	:	14.4% ¹²	:	22.1% ¹²
	Science	●	:	9.0% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		5.5%	5.3% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		12.5%	12.5% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		7.4%	7.3%	15.2%	12.7%
	Women		3.7%	3.3%	11.5%	9.5%
	Total	●	5.6%	5.4%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		30.0%	34.2%	31.0%	33.6%
	Women		43.2%	50.2%	38.7%	42.3%
	Total	●	36.5%	42.1%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		●	78.4%	83.8% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	93.7% ¹³	:	84.6% ¹³
	Special needs education		:	57.6% ¹³	:	32.4% ¹³
	Multicultural settings		:	4.9% ¹³	:	13.2% ¹³
	ICT skills for teaching		:	51.5% ¹³	:	51.0% ¹³
Foreign language learning			79.0%	93.4% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			48.3%	48.7% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		65.8%	65.6%	71.3%	70.8%
	ISCED 5-8		82.6%	83.7%	82.5%	80.5%
	ISCED 3-8 (total)	●	75.3%	75.6%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	: ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	: ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	●	4.4%	4.0%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Poland has one of the EU's lowest proportions of early school leavers and of students with underachievement in basic skills. There has also been rapid progress on tertiary education attainment and increased participation in early childhood education and care (ECEC). The Polish education and training system has undergone profound changes in terms of its structure, organisation, management and core curricula in the face of the population's increasingly high educational aspirations.

However, a significant number of challenges remain. These include issues relating to access to quality early childhood education and care, particularly for children under the age of three, the teaching of transversal skills, the attractiveness of vocational education and training (VET), and the relevance of higher education to the labour market. In addition, the low level of adult participation in lifelong learning and poor skills levels among adults, particularly in ICT, remain a source of concern for the future.

3. Investing in education and training

General government expenditure on education as a proportion of GDP has remained relatively stable since 2000 and is close to the EU average (5.3% compared with the EU average of 5% in 2013).²⁰⁰ There was no significant fall in education expenditure as a result of the economic and financial crisis, which has affected the Polish economy only marginally on the whole. The proportion of spending allocated to education is above the EU average (12.5%, compared with 10.3 %). Education projects receive a significant amount of funding from the European Structural and Investment Funds, and in particular from the 2014-20 national operational programme, 'Knowledge, Education and Development' (*Wiedza-Edukacja-Rozwój* — PO WER), and, to some extent, from the 16 regional operational programmes.

In 2013, expenditure on pre-primary, primary and secondary school education amounted to 3.2% of GDP, with both the national and regional authorities' budgets taken into account, in comparison with 3.5% in the EU as a whole. Poland clearly prioritises certain types of education expenditure, e.g. ECEC and pre-school education (Box 1). Public expenditure on higher education in Poland amounted to 1.4% of GDP in 2013 compared with an EU average of 0.8%. Poland has one of the highest proportions of private spending on education in the EU (along with the UK and Cyprus) and a still significant share of students enrolled in privately-owned higher education institutions.

4. Tackling inequalities

Poland is one of the best performers in the EU when it comes to early school leaving, with a rate of 5.4% compared with an EU average of 11.1% in 2014. The Europe 2020 national target is 4.5% and appears to be achievable. Boys are more likely to leave school early (7.3%) than girls (3.3%). However, in the last decade, the early school leaving rate has remained largely unchanged (having already reached 5.4% in 2010). The rate is higher in less-developed parts the country. In Warmińsko-Mazurskie, for example, the rate has been rising steadily for the last two years, and was double the national average in 2013.

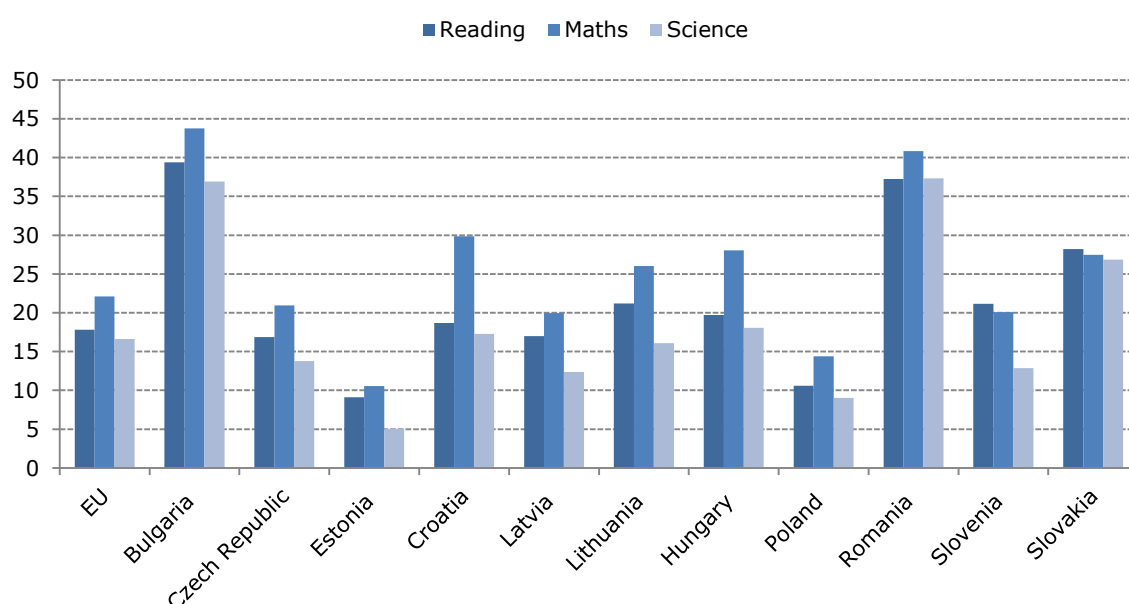
Poland has made very significant progress in terms of the provision of ECEC, in particular pre-primary education, but many issues remain in this area (Box 1).

With regard to basic skills, the rate of low achievement among 15 year-olds in OECD PISA 2012 (OECD 2013c) is significantly lower than the EU average in all three tested fields (Figure 2): 10.6 % for reading (compared with an EU average of 17.8%), 14.4 % for maths (compared with an EU average of 22.1%) and 9.0% for science (compared an EU average of 16.6%).

²⁰⁰ Source: Eurostat, General government expenditure by function (COFOG) database.

However, students' socioeconomic background still has a significant impact on performance. There are also substantial differences in achievement between different types of upper secondary schools (general schools as compared with vocational schools). For example, in 2012 over 46% of students in basic vocational schools were low achievers in literacy. The assessment of the level of basic skills of Polish students should also, however, take into account average performance in both TIMSS (Trends in International Mathematics and Science) and PIRLS (Progress in International Reading Literacy Study) from 2011, particularly for maths. Finally, the level of digital skills of 15-year-olds as measured by ICILS (the International Computer and Information Literacy Study) in 2013 were also remarkably good, with Poland scoring better than e.g. Norway, or neighbouring countries such as Germany and Slovakia (IEA 2014).

Figure 2. Percentage of low-achievers in basic skills for selected Central European countries



Source: OECD (2013c) and European Commission calculations

Poland does not have a specific strategy for tackling early school leaving, but it does have a series of dedicated measures, including monitoring tools, and prevention, guidance and re-integration measures. For instance, the school entry age was gradually lowered from seven to six years. Before 2014 admission of 6 year-olds to grade 1 of primary school was left to parents' discretion. In 2014 education in primary schools was made compulsory for 6-year-old children born before the end of June 2008. Starting in 2015 all 6 year-olds commence compulsory schooling.

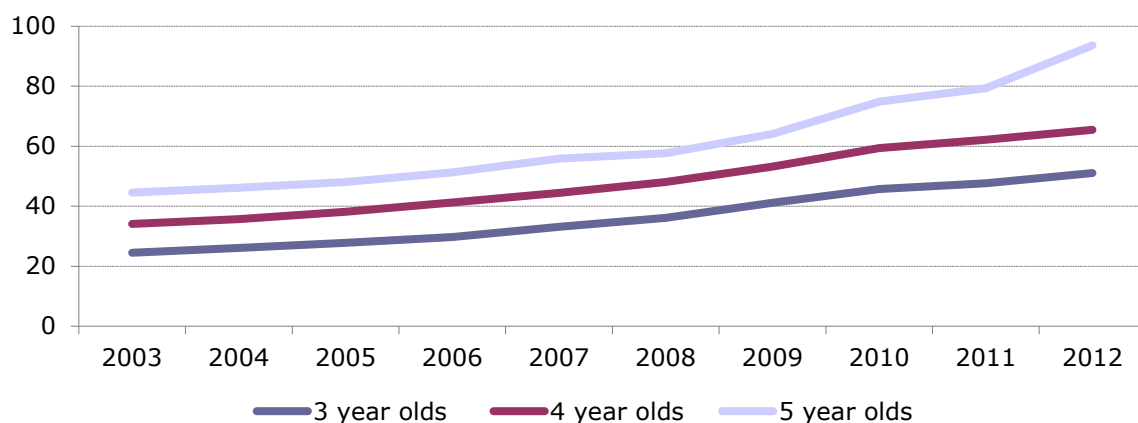
In order to encourage equality of opportunity, the provision of free schoolbooks is introduced gradually across Poland. In the first grade of primary school this scheme has been in place since 2014. In 2015, free schoolbooks will be introduced in the second and fourth grade of primary school and first year of lower secondary school. In 2017, all primary and lower secondary schools' students should be receiving free schoolbooks. In addition, a general reform of the upper secondary school curriculum is being carried out, placing, for example, more emphasis on teaching non-cognitive (transversal) skills.

Finally, the government recently launched the *Bezpieczna i przyjazna szkoła* ('Safe and friendly school') programme for the period 2014-20. It is based on a similar initiative implemented between 2008 and 2013. The new programme, which has a rather limited budget of PLN 6 million a year, aims to create a safe and friendly environment in Polish schools by: increasing

the effectiveness of the education process; strengthening cooperation between students, parents and teachers; creating a supportive atmosphere based on mutual respect and trust; and preventing truancy.

Box 1. Early-childhood education and care (ECEC) in Poland

Participants for ISCED level 0: at 3, 4 and 5 years of age, as a % of population in a cohort



Source: Główny Urząd Statystyczny (GUS)

The national rate of participation in education for 4-6 year-olds in Poland is rising rapidly. It increased from 76.3% in 2010 to 83.8% in 2013, compared with an EU average of 93.1%. Poland reported a rate of 89.2% in 2014 in the National Reform Programme for 2015 (Polish Government 2015). Expenditure from public sources on pre-school education in Poland amounts to around 0.6% of GDP, and from private ones to around 0.1%. Both figures are above the respective OECD and EU averages. However, strong regional disparities remain and there are also significant differences between the level of provision in urban and rural areas. Finally, there is much lower participation among children under three than among older children.

Poland has a dedicated core curriculum for pre-school education. Pre-primary education became compulsory for all 5 year-olds in 2011. From September 2015, ECEC places became a legal entitlement for 4 year-olds. This will be extended to 3 year-olds from September 2017. From September 2015, foreign languages will be compulsory for 5 year-olds and this will be extended to all children in pre-school education from September 2017.

Amendments to the School Education Act (2013) introduced a capping mechanism for school fees, with earmarked grants from the state to local governments to compensate for any differences in costs. To increase the availability of early-childhood education, the state allocates PLN 1.5 billion per year to local governments and guarantees the level of allocation per pupil. The national authorities announced in the autumn of 2014 that investment in new nurseries and pre-school educational infrastructure will double from PLN 50 million to PLN 100 million a year. Poland will also invest PLN 2 billion in the period 2015-20 in building nurseries and other pre-school facilities at companies and higher education institutions. The government also decided to continue the *Maluch* (toddler) programme for children under 3. This programme has a budget of PLN 151 million in 2015 and has created 36 000 new ECEC places (it should be noted, however, that around 372 000 children were born in 2013). Poland has also made a concerted effort to channel investment from the European Structural and Investment Funds (ESIF) 2014-20 into ECEC infrastructure. However, the level of new provision is still quite imbalanced, and often depends on regional authorities' priorities for the ESIF.

In the future Poland will have to address the issue of participation of children under 3 years and the insufficient provision in rural areas. As the number of public and private providers (e.g. kids clubs, day carers) increases, it will also have to ensure that quality and affordability are monitored. Finally, the long-term sustainability of investments co-funded through ESIF will have to be ensured, especially after EU co-financing ends in 2023.

5. Modernising school education

According to the 2013 OECD Teaching and Learning International Survey (TALIS), the percentage of teachers who reported having participated in professional development activities in the previous 12 months is above the EU average (93.7% compared with 84.7%). The proportion of teachers assigning different work to students based on their individual needs is also above the EU average (55.5% for Poland compared with 46% in the EU as whole). The proportion of teachers using ICT for student projects or class work (36.4%) and participating in ICT training (51.5%) is around the EU average. The rate of teachers' participation in special needs education training in Poland was 57.6% 2013, well above the OECD average of 31.7%. Lastly, only 13.6% of teachers participated in training on careers guidance, as opposed to the OECD average of 23.6% (OECD 2014).

Polish teachers' statutory base salaries (measured in purchasing power standard) are still significantly below the OECD average and are among the lowest in EU countries. However, bonuses and allowances considerably increase their level, making them around 30% higher than base statutory salaries, according to Polish authorities. Despite efforts to gradually increase teachers' salaries, teachers' salaries remain modest when compared to earnings of full-time, full-year employees with tertiary education (ranging from 0.71 of such salary in pre-primary to 0.82 in upper secondary education in 2012).

In Poland, the need to encourage more innovative and creative approaches to learning, instead of traditional academic methods, is broadly accepted. Certain experts argue that an excessive focus on preparing students for testing could be a problem when trying to encourage more innovative approaches. One of the key challenges is to improve teacher training on the teaching of transversal skills, such as teamwork, problem-solving, analytical skills, and creativity.

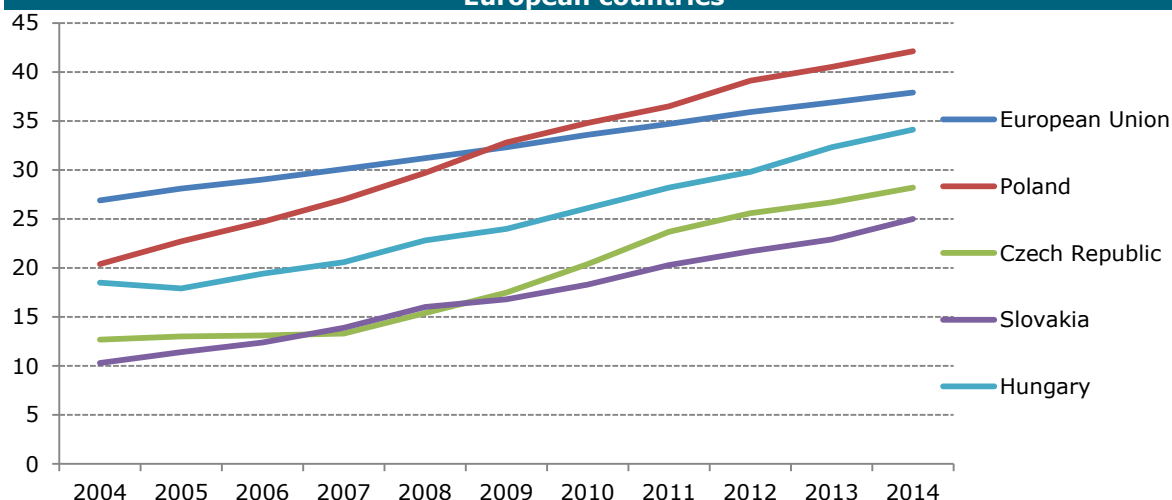
Measures are also being taken to improve training on teaching methods, including the use of ICT in the classroom. Under the Digital School programme, open educational resources (e-textbooks) are made publicly available. Poland will also invest heavily in ICT infrastructure and on online teacher and student support materials to encourage the use of ICT, especially via the ESIF 2014-20. Finally, the Ministry of National Education introduced in 2014 a regulation in which compulsory careers guidance is provided from lower secondary level onwards.

6. Modernising higher education

The Polish tertiary education attainment rate of 30-34 year-olds (Figure 3) rose sharply from 12.5% in 2000 to 42.1% in 2014, surpassing the EU average of 37.9%. The expansion of the private higher education sector was an important factor explaining this development. The Europe 2020 national target is to reach 45%, which appears to be achievable. More women (50.2%) than men (34.2%) have successfully completed tertiary education. The employment rate of recent tertiary graduates²⁰¹ was 83.7 % in 2014, which is still above the EU average of 80.5%, but has fallen from 87% in 2008. The completion rate (OECD 2013a) in Poland (students who have completed at least an ISCED 1997 level 5B or 5A programme) is below the OECD average (62% compared with 68% in 2011), and features considerable gender gap (the completion rate among women is 74% compared with 48% for men). Student mobility flows are relatively low, with only 1.3% of all students coming from outside Poland in 2012.

Very few students complete doctoral studies, and cooperation with the business sector remains insufficient. For instance, doctorate students of science and technology in 2012 represented only 0.2% of the population aged 20-29 years, as opposed to 0.7% in Sweden and 0.5% in the EU as a whole. The number of researchers in Poland (1 753 per million inhabitants) is also very low in comparison with other EU Member States and there is a clear issue in terms of the degree of internationalisation of Polish science and research.

²⁰¹ People aged 20-34 who left education between one and three years before the reference year.

Figure 3. Tertiary education attainment levels (30-34 year-olds) for selected Central European countries


Source: Eurostat

At present, graduates of tertiary education have difficulty finding suitable employment after graduation and the percentage of people employed in positions below their level of qualifications rose from 11% to 19% between 2002 and 2012, which is one of the most marked increases in the EU. At the same time, employers' organisations often complain that recent graduates lack transversal skills, such as teamwork, problem-solving and critical thinking. To address this issue, an amended higher education law entered into force on 1 October 2014. The main objectives of the amendment are to improve the quality of higher education by establishing a system of monitoring of graduates' pathways to better adjust the future educational offer to changes in the demands of the labour market. The government also announced that students will be offered the opportunity to take part in a special traineeship programme in public sector institutions.

Finally, to promote excellence, the government has announced that it will launch a grant programme for the top students to study at leading foreign universities as from 2016. However, to prevent 'brain-drain' (the emigration of highly qualified people), this opportunity will be granted on condition that beneficiaries spend five years working in Poland upon graduation or do a PhD there. Work is also being done to increase the internationalisation of higher education establishments through the newly adopted programme for the internationalisation of Polish higher education institutions, as well through information campaigns, such as 'Ready, Study, Go! Poland'. An important number of those initiatives are also supported by ESF financing.

7. Modernising vocational education and training and promoting adult learning

In 2013, the share of ISCED 3 students in vocational education and training (VET) was 48.7% compared with an EU average of 48.9%. In the 2013/14 school year, initial vocational education and training (IVET) students (*zasadnicze szkoły zawodowe* and *technika*) accounted for 55.3% of all upper secondary students (GUS 2015). The employment rate of recent upper secondary graduates²⁰² (65.6 % in 2014) is below the EU average. In the fourth quarter of 2014, the unemployment rate for graduates of technical upper secondary schools and post-secondary schools (*technika* and *szkoły policealne*) stood at 30.2% (12.6 percentage points lower than in the fourth quarter of 2013) and at 37.3% for basic vocational schools (*zasadnicze szkoły zawodowe*), 11 percentage points lower than in the fourth quarter of 2013. Although the unemployment rate among IVET graduates is falling (GUS 2014), they still have more difficulty

²⁰² People aged 20-34 who left education between one and three years before the reference year.

finding work than higher education graduates (the unemployment rate among higher education graduates was at 21.1%).

The rate of adult participation in lifelong learning in Poland decreased to 4% in 2014. At the same time, the percentage of adults (aged 18-59/64) in Poland who, in 2014, reported having participated in any kind of training or education (training, non-formal and informal education, formal education) in the previous 12 months remained almost unchanged at 37%. Participation tends to be lowest among people with basic levels of education, those over 50 and people who are inactive on the labour market. Adult education and training in Poland is mostly job-related. In 2014, 62% of all training and education in which adults in Poland participated was financed by their employers. At the same time, 60% of those who participated in education and training in 2014 cited employers' needs for specific skills as the main reason for participating (PARP 2015). Nevertheless, no in-depth analysis has been carried out to examine the low rate of adult participation in lifelong learning.

The level of basic skills of adults, in particular as regards ICT, is a source of serious concern. There is a generational gap in ICT skills. While 15-year-olds have very good ICT skills, skills levels among older groups are well below the OECD average, as shown by PIAAC (Programme for the International Assessment of Adult Competencies) results (OECD 2013b). There is also a clear age threshold as people under 34 have a much higher level of basic skills compared with other age groups. The proportion of people refusing or not able to solve problems using a computer was one of the highest in the PIAAC survey, which also indicates a problem in relation to the accessibility and availability of digital equipment in Poland. The low scores on basic skills, general skills and participation in education or training are mirrored by the labour market. In 2014, 80% of recruiters found it difficult to attract employees with the required skills (PARP 2015), compared to 39 % in the EU as a whole (Eurofund 2013). Moreover, since 2010 this rate has been rising steadily (PARP 2015). At the same time, in 2014 43% of employers said that their employees needed upskilling and 3% were not satisfied with the level of their employees' skills (PARP 2015).

With regard to changes in IVET, the implementation of the VET reforms that Poland launched in 2012/13 is ongoing and will be completed by 2016/17. The Minister of National Education declared the 2014/15 school year as the '*Year of VET professionals*' and presented a set of initiatives and measures financed both by the state budget and ESIF. The measures included establishing a VET advisory committee (comprised of business representatives to advise on the challenges in the VET system); creating and launching the Map of Vocational Schools, launching an internet portal devoted to guidance, and a four-party agreement between the Ministers of Education, Economy, Labour and Treasury aiming at cooperation for VET development. More measures are planned within the financial perspectives 2014-20, such as establishing sector skills councils contributing to a revision of curricula and greater cooperation with employers; improving career guidance services and the use of ICT; funding for equipment and teacher training; the development of non-formal and informal training sessions; promoting VET among key stakeholders; monitoring graduates' pathways, and the inclusion of business representatives in examination boards.

Moreover, in June 2014, the second 'Employer of Tomorrow' competition was launched. It aims to showcase employers who successfully implement educational projects targeted at young people to help them prepare to enter the world of work. The competition will run again in 2015. Although these measures are a step in the right direction, the improvement of VET needs to be a continuous process in to secure more quality apprenticeships and increase the proportion of work-based learning. Specific challenges remain, including, in particular, encouraging more employers to cooperate with VET schools, updating the skills of VET teachers and their teaching methods, and providing good quality careers guidance.

Lifelong learning provision is being developed on the basis of two general strategic documents ('Strategy for the Development of Human Capital 2020' and 'Lifelong Learning Perspective'). New measures, co-financed by the European Social Fund, the 'Knowledge, Education and Development' programme (PO WER), and the 16 regional operational programmes, have been introduced in line with these strategies to tackle the issue of low adult participation in lifelong learning. The shift towards demand-driven systems of support for continuing vocational training co-financed by the European Social Fund, and the focus on the quality of support under the ESF are the main principles guiding efforts to improve the situation. The measures also emphasise the important role the social partners and employers' organisations have to play in raising employers' awareness of the benefits of education, identifying labour market needs and encouraging employers to invest in their employees.

At the same time, the Ministry of Labour and Social Policy presented an amendment to the Act on the Promotion of Employment and Labour Market Institutions (*Ustawa o promocji zatrudnienia i insytucjach rynku pracy*) in 2013. From 2014, companies have been able to co-finance training for their employees using the National Training Fund (*Krajowy Fundusz Szkoleniowy*). Moreover, the recent VET reform introduced the possibility of validating full qualifications acquired outside of the formal education system. The amendment to the higher education law of October 2014 also introduced the possibility of validating such qualifications at tertiary level. In addition, Poland has committed itself to adopting the legislative act on the integrated qualifications system, covering formal, informal and non-formal education by the end of 2015, and ensuring the whole qualifications system (for full and partial qualifications) is operational by the end of 2016. This is a very ambitious objective, especially given the current political and electoral calendar in Poland. Most of the above-mentioned measures and initiatives are at an early stage of implementation and it is not yet possible to fully evaluate their effects.

References

Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Poland and delivering a Council opinion on the 2015 Stability Programme of Poland, 2015/C 272/16, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_poland_en.pdf

Eurofound (2013), 3rd European Company Survey, <http://www.eurofound.europa.eu/surveys/ecs/2013/european-company-survey-2013>

GUS (2014), Quarterly information on the labour market in the 4th quarter of 2014

IEA (2014), International Computer and Information Literacy Study ICILS, http://www.iea.nl/icils_2013.html

OECD (2013a), Education at a Glance, <http://www.oecd.org/edu/eag2013%20%28eng%29--FINAL%20%20June%202013.pdf>

OECD (2013b), OECD Survey of Adult Skills (PIAAC), <http://www.oecd.org/site/piaac/>

OECD (2013c), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

PARP (2015), Study of Human Capital in Poland. Population survey 2010-2014, <http://en.bkl.parp.gov.pl/>

Polish Government (2015), National Reform Programme 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_poland_pl.pdf

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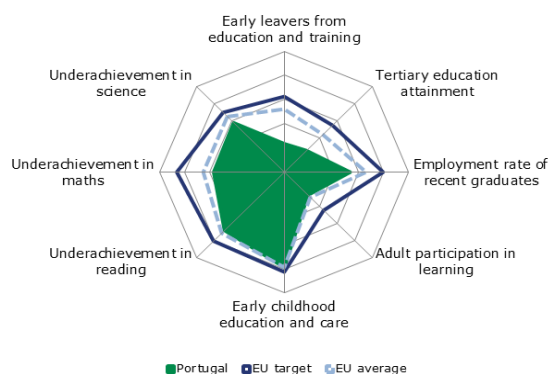
Portugal

1. Key Indicators and Benchmarks

			Portugal		EU average			
			2011	2014	2011	2014		
Educational poverty and spending cuts: challenges for the education sector								
Share of 15 year-olds with underachievement in:	Reading	●	:	18.8% ¹²	:	17.8% ¹²		
	Maths	●	:	24.9% ¹²	:	22.1% ¹²		
	Science	●	:	19.0% ¹²	:	16.6% ¹²		
Education investment	Public expenditure on education as a percentage of GDP		7.3%	6.8% ¹³	5.1%	5.0% ¹³		
	Public expenditure on education as a share of total public expenditure		14.5%	13.5% ¹³	10.5%	10.3% ¹³		
Education attainment levels of young people across Europe								
Early leavers from education and training (age 18-24)	Men		28.1%	20.7%	15.2%	12.7%		
	Women		17.7%	14.1%	11.5%	9.5%		
	Total	●	23.0%	17.4%	13.4%	11.1%		
Tertiary education attainment (age 30-34)	Men		21.8%	23.2%	31.0%	33.6%		
	Women		31.3%	38.9%	38.7%	42.3%		
	Total	●	26.7%	31.3%	34.8%	37.9%		
Policy levers for inclusiveness, quality and relevance								
Early childhood education and care (participation from age 4 to starting age of compulsory education)			●	93.8%	93.9% ¹³	93.2%	93.9% ¹³	
Teachers' participation in training	Any topic (total)			:	88.5% ¹³	:	84.6% ¹³	
	Special needs education			:	16.5% ¹³	:	32.4% ¹³	
	Multicultural settings			:	9.6% ¹³	:	13.2% ¹³	
	ICT skills for teaching			:	49.1% ¹³	:	51.0% ¹³	
Foreign language learning				Share of ISCED 2 students learning two or more foreign languages	72.6%	78.4% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)				42.4%	45.8% ¹³	50.4%	48.9% ¹³	
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4			72.8%	65.2%	71.3%	70.8%	
	ISCED 5-8			78.5%	73.6%	82.5%	80.5%	
	ISCED 3-8 (total)		●	75.8%	69.4%	77.1%	76.1%	
Learning mobility	Inbound graduates mobility (bachelor)			:	1.7% ¹³	:	: ¹³	
	Inbound graduates mobility (master)			:	5.5% ¹³	:	: ¹³	
Adult participation in lifelong learning (age 25-64)			●	ISCED 0-8 (total)	11.5%	9.6%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

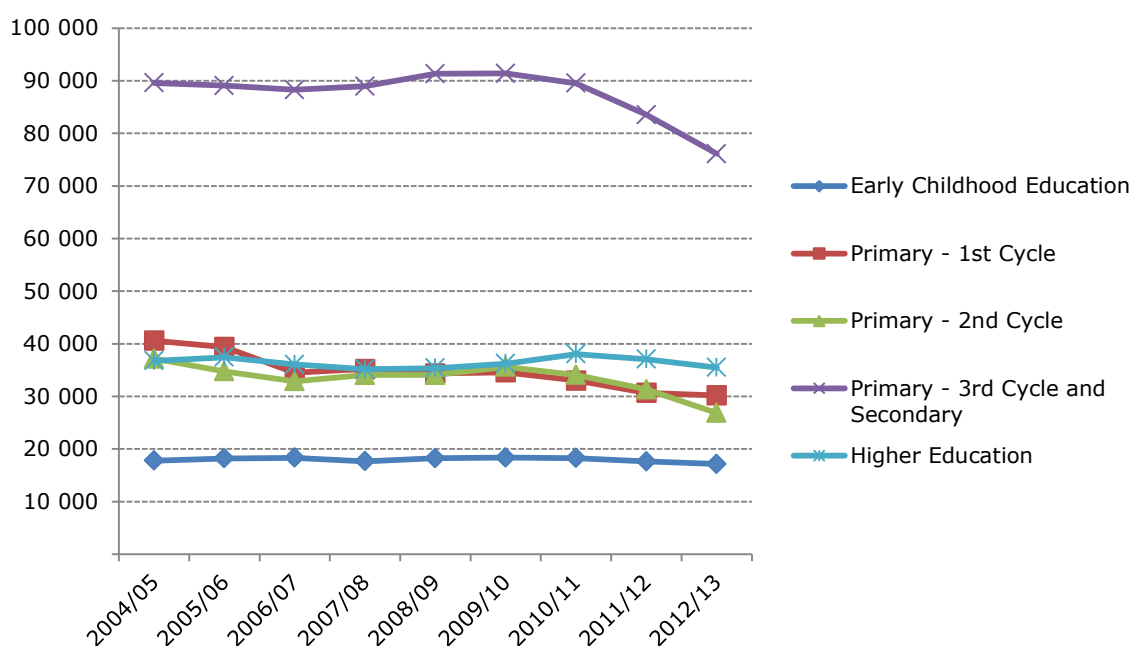
Portugal has significantly reduced its early school leaving rate, and tertiary education attainment has greatly improved. The government has continued to implement major reforms, with the aim of improving the level of basic skills in the population. Signs of economic recovery could, meanwhile, bring new opportunities for the highly skilled. Enrolment in vocational education and training has continued to increase and a first set of new short-cycle higher technical courses (*TeSP*) were launched during the 2014/15 academic year.

The high proportion of students re-sitting years and the extent to which socioeconomic background determines educational achievement demonstrate the extent to which ensuring equity in basic education remains a problem, despite the many new programmes and measures introduced over the last decade. Concerning attractiveness of higher education, and university in particular, enrolment rates have shown some fluctuations over the past three years.

3. Investing in education and training

In 2013, general government expenditure on education as a proportion of GDP was among the highest in the EU at 6.8%, well above the EU average of 5%.²⁰³ The 2015 budget includes a 9.6% reduction in spending on education (not including higher education), relative to the 2014 budget.²⁰⁴ While spending on pre-school education has remained stable, the budget for primary and secondary education has been reduced by over 11%. The main reason for this is a large fall in teacher numbers (Figure 2), mainly among those dedicated to non-teaching activities. The student teachers ratio, however, remains one of the lowest in Europe.

Figure 2. Number of Teachers per education level



Source: Direção-Geral de Estatísticas da Educação e Ciências

The 2015 budget for the science and higher education sector remained largely stable overall. Within this total, however, there was a 5.5% increase in funding for the science sector, which comes under the management of the Science and Technology Foundation. Higher education

²⁰³ Source: Eurostat, General government expenditure by function (COFOG) database.

²⁰⁴ Source: 2015 Draft National Budget (Orçamento Geral do Estado para 2015)

institutions, meanwhile, saw their budget reduced, with a 4.4% fall in funding for universities, and 2.5% for polytechnic institutes.²⁰⁵

Portugal has taken a number of measures to increase the efficiency of its spending on education. These include the introduction of a new funding formula, which allows teaching hours to be optimised, and the rationalisation of the schools network. In 2012/13, only around 90% of the teaching hours financed by public spending in primary and secondary education were actually taught. The implementation of the new funding formula has significantly improved the use of funding for teaching time at school level. During the first year using the new funding formula, almost all schools have used 99% or more of their credited hours, whereas previously, 24% of schools had a 'usage rate' of below 95%.²⁰⁶

The introduction of performance criteria in the formula is expected to incentivise schools to improve the quality of lessons and should allow a better allocation of the available resources across education centres. The new web portal *infoescolas*²⁰⁷ also provides parents and other users with comprehensive information on schools' performance, thus also making the new funding system more transparent. The first set of results was promising, but they will need to be followed by evidence of a real effect on students' performance.

The reorganisation of the schools network reduced the number of education centres from 7 168 in 2011/12 to 5 857 in 2014/15,²⁰⁸ by grouping small schools under larger education centres. Whilst this may not have delivered a visible reduction of costs in the first year following the reorganisation, the management of resources is expected to be more efficient going forward.

Portugal has introduced an additional loan system for tertiary education students that will come into operation in the 2015/16 academic year. Students will be able to apply for loans of up to EUR 5 000 per year over a period of five years, with monthly disbursements conditional on academic results.

4. Tackling inequalities

Portugal has significantly reduced its early school leaving rate, from 30.9% in 2009 to 17.4% in 2014. Nonetheless, this remains far above the Europe 2020 national target of 10%. Portugal is one of the few European countries where the early school leaving rate is almost the same among students born in Portugal and those born outside the country. In contrast, there is a significant gender gap, with early school leaving rates of 14.1% for women and 20.7% for men.

The OECD's Programme for International Student Assessment (PISA 2012) shows performance to have remained stable, around the level of the OECD average. Progress has therefore slowed, following the significant improvement seen between 2000 and 2009. The study also shows there to be considerable variation in performance within age groups, linked to socio-economic background. The proportion of students performing poorly in mathematics has remained relatively stable at 24.9%, above the EU average of 22.1%. The results for reading and science showed a slight deterioration between 2009 and 2012 (OECD 2013).

Enrolment rates in early childhood education and care (ECEC) have increased dramatically over the last decade, for both the 0-3 and 3-5 age groups. The enrolment rate for 0-3 year olds has, however, remained broadly unchanged since 2012, particularly in urban areas, due to the decrease in families' average income. In 2013, the rate of participation in ECEC was 77.8% for children aged 3, increasing to 90.4% and 97.5% for children aged 4 and 5 respectively

²⁰⁵ Source: 2015 Draft National Budget (Orçamento Geral do Estado para 2015)

²⁰⁶ Source: Directorate General for Education Statistics (Direção-Geral de Estatísticas da Educação e Ciências)

²⁰⁷ <http://infoescolas.mec.pt/>

²⁰⁸ Source: Directorate General for Education Statistics (Direção-Geral de Estatísticas da Educação e Ciências)

(European Commission 2014). Recent changes to legislation allow children who are turning three during the course of the school year to be enrolled in pre-school education.

Portugal has continued to implement the national programme to tackle school failure and early school leaving launched in 2012, with a new monitoring system introduced in 2013/14. This new tool monitors absenteeism and students' performance, meaning that problems are picked up on quickly. A procedure is triggered automatically when risks are detected, thus helping to reduce drop-out rates. The system also makes it easier to compare schools' performance, and to identify risks and direct support appropriately. The government's statistics department is now developing an 'early warning' system for identifying schools where high numbers of students are expected to need to re-sit a year. This new tool should allow preventive measures to be introduced at school level and should improve the allocation of additional resources.

Portugal is also continuing to provide support to tailor-made school-based programmes designed to improve achievement and reduce the numbers of students re-sitting years and dropping out. The third generation of TEIP programmes²⁰⁹ (programmes targeted at priority regions) are one example of this. The number of TEIP school clusters has increased from 104 in 2012 to 137 in 2014, and the programme now covers 16% of schools. Moreover, the approach developed during the pilot projects for the 'More School Success programme'²¹⁰ (*Mais Sucesso Escolar*) have now been made available to schools.

The pilot programme offering basic vocational courses (*Cursos vocacionais de ensino basico*) as an alternative path to students at risk of leaving education is now in its third year in lower secondary education, and in its second year at upper secondary level. A total of 27 411 students distributed in 1 266 classes benefited from the programme in the 2014/15 school year. In March 2015, the government announced the continuation of the programme at both levels (lower and upper secondary) for the 2015/16 school year, and called for public and private providers of education to offer these vocational courses. The drop-out rate is currently at 5.5% for the lower secondary level, but it is still too early to carry out a proper assessment as data on students' employment and further education after completion of the courses is not yet available for the upper secondary level.

Portugal must now ensure that the numerous different programmes it has launched to tackle early school leaving are complementary to one another, and are working effectively towards the same aim. There are plans to address the problem of the overlap between measures and to better link specific programmes to specific problems. On the other hand, the socio-economic condition of families continues to play a deciding role in students' performance (OECD 2014a). The increasing poverty experienced by the most disadvantaged groups could thus reduce the effectiveness of the policies introduced to tackle early school leaving.

Steps are also being taken to address the low level of basic skills among Portuguese students. The Ministry of Education has introduced a number of learning objectives for maths and Portuguese (*metas curriculares*). It has increased the teaching hours allocated to both these two subjects and provided teachers' training accordingly. The new learning objectives were the subject of a public consultation, and provoked a heated ideological debate. Some regret that emphasis is now being put on traditional teaching and assessment of basic knowledge and skills, instead of on promoting multidisciplinary approaches such as teaching and learning through projects. Others, meanwhile, welcome these new objectives, which they see as being more demanding and promoting a culture of excellence.

²⁰⁹ The present TEIP (Educational Territories of Priority Intervention) were launched in 1996, inspired by the French ZEPs (Priority Intervention Zones). Schools with a high percentage of students from vulnerable socio-economic background are entitled to benefit from additional funding and support through "improvement contracts".

²¹⁰ The Programme 'More School Success' proposes alternative and innovative classroom teaching strategies designed to enhance learning through motivation and challenging experiences. 'More School Success' is an 'umbrella' created in 2009 to provide institutional support to three models developed at local level: *TurmaMais*, *Fenix* and *Híbridas*.

In 2014, the government appointed a working group to set guidelines for childcare centres and nurseries, in order to improve education for the 0-3 age group. The conclusions have not yet been published, however, and public debate on this issue is therefore lacking.

In 2013, the Ministry of Education launched a new accreditation process for the resource centres for inclusion (*centros de recursos para a inclusão*), which extended the network to include 90 centres. In 2014, the Ministry commissioned an evaluation of the centres, which confirmed that they are having a positive effect in terms of promoting the inclusion of students with special needs in mainstream education.

Box 1. Promoting schools autonomy

In view of the highly centralised nature of Portugal's education system, promoting schools' autonomy is a major part of the strategy for improving students' performance and reducing drop-out rates.

The number of autonomy contracts rose from 22 in 2012 to 212 in 2014, with 26% of all school clusters now covered. State schools that have signed autonomy contracts and private schools both benefit from greater autonomy in several areas: the design of the curriculum, the distribution of teaching hours, choice as to which subjects to teach in which school years, management of up to 25% of the workload of each subject, with the exception of Portuguese and mathematics, and the opportunity to propose new subjects and school activities.

The aim of giving schools greater autonomy is to give them a certain amount of freedom to develop new educational programmes, with the aim of improving students' performance, while also making them accountable for the results of the proposed programmes through annual monitoring. The Ministry of Education has developed two indicators to measure the effectiveness of the schools given greater autonomy: 1) the education efficiency indicator, which measures the annual improvement in students' educational achievement; and 2) the drop-out risk indicator, which calculates the number of students classified, at the end of the year, as potential school leavers. These indicators are critical for applying the funding formula and provide the right incentives by allocating additional credit hours to the implementation of new programmes. It is still, however, too soon to evaluate the effect of schools' increased autonomy on students' performance. Nonetheless, the results of earlier pilot programmes, such as the TEIP schools, *Fenix* and *Turma+*, are promising.

In 2015, the government launched the second phase of the programme, which involves further decentralisation and aims to extend schools' autonomy and link them with local authorities. This programme is part of the wider *APROXIMAR* policy, which also covers health and social security. The Ministry of Education issued a new law in March 2015, which increased schools' autonomy in relation to teaching methods and resource management. A pilot programme involving 15 municipalities (*conselhos*) has been launched to test the decentralisation process. Mechanisms have been put in place to monitor and evaluate the impact of the programme.

Given how recently this second phase of the programme was launched, it is not yet possible to assess what the changes will actually mean for schools and local authorities, or what the effect will be on students' performance. Nonetheless, it can be noted that giving schools greater autonomy makes it more important than ever to promote strong school leadership and strengthen middle management capacities. Teachers will also need to receive appropriate training to allow them to develop the skills needed to successfully implement new initiatives.

5. Modernising school education

Recruitment of fewer new teachers over the period 2011-13 has led to a significant fall in total teacher numbers, and contributed to the ageing of the teaching profession. According to the 2013 OECD Teaching and Learning International Survey (TALIS), the proportion of teachers using information and communication technologies (ICT) for student projects or class work is 34.4%, and the proportion of teachers participating in ICT training 49.1%, both around the EU average. The overall proportion of teachers taking part in some form of professional development during the previous 12 months is 88.5%, slightly above the EU average of 85%.

The proportion of teachers assigning different work to students based on their individual needs is above the EU average, at 52.7% compared to 46% (OECD 2014b).

The Ministry of Education has brought in a number of reforms designed to improve the quality of teaching staff. The entry requirements for teacher training courses have been increased, the academic part of the teacher training course is being revised, and a new entry exam for teachers with less than five years teaching experience (*Prova de Avaliação de Capacidades e Conhecimentos*) has been introduced, provoking a widespread debate. Portugal has also reformed its system for employing temporary teachers, following the infringement procedure opened by the European Commission in 2014. The annual renewal of fixed term contracts cannot now exceed five years.

The Ministry of Education has begun implementing the new system of continuous professional development for teachers, which had been approved in February 2014.²¹¹ The new scheme introduces training criteria, meaning that only relevant courses, i.e. those that update specific technical skills or improve teaching skills, will be recognised when considering staff for promotion. It also includes plans for creating internal pools of trainers for each education cluster, thus increasing in-house training capacities. This part of the system has not, however, yet been put into practice. There are now 91 training centres across the country, which are responsible for providing the training required by schools and by teachers working in the public, private and cooperative education networks. Their ability to provide good quality, relevant courses will be crucial to ensuring that this new system has the positive effect expected.

Portugal is trying to improve the use of ICT in its education system but budgetary constraints have severely limited its scope for action in recent years. The Technological Plan for Education introduced in 2007 has not been updated and internet coverage does not meet schools' current needs. Teachers complain that the courses proposed by the official training centres are expensive and not recognised when a teacher is being considered for promotion. The new project Future classroom labs (*laboratórios de aprendizagem*), launched in cooperation with the European Schoolnet, aims to publicise European projects and to create a network for teachers involved in innovative projects.²¹²

The Ministry of Education has introduced English into the primary school curriculum, as a way of improving the quality and labour market relevance of the skills which students have on leaving education. As of the 2015/16 school year, primary school children will learn English for seven consecutive years. Teachers will receive training to improve their language skills, in order to ensure that the change to the curriculum does have the intended effect.

6. Modernising higher education

Portugal's tertiary education attainment rate for 30-34 year-olds has increased dramatically over the past ten years, but, at 31.3% in 2014, it remains significantly below the EU average (37.9%) and its Europe 2020 national target of 40%. The 2015 Bologna implementation report (European Commission 2015) shows, however, that completion rates in higher education have fallen by 19 percentage points since 2008 (the biggest decrease in Europe). Women have a significantly better completion rate than men, with 73% successfully completing their studies compared to 59% of men (European Commission 2015).

The relatively low employment rate of recent tertiary graduates²¹³ (73.6%, compared to the EU average of 80.5%) could make higher education less attractive to young people in Portugal. They seem less inclined to believe in the value of academic studies, as shown by the results of the fourth Education Barometer (EPIS 2013). Enrolment rates in higher education have shown

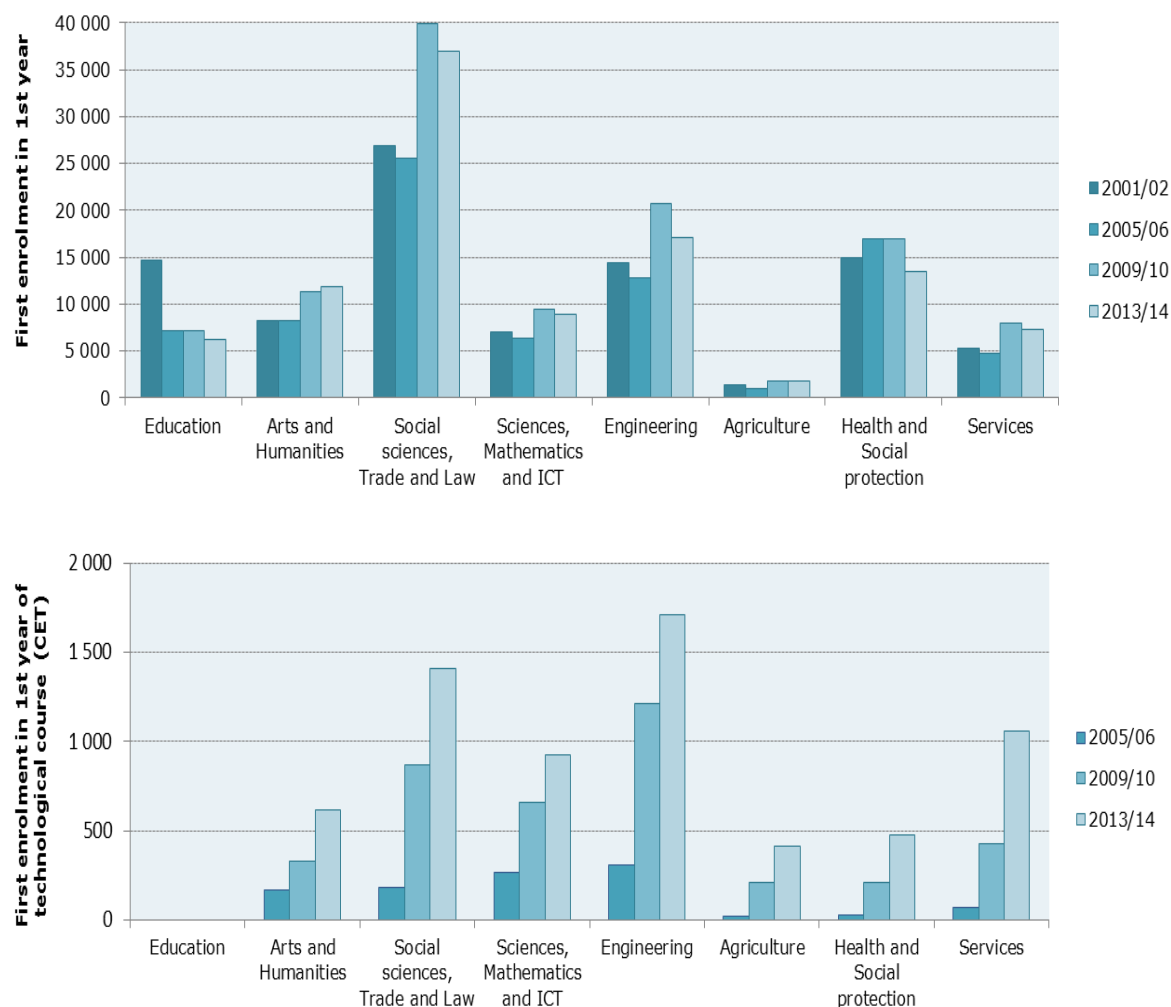
²¹¹ Decree n. 22/2014.

²¹² Laboratórios de aprendizagem: http://www.cfaebn.pt/documentos/doc_visitas_CF_Braganca.pdf.

²¹³ People aged 20-34 who left education between one and three years before the reference year.

fluctuations over the past three years, despite the increase in students completing upper secondary education. This downturn trend is more visible for first degrees (Figure 3), while the number of students starting master's courses and PhDs has increased, with enrolments for master's courses tripling between 2007 and 2014, and for PhD courses doubling over the same period.²¹⁴

Figure 3. First enrolment in first academic year (university and technological courses)



Source: Direção-Geral de Estatísticas da Educação e Ciências

At the beginning of the 2014/15 academic year, 50 820 places were offered (on first degrees and integrated master's degrees) by a range of public institutions including 13 universities, 15 polytechnic institutes and five independent colleges. The major universities located in or around Lisbon and Porto were able to fill over 90% of their places while smaller universities located further from the major urban areas attracted lower numbers of students, such as was the case for Azores University (where 69.8% of places were filled) and Algarve University (71.9%). Among polytechnic universities, the gap in enrolment rates between the different institutions is even wider. Only a small number are able to fill 70% or more of their places – those that do include Porto (87.8%), Coimbra (71.9%) and Lisbon (77.4%) – and some do not even reach the 50% level – Beja (42.7%), Bragança (34.8%) and Tomar (29.4%) being amongst these.

²¹⁴ Source: Directorate General for Education Statistics (Direção-Geral de Estatísticas da Educação e Ciências)

In response to this, the government has launched several specific programmes and measures designed to increase the number of places available in higher education, while rationalising the higher education network (MEC 2014). The new web portal *inforcursos*²¹⁵ provides better transparency and useful information to guide students' choices.

The new short-cycle higher technical courses (*TeSP*) are the government's flagship initiative, designed to promote the link between higher education and the business sector and to attract students and businesses to higher education. Those programmes have a strong technical and vocational component and include on-the-job training. The majority are run by polytechnic institutions. A total of 92 courses were approved and offered in the 2014/15 academic year, set to rise to 180 in 2015/16. The enrolment rate for 2014/15 was 82% and, despite some initial difficulties with the introduction of the programmes, they now appear to be running smoothly. It is, however, still too early to assess their quality and the employability of their graduates.

The programme *Mais Superior* provided 991 scholarships in the 2014/15 academic year. These are designed to encourage students to enrol in higher education institutions where demand for places is lower, mainly those located in the more rural regions. At the same time, the programme requires these institutions to adapt courses they offer to the needs of the local economy. Again, it is the employability of future graduates that will be the true measure of the effectiveness of the programme, rather than enrolment rates.

The government is supporting the creation of regional clusters, as a way of rationalising the range of courses offered, making better use of the resources available and encouraging the exchange of best practices. The two major projects currently under way are the merger of two major state-funded universities in Lisbon, and the creation of the consortium *UniNord*, a grouping of three universities in the north of the country.

The international students' statute was amended to give universities greater freedom in setting entry requirements. The objective is to allow universities to make their requirements more flexible, and thus to attract higher numbers of non-EU students. The government has continued to run the *Retomar* programme, designed to encourage students who dropped out of higher education to re-enrol, but tight budget constraints have limited its effectiveness.

In 2014, the Ministry of Education, with the support of the OECD and the European Commission, launched an initiative to develop a national skills strategy. A number of Ministries have been involved, and a dialogue has been opened between the government and relevant social and economic parties on how to improve the quality and labour market relevance of education. The diagnostic report presented in April 2015 emphasises the importance of balancing the need to improve performance and the need to ensure greater equity. It also expresses the view that re-sitting years has become too common a practice. The report recommends that more emphasis be put on social skills, and that methods for evaluating and assessing students be improved. According to the report, the difference in the level of resources allocated to schools with disadvantaged students and to those with students from more privileged backgrounds is above the OECD average. It also states that access to higher education needs to be improved and that regional and local authorities should be more involved in decision-making (OECD 2015).

7. Modernising vocational education and training and promoting adult learning

Upper secondary students' participation in vocational education and training (VET) is slightly below the EU average, at 45.8% compared to 48.9% in 2013. Participation of adults in lifelong learning in Portugal has been decreasing from 10.5% in 2012 to 9.6 in 2014%, compared to an

²¹⁵ <http://infocursos.mec.pt/>.

EU average of 10.7% in 2014. Portugal's employment rate of upper secondary education graduates²¹⁶ increased from 64.1% in 2013 to 65.2% in 2014. This reverted the falling trend experienced since 2008, when employment rate had reached its peak at 82.1%.

As part of its strategy to address early school leaving, Portugal has increased the number and diversity of vocational courses offered within secondary education. The new courses include, for example, a basic vocational course that students can take from the age of 13. This gives students at risk of re-sitting years another alternative and is complemented by targeted guidance services.

Steps are being taken to improve the quality and labour market relevance of VET. In particular, training materials have been improved and the proportion of training at the work place has increased significantly on the basis of new partnerships with the industry. The effect of these changes will be monitored using a set of indicators, and external evaluations will also be carried out. Vocational programmes with a significant work-based dimension are now being offered to young people over 16, who are interested in a more practical education. These programmes lead to recognised professional qualifications and monitoring of their quality by higher education institutions ensures their accreditation and provides their graduates with access to further studies. The extensive range of programmes and target groups should, however, be simplified.

The enrolment rate in VET rose in 2014. The Centres for Qualification and Vocational Education provide additional guidance to young people and adults in VET, including on routes to validation of non-formal and informal learning. They also build links with employers, schools and certified VET institutions, in order to help adapt the courses offered to the regional economy. The National Agency for Qualification and Vocational Education and Training is also developing a new tool (*Sistema de Antecipação de Necessidades de Qualificações*)²¹⁷ designed to predict the qualification and skills needs of the country's economy, in order to be able to better adapt the VET being offered to the labour market.

Lastly, the new short-cycle higher technical courses (*TeSP*) are intended to develop close relations between business schools and regional businesses. One business school, the Instituto Empresarial da Bairrada, has now opened programmes for these courses, and five others are waiting for authorisation.

References

EPIS (2013), Education Barometer, <http://www.epis.pt/mediadores/barometro-epis/familia>

European Commission (2015), The European Higher Education Area in 2015: Bologna Process. Implementation Report, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf

European Commission (2014), Key data on early childhood education and care education in Europe, http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/166en.pdf

MEC (2014), Projeto de despacho orientador, <http://www.portugal.gov.pt/media/1417108/20140510%20mec%20doc%20orientacao%20estrategica%20enssup.pdf>

OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education Policy Outlook Portugal, http://www.oecd.org/edu/EDUCATION%20POLICY%20OUTLOOK%20PORTUGAL_EN.pdf

²¹⁶ People aged 20-34 who left education between one and three years before the reference year.

²¹⁷ <http://sanq.anqep.gov.pt/>

OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

OECD (2015), OECD Skills Strategy Diagnostic report. Portugal 2015,
<http://skills.oecd.org/developskills/documents/Portugal-Diagnostic-Report-web.pdf>

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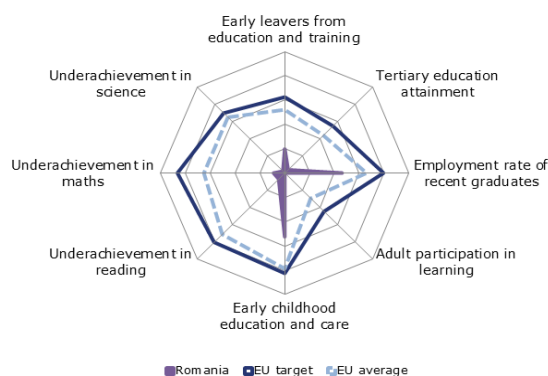
Romania

1. Key Indicators and Benchmarks

			Romania		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	•	:	37.3% ¹²	:	17.8% ¹²
	Maths	•	:	40.8% ¹²	:	22.1% ¹²
	Science	•	:	37.3% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		4.1%	2.8% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		10.5%	8.1% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		19.1%	19.5%	15.2%	12.7%
	Women		17.2%	16.7%	11.5%	9.5%
	Total	•	18.1%	18.1%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		20.1%	22.9%	31.0%	33.6%
	Women		20.6%	27.2%	38.7%	42.3%
	Total	•	20.3%	25.0%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	86.4%	86.4% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	83.3% ¹³	:	84.6% ¹³
	Special needs education		:	23.6% ¹³	:	32.4% ¹³
	Multicultural settings		:	18.2% ¹³	:	13.2% ¹³
	ICT skills for teaching		:	60.5% ¹³	:	51.0% ¹³
Foreign language learning			95.5%	95.4% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			63.1%	60.0% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		58.9%	57.2%	71.3%	70.8%
	ISCED 5-8		81.4%	74.2%	82.5%	80.5%
	ISCED 3-8 (total)	•	70.8%	66.2%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	1.6% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	2.5% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	1.4%	1.5%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Romania's tertiary education attainment rate has risen consistently in recent years. The Romanian Government has adopted a strategy on tertiary education, which has two overarching aims: to make higher education more relevant by aligning it more closely with labour market needs; and to improve the accessibility of higher education for disadvantaged groups. It also adopted strategy for reducing early school leaving in June 2015. The early school leaving rate remains well above the EU average. The availability and access of early childhood education and care services is limited, especially in rural areas and for the Roma community. The tertiary education attainment rate remains the second lowest in the EU. Adult participation in lifelong learning remains far below the EU average. General government expenditure on education as a share of GDP is the lowest in the EU.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Romania (Council of the European Union 2015) included a recommendation on education and training:

CSR 3: Increase the provision and quality of early childhood education and care, in particular for Roma. Take action to implement the national strategy to reduce early school leaving.

3. Investing in education and training

General government expenditure on education as a share of GDP fell from 3.0% in 2012 to 2.8% in 2013, making it the lowest in the EU-28 and just over half the EU average of 5.0%.²¹⁸ According to Romania's 2015-2018 Convergence Programme published in April 2015, the wages of teaching and support staff in education will be increased in 2015 and 2016 by 5% in March and 5% in September (Government of Romania 2015).

A study on school budgetary allocation (Fartuşnic et al. 2014) found that schools in disadvantaged communities have limited resources and usually fail to carry out any additional support activities targeting students at risk of school failure (repetition, absenteeism, drop-out, etc.). According to the study, the core financial resource of these schools is state funding and in some cases it constitutes their entire annual budget. Under these circumstances, schools can only cover their basic needs (i.e. administrative costs and teachers' salaries), and clearly have insufficient resources to initiate specific activities to help students at risk of dropping out of school. The conclusions of the research were also relevant for schools in areas with a Roma population, as Roma children accounted for more than 10% of children in most of the schools included in the sample.

4. Tackling inequalities

Romania's early school leaving rate reached 18.1% in 2014, having increased from 2013. This was in contrast with previous years, when the rate had been falling. Romania has the third-highest early school leaving rate in the EU-28 and is still far from its Europe 2020 national target of 11.3%. According to the data on early school leaving provided by Romania's National Institute for Statistics, the proportion of early school leavers in rural areas is three times higher than in urban areas. Regional disparities in early school leaving rates are highly dependent on the socioeconomic development level of the regions. The highest rates were recorded in the North-East, South-East and South Muntenia regions, while the lowest were in the Bucharest-Ilfov and West regions. According to European Agency for Fundamental Rights (2012), the early school leaving rate for Roma is almost twice as high as for the non-Roma population. About 14% of Roma older than 10 are illiterate and about 20% of Roma have not attended school.

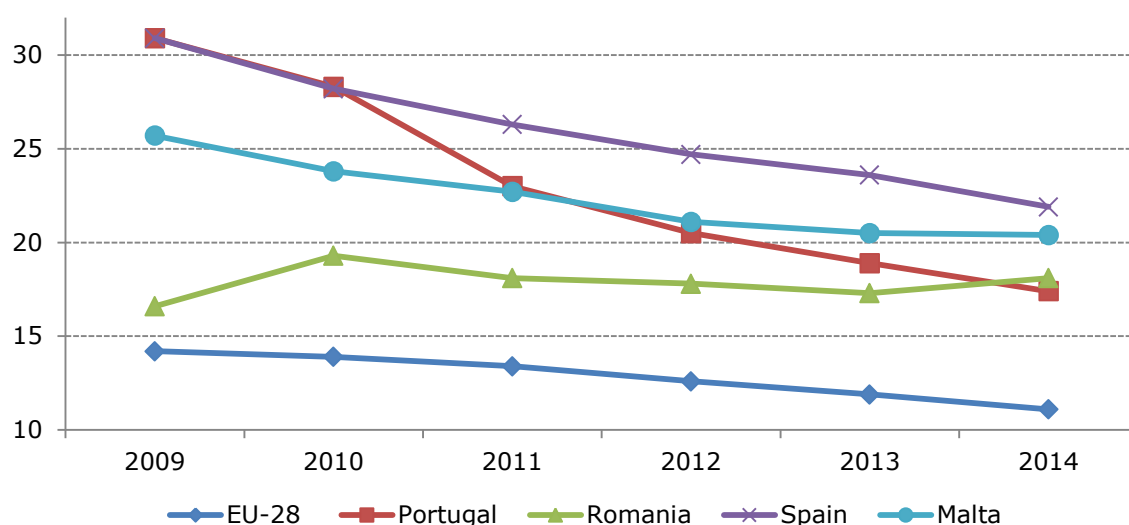
²¹⁸ Source: Eurostat, General government expenditure by function (COFOG) database.

The challenge of tackling early school leaving is made harder by the following factors:

- the lack of evaluation of measures for early school leavers;
- the lack of data collection;
- insufficient initial and continuing training for teachers to instil in them new teaching skills and practices for working with students at risk.

Integration of Roma children in schools is difficult, with 26% of Roma children attending ethnically-separated school classes (European Union Agency for Fundamental Rights 2014, p.45).²¹⁹

Figure 2. Early school leaving rate (18-24 year-olds)



Source: Eurostat

Participation in early childhood education and care (ECEC) in Romania has been slowly decreasing in recent years and is below the EU average (86.4% in 2014, compared to 93.9% in 2012 and 86.4% in 2011). Participation in ECEC is characterised by major disparities in access for the most disadvantaged children, such as children from rural areas, children from Roma communities and children with disabilities. According to data from the National Institute of Statistics, the enrolment rate in pre-school (i.e. the last year of ECEC before the start of primary education) in rural areas in 2013/14 was about seven percentage points lower than in urban areas (83.9% compared to 90.3%). This is caused by access barriers to pre-school enrolment, such as large distances between home and pre-school, poor quality or absence of pre-school infrastructure in some isolated, small rural communities. According to European Agency for Fundamental Rights (2012), the pre-school enrolment rate in 2011 of non-Roma children was almost twice as high as for Roma children from the same community (63% for non-Roma children and 37% for Roma children).

The 2012 OECD Programme for International Student Assessment (PISA) survey on the mathematics, science and reading skills of 15-year-olds (OECD 2013) found that Romania falls far short of the EU average:

- 37.3% are low achievers in reading (EU average: 17.8%);
- 40.8% are low achievers in maths (EU average: 22.1%);
- 37.3% are low achievers in science (EU average: 16.6%).

²¹⁹ Given that the survey covered areas where Roma lived in higher density than the country average, the answers are likely to reveal a higher share of Roma children at school.

PISA 2012 also shows major disparities in learning outcomes between students from different socioeconomic backgrounds.

After significant delays in adopting the national strategy for reducing early school leaving, this was finally adopted in June 2015 (Box 2). The Romanian Government is currently putting in place the institutional and administrative capacity and mechanisms to implement the strategy. These include an integrated data collection system on early school leaving that has been designed based on a new set of national indicators.

Annual social programmes continue to support students in disadvantaged areas. These include providing school supplies and day classes for students enrolled in primary and secondary education who come from families where the average net income per family household member accounts for maximum 50% of the minimum gross salary at national level. Financial support is granted to encourage the purchase of personal computers for school and university students from a disadvantaged economic background and to reimburse transportation expenses.

The Romanian Government has revised the rules on how nurseries and other pre-preschool early education services are organised and operate, including changes in educational content. Both the pre-preschool curriculum and the evaluation standards for pre-preschool education services have been drawn up. To overcome the lack of any preschool experience for children in some communities, the Ministry of Education brought in a compulsory preparatory school year, starting from 2012. The measure has improved the school integration of children who had not previously attended preschool. A number of European Social Fund (ESF)- and World Bank-funded strategic projects in ECEC, including an important focus on Roma children, are currently being implemented.²²⁰

An ESF-funded project was carried out in the context of the TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study) tests (IEA 2012). This involved training in which teachers were given a range of examples of good practice in mathematics, science and reading and invited to adapt, develop and contextualise new problems to ensure more effective learning. The teachers implemented new approaches in their classes while being coached online.

Box 2. Strategy for reducing early school leaving

The current level of early school leaving in Romania is the result of a complex set of causes. These include:

- structural causes relating to the socioeconomic situation of families and children with limited resources, and negative expectations and attitudes towards education in general;
- systemic causes relating to malfunctions in the way education is organised and governed, which result in a failure to offer appropriate, inclusive and quality educational support for all children irrespective of their socioeconomic and cultural background and personal characteristics;
- cultural causes within the education system and in society as a whole.

A strategic framework for reducing early school leaving in Romania was drafted with the support of the World Bank. The strategy is built on existing practices, giving priority to social support measures. Although the strategy includes an assessment of existing policies and measures on early school leaving, there is no clear evidence indicating whether these measures are effective or not. The strategy is based on four main pillars:

- Pillar I: ensure that all children go to school and receive quality education;
- Pillar II: ensure that all children complete compulsory education;

²²⁰ 'National Programmes for early childhood education reform', 'All in kindergarten, all in the first class', 'Roma children and parents want to go to school', 'Educational integrated services for the Roma communities', 'All Families get involved'.

- Pillar III: get early school leavers back in school;
- Pillar IV: develop appropriate institutional support.

Each pillar covers a number of programmes and measures, including a programme on early childhood education. The strategy also includes specific priorities on inclusion and institutional capacity and the monitoring system, which apply to, and are clearly stated under, each of the four pillars.

The strategic framework document provides for a clearly-defined monitoring and evaluation system. The system makes provision for:

- a specific timetable;
- the reports to be drawn up;
- the types of information to be collected;
- a clear division of responsibilities for the different key institutions and stakeholders in the process.

If the strategy is to be implemented successfully, tackling the following challenges is vital:

a) Developing a relevant data collection and monitoring system — there are difficulties in school system coverage. The causes for these include a lack of coherent information campaigns, the lack of a training strategy and no incentives to input and report data. A number of significant steps have been taken in this respect. These include gathering all existing initiatives on how to design data collection systems for education; and planning an integrated data collection and analysis system at national, county and school level.

Romania's 'Integrated Information System of Education' (SIIE) has already been designed, based on a new set of national indicators for education, including early school leaving. Although the primary education module is already up and running, the system is not yet fully operational and does not yet provide reliable data. Moreover, there are significant inconsistencies compared with other data collection systems of the National Institute for Statistics.

b) Consultation and awareness-raising among stakeholders — in order to get school staff and local stakeholders behind the strategy, a coherent information and training strategy is needed, plus incentives.

c) Financing system at central level and at school level — in order to effectively implement the early school leaving strategy, providing adequate financial resources is key, in particular for the most disadvantaged schools.

The strategic framework for reducing early school leaving offers appropriate, comprehensive and relevant support for future policies in this area. Putting the necessary institutional and financial mechanisms in place, in particular a reliable data collection system, is crucial for the successful implementation of the strategy. Another policy that could contribute to the success of the strategy is the reform of initial teacher training.

5. Modernising school education

The 2013 OECD Teaching and Learning International Survey (TALIS) found that a high proportion of teachers (58%, as compared with the EU average of 36%) worked in schools where head teachers reported a shortage of qualified staff and that only 26% of teachers used ICT for students' projects or class work (EU average: 34%) (OECD 2014).

Initial training for future primary teachers does not pay enough attention to integrating children with special needs and Roma children or dealing with students' learning difficulties. Training for teachers who are going to be working in lower secondary education is highly theory-based and its quality varies from one university to another, depending on their capacity to attract highly professional pedagogical staff with relevant experience in modern teaching methodologies.

Teaching is not a financially attractive profession in Romania for top graduates. Although teachers' maximum gross income per year as a proportion of GDP per capita is not extremely

low compared to other countries in Europe, Romania has the highest gap between the salaries of newly-qualified and experienced teachers. A newly-qualified teacher, who starts from the minimum salary level, must spend 40 years in the system before reaching the maximum salary.

In November 2014, Romania's national strategy on digital agenda was officially launched. The strategy aims to set out the key enabling role that the use of ICT will play in achieving the objectives of the Europe 2020 strategy. Three of the seven pillars of the strategy are of relevance here:

- improving the ICT skills of children, young people and adults;
- supporting innovation and research;
- responding to social challenges by using ICT.

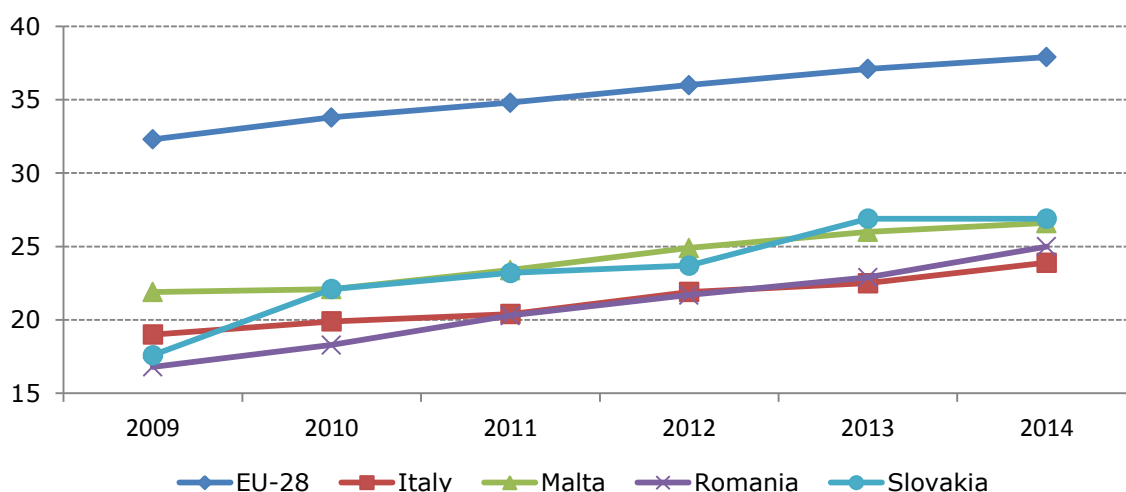
As part of this initiative, a series of campaigns were developed recently to increase public awareness of the new digital society challenges in Romania.

Since 2012, ICT has been an optional subject in the national curriculum for primary education. Using ICT in education and training has become a priority for teacher training programmes in Romania and large-scale ICT infrastructure has recently been installed. ESF-funded projects have been particularly addressing the large amount of teachers involved in ICT-related training.

6. Modernising higher education

Romania's tertiary education attainment rate has been steadily increasing over the past four years and reached 25% in 2014, on track to reach the Europe 2020 national target of 26.7%. Women outperform men, with rates of 27.2% and 22.9% respectively in 2014. However, as shown by the national 'State of the Education System' annual report for 2014, enrolment rates among people aged 19-23 in academic higher education courses recently dropped from 28.4% in the 2011/12 academic year to 26.6% in the 2013/14 academic year for people aged 19-23.

Figure 3. Tertiary education attainment rate (30-34 year-olds)



Source: Eurostat

Several factors influenced this trend: emigration, a growing interest in other forms of tertiary education (especially professionally oriented options), and a reduction in the number of educational programmes provided by private universities. Large disparities in enrolment between students from rural and urban areas continue to be a real challenge. According to the latest data from the National Institute of Statistics for the year 2011/2012, the enrolment rate of students from urban areas was 43.4%, while for students from rural areas the rate was only 16%.

The relevance of university education to the labour market is a major concern. The employment rate of recent tertiary graduates²²¹ has been decreasing since 2009. In 2014 the figure was 74.2%, which is around 6 percentage points less than the EU-28 average, while there are also concerns about universities' limited connections with the most innovative sectors of the economy. At the same time, adapting university curricula and teaching practices to help students better develop the kind of skills they need on the labour market is a slow process. The strategy on tertiary education adopted in July 2015²²² aims to make higher education more relevant to labour market needs and more accessible to disadvantaged groups. In the meantime, a database integrated into the management systems of 50 public universities has been completed to enable monitoring of higher education graduates' entry onto the labour market. Work has continued on aligning occupational standards with labour market requirements and updating the educational offer, with 36 new standards developed. All universities are expected to establish career guidance and counselling centres in 2015.

The most recent policy developments in the field of higher education include:

- granting access to non-university programmes for students who did not pass their baccalaureate exam;
- the provision by all universities of career counselling through a university counselling centre;
- the reinforcement of the six-month compulsory practical internships in companies for all university graduates.

Romania's 2015 National Reform Programme (NRP) action plan on tertiary education proposes new measures. These include drafting a strategic document on equity and access in higher education in Romania, and measures on monitoring and the development of a strategic information system.

The Ministry of Education and Scientific Research continued to run social programmes for students. These focused on support for students from rural areas, disadvantaged groups and non-traditional students in order to increase their participation rate in tertiary education.

7. Modernising vocational education and training and promoting adult learning

The participation of upper secondary students in vocational education and training (VET) in Romania remains above the EU average (60% compared with 48.9% in 2013). However, the drop-out rate in VET high schools was twice as high compared to general upper secondary education in 2012. Since the 2014/15 academic year, schools have been receiving incentives to offer second chance programmes to young adults who left education and training early.

Romania has not made significant progress in recent years on the participation of adults aged 25-64 in lifelong learning. The 2014 rate of 1.5% is the lowest in the EU and falls significantly short of the EU average of 10.7%. The lowest rate of participation in training is recorded among employees with low levels of education and professional qualifications, working in companies with less than 10 employees and aged over 40. Training participation rates are also lower in rural areas than in urban areas and lower for women than men.

Measures have been implemented with the aim of reinforcing vocational education and training in general and apprenticeships schemes in particular. Government Order No 117/2013 created the legal framework for a new initial vocational education and training (IVET) strand in the education system (Cedefop 2013). The new three-year VET programmes were introduced for the 2014/15 school year, with curricula covering the learning objectives and involving teaching

²²¹ People aged 20-34 who left education between one and three years before the reference year.

²²² Government Decision 565 of 15.07.2015.

hours for students in the ninth and tenth years of school. This was necessary for the VET strand to be considered part of the compulsory education system and to enable students graduating from the VET schools to continue their education in grades 11 and 12 of high school. The proportion of work-based learning increases in each year of the training, up to 72% of the total number of hours in the third year of training. Signed agreements with companies for work-based learning are a requirement for VET schools that want to provide the vocational type of these three-year courses. 2014 Ministry of Education rules require the student, the school and the company to sign a contract before the beginning of the programme.

Changes in the apprenticeship system since 2013 include:

- a subsidy for companies participating in the apprenticeship programme;
- a link between the duration of studies and acquiring corresponding qualifications (levels 2-3 of the European qualifications framework (EQF));
- opportunities for transition to higher VET programmes if the apprenticeships programme is followed by studies at EQF level 4 in general or technological programmes (Cedefop 2015).

In December 2014, the Government approved the introduction of the two-year dual-system vocational programmes, as part of the initial VET system. Currently, the Governmental Decision is subject of Parliament approval, prior to its adoption by law. This pathway, which is going to be introduced in parallel with the current initial VET programmes, is expected to provide new opportunities for better matching companies needs as well as for increasing VET attractiveness, also for students at risk of early school leaving.

Starting from the 2015/16 academic year, universities can also organise 'vocational education and training colleges' by enabling a form of tertiary vocational training giving access to the labour market. So far, 'higher VET programmes' have been offered only by initial VET schools at post-secondary level and have included work-based learning. For continuing vocational education and training, the number of apprenticeships started increasing after the change in the law, but remains limited. Apprenticeship schemes have been expanded to cover a broader age group (over the age of 24) and make it easier for employers to participate through partnerships with vocational training providers. A number of measures planned under Romania's new education law were implemented as pilot schemes (e.g. the work-based learning vocational training scheme) and will be further rolled out.

A new strategic framework for VET has been developed and is currently in the approval process. The main objectives of the VET strategy, drafted with involvement of social partners, are to make VET programmes more relevant to the labour market and improve the quality of VET.²²³ The training standards and occupational standards in place offer the basis for strengthening VET graduates' and apprentices' prospects on the labour market. Recently, a set of new training standards and occupational standards in VET have been drafted in this respect.

With the support of the World Bank, the Romanian Government has developed a national lifelong learning strategy and a methodology for the organisation and operation of community lifelong learning centres. The strategy, which was adopted in June 2015, aims to diversify the provision of VET. With that aim in mind, it has identified a number of priority target groups, including:

- early school leavers;
- graduates with formal qualifications no longer relevant on the labour market;
- individuals returning to the country after period of working abroad;
- low-skilled adults over the age of 40.

²²³ The VET strategy has four strategic objectives: (i) fostering the labour market relevance of VET; (ii) improving participation and facilitating access to VET programmes; (iii) improving VET quality; (iv) fostering innovation and cooperation in VET. For each strategic objective, a set of measures are foreseen.

References

- Cedefop (2013), VET in Europe: Country Report Romania, https://cumulus.cedefop.europa.eu/files/vetelib/2013/2013_CR_RO.pdf
- Cedefop (2015), National qualifications framework developments in Europe. Anniversary edition, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/4137>
- Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Romania and delivering a Council opinion on the 2015 Convergence Programme of Romania, 2015/C 272/01, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_romania_en.pdf
- European Union Agency for Fundamental Rights (2012), The situation of Roma in 11 EU Member States. Survey results at a glance, http://fra.europa.eu/sites/default/files/fra_uploads/2099-FRA-2012-Roma-at-a-glance_EN.pdf
- European Union Agency for Fundamental Rights (2014), Report on education 2014: The situation of Roma in 11 EU Member States, http://fra.europa.eu/sites/default/files/fra-2014_roma-survey_education_tk0113748enc.pdf
- Government of Romania (2015), Convergence Programme 2015-2018, http://ec.europa.eu/europe2020/pdf/csr2015/cp2015_romania_en.pdf
- IEA (2012), TIMSS and PIRLS 2011: Achievement Results in Reading, Mathematics, and Science, <http://timssandpirls.bc.edu/data-release-2011/pdf/Overview-TIMSS-and-PIRLS-2011-Achievement.pdf>
- Fartuşnic, C. et al (2014), Financing pre-university education system based on standards cost. Current evaluation from the equity perspective, Bucharest: Institute of Educational Sciences, UNICEF Romania
- OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>
- OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

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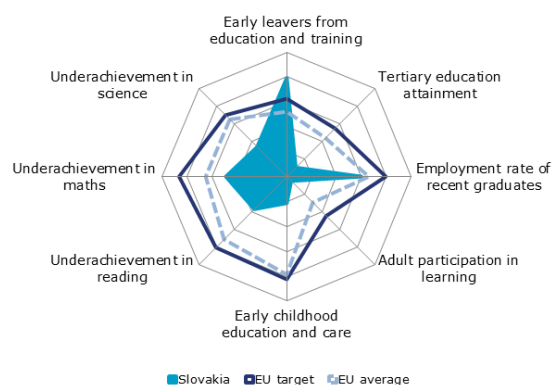
Slovakia

1. Key Indicators and Benchmarks

		Slovakia		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	•	: 28.2% ¹²	:	17.8% ¹²
	Maths	•	: 27.5% ¹²	:	22.1% ¹²
	Science	•	: 26.9% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		4.6% 5.0% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		11.3% 12.2% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men		5.4% 6.9%	15.2%	12.7%
	Women		4.6% 6.6%	11.5%	9.5%
	Total	•	5.1% 6.7%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		19.4% 22.5%	31.0%	33.6%
	Women		27.3% 31.5%	38.7%	42.3%
	Total	•	23.2% 26.9%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	76.9% 77.5% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		: 73.3% ¹³	:	84.6% ¹³
	Special needs education		: 22.3% ¹³	:	32.4% ¹³
	Multicultural settings		: 13.2% ¹³	:	13.2% ¹³
	ICT skills for teaching		: 60.4% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		52.2% 66.5% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			70.9% 68.1% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		61.6% 68.3%	71.3%	70.8%
	ISCED 5-8		79.3% 76.7%	82.5%	80.5%
	ISCED 3-8 (total)	•	70.1% 72.7%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		: 4.2% ¹³	:	: ¹³
	Inbound graduates mobility (master)		: 3.5% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	3.9% 3.0%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The early school leaving rate in Slovakia remains low in comparison with other countries. Nevertheless, the increase in recent years calls for targeted measures. The new Vocational Education and Training (VET) Act, which is intended to encourage practical work experience in companies, is likely to improve graduates' preparedness for the labour market. Capacities for early childhood education and care are being strengthened in order to boost the participation rate. If these are well targeted, they could also lead to a higher rate of participation by children from marginalised communities, which could in turn contribute to better educational outcomes for disadvantaged students. The Slovak Ministry of Education is strengthening its analytical capacities and the country is participating in a number of international reviews, which should improve evidence-based policy-making.

Educational inequalities remain high and educational outcomes have deteriorated over recent years. Participation of Roma children in mainstream education and in high-quality early childhood education needs to increase. The attractiveness of the teaching profession to talented young people is low. Initial teacher education and continuous professional development need to be improved. The quality of higher education and cooperation with employers need to be strengthened. Deeper knowledge of the labour market needs would contribute to fewer skills and qualifications mismatches. Reforms often do not always reach their full potential partly because stakeholders are not always fully on-board with the reforms and due to weaknesses in the implementation phase.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to Slovakia (Council of the European Union 2015) included a recommendation on education and training:

CSR 3: Improve teacher training and the attractiveness of teaching as a profession to stem the decline in educational outcomes. Increase the participation of Roma children in mainstream education and in high-quality early childhood education.

3. Investing in education and training

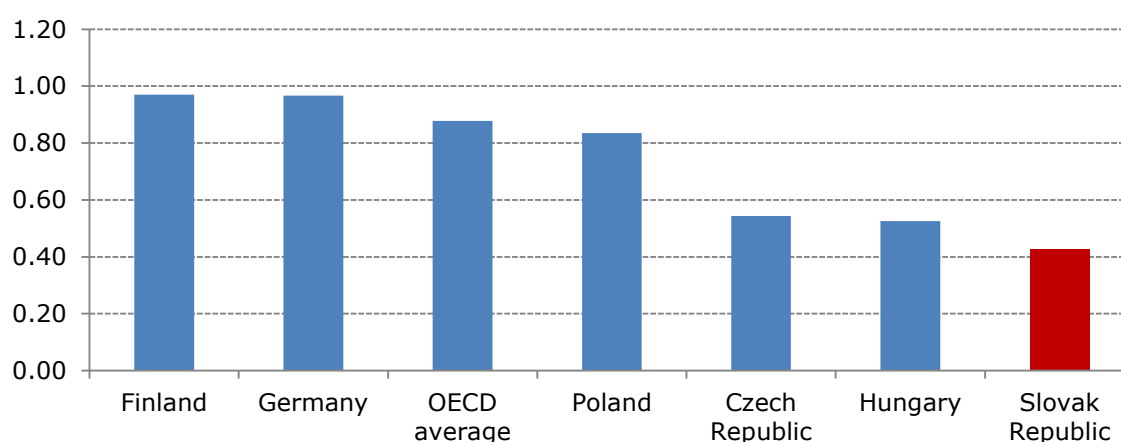
Slovakia's general government expenditure on education rose to 5% of GDP in 2013, which is in line with the EU average.²²⁴ The increase in 2013 followed a decrease over the previous three years. Part of the increase from 2013 is linked to a 5% rise in teachers' pay, which has continued in 2014 and 2015. However, teachers' pay remains low compared with other countries and with the salaries of other Slovak workers with equivalent levels of qualifications (Figure 2). Slovakia's 2015 National Reform Programme (NRP) reiterates the government's intention to continue increasing teachers' salaries in the coming years (Ministry of Finance of the Slovak Republic 2015). It is hoped that Slovakia will continue to make up for earlier gaps in funding, e.g. for learning materials (textbooks, equipment) or supporting underperforming students and schools.

European Structural and Investment Funds will continue to support the education sector in Slovakia in the 2014-2020 period. Not all the available funds were used between 2007 and 2013, owing to weak project management. As part of the 2015 NRP, the Slovak Government intends to improve its management of EU funds. In particular, the long-term impact of projects could be improved through better evaluation and mainstreaming of positive results.

²²⁴ Source: Eurostat, General government expenditure by function (COFOG) database. A new European System of National and Regional Accounts was implemented from September 2014, affecting (among other things) the figures for Slovakia from previous years.

Slovakia is reviewing its funding system for regional education (upper secondary level) in order to make it more efficient. Smaller intakes of students call for optimising the network. From September 2015, funding for VET programmes will be partly linked to needs on the labour market. As part of its drive towards improved efficiency, Slovakia took part in an OECD review on the efficiency of the use of school resources (Ministry of Education, Science, Research and Sport of the Slovak Republic 2015). More generally, the education sector will be impacted by a wide-reaching ongoing reform of state administration entitled 'Effective, Reliable and Open state administration' (ESO reform). On funding, Slovakia's NRP states that savings are expected in education as a result of greater efficiency.

Figure 2. Teachers' salaries relative to earnings for tertiary-educated workers aged 25-64 (2012)
Lower secondary teachers' salaries, in public institutions



Source: OECD (2014a)

4. Tackling inequalities

Slovakia's early school leaving rate remains among the lowest in the EU at 6.7% in 2014, compared to the EU average of 11.1%. However, from 4.7% in 2010, the rate has been rising constantly, surpassing the Europe 2020 national target of 6%. Regional differences are high: in particular, areas with a high proportion of Roma in the population show high rates of early school leaving; it is estimated that 83% of Roma leave school early (European Agency for Fundamental Rights 2014). Since Slovakia has the lowest employment rate in the EU for those not having attained upper secondary education, the impact of leaving school early is particularly strong.

The OECD 2012 Programme for International Student Assessment (PISA) pointed to a significant deterioration in all areas tested and in all types of schools (OECD 2013). What is more, among the countries surveyed, Slovakia recorded the strongest impact of socioeconomic background on academic performance in mathematics. Dividing students into different streams from the age of 11 (one of the earliest among OECD countries) is likely to contribute to inequalities. The PISA results also found that there is a teacher shortage in socioeconomically disadvantaged schools and in schools located in rural areas. Incentives to attract good teachers to disadvantaged schools could contribute to improved learning outcomes while grants to encourage disadvantaged students to attend upper secondary school could raise attainment. Truancy and grade repetition are on the rise among disadvantaged students.

According to Slovakia's Public Defender of Rights, the way in which Slovakia assesses the school-readiness of children is discriminatory: Roma children are over-represented in special schools with lower learning standards, reducing their chances of completing upper secondary

education and hampering their opportunities on the labour market.²²⁵ The low number of Roma students in upper secondary or higher education levels also means that there are few Roma teachers, while Roma children would probably benefit from being taught by Roma teachers who would also offer positive role models.

PISA results for Slovakia confirmed the strong relationship between participation in early childhood education and care (ECEC) and learning outcomes. Participation in ECEC is low (77.5% in 2013, compared with the EU average of 93.1%). For children from marginalised Roma communities, the estimated rate is extremely low (28% in 2011) (European Agency for Fundamental Rights 2014). This is partly due to insufficient ECEC capacities.

The 2013 OECD Teaching and Learning International Survey (TALIS) showed that the proportion of teachers in Slovakia who reported having participated in professional development related to teaching students with special needs was among the lowest among countries surveyed (22.3%, compared with the OECD average of 31.7%). The same holds for participation in training for teaching in multicultural or multilingual settings (OECD 2014c), which would be beneficial among others when teaching classes with Roma students.

Although Slovakia does not have a national strategy on early school leaving, some measures targeting vulnerable groups are in place and have secured EU funding. The measures include all-day programmes, teacher training towards inclusive education, the EU-funded 'PRINED' project to prevent disadvantaged students from being placed in special schools due to misdiagnosis.

Desegregation legislation was adopted mid-2015 to eliminate the placement of socially disadvantaged students in special classes or schools and ensure their direct placement in mainstream classes. Extra contribution by public funds for socially disadvantaged pupils will be allocated only for children in mainstream schools and classes. The placement in catching-up classes cannot exceed one year and the School Inspection will control diagnosis more strictly. The latter actively cooperates with human rights organisations on finding effective ways to eliminate segregation and stakeholders exchange practical information, experiences and activities. Specific support to systematically address Slovak language deficiencies would be desirable. It is not clear if increased numbers of teacher assistants for Roma students are planned. Efforts will be needed to ensure that EU-funded projects with good results are mainstreamed towards systemic, sustainable measures that will also benefit national funding.

The expansion of early childhood education and care capacities has been allocated EUR 14.5 million for 2015; special attention will be given to capacities in kindergartens in places with higher numbers of children from marginalised Roma communities. In order to achieve substantial increases in ECEC participation for disadvantaged children, further action is most likely needed, such as extending the entitlement to a place.

To work in early childhood education and care in Slovakia, teachers need only an upper secondary level qualification (specialised 4-year education programme from a pedagogical school), whereas in most EU countries a bachelor's degree is required. Previously envisaged tougher qualification requirements are not on the agenda anymore at this stage. A new curriculum at pre-primary level is being pilot tested since September 2015, as well as a new online diagnostic tool, which, among other things, can detect learning or behavioural difficulties.

²²⁵ The European Commission has launched infringement proceedings against Slovakia for discriminating against Roma children by placing them in special schools with a reduced curriculum, intended for children with mild mental disabilities.

5. Modernising school education

Low pay is one of the factors making teaching unattractive as a profession to talented young people. It contributes to teacher shortages in certain fields. Initial teacher training does not include a high proportion of time dedicated to practical training. The proportion of teachers reporting participation in professional development to improve ICT skills for teaching is high (60.4%) and this is reflected in the high proportion of teachers using information and communication technology for students' projects or class work (OECD 2014c). However, the proportion of teachers who have participated in professional development in student career guidance and counselling is among the lowest of the countries surveyed. Overall, the proportion of teachers who took part in some professional development activities in the last 12 months (73%) is the lowest in the EU.

To attract more higher education students to science, technology, engineering and mathematics including future science teachers, motivational scholarships were continued in 2015. The availability of new textbooks needed further to the curricular reform launched in 2008 in schools substantially improved since the 2014/15 school year. Authorities aim at making the production, procurement and distribution of textbooks more effective. Together with the low attractiveness of the teaching profession, a lack of funds to buy the necessary teaching materials is harming the quality of teaching.

Research on teaching methods aimed at directing reforms and delivering results to be used in the classroom seems insufficient. Primary education was identified as a priority field of action in the 2015 NRP. An EU-supported project is to issue recommendations to higher education institutions preparing future teachers. The recommendations relate to how to achieve better initial training in line with new professional standards for teachers. They cover among others practical training, foreign languages and ICT. It is not clear how much progress has been made on announced improvements to continuous professional development of teachers, intended to make supply better match the actual needs of teachers. The individual needs of teachers may be better met if participants' feedback is examined closely and if a strict evaluation is carried out of the accreditation procedures for the courses.

Legislation was amended in early 2015 to prevent recruiting regular staff only for the active teaching period (i.e. excluding during the summer holidays), which is a positive step. If the new teacher standards are to be implemented properly, they will need adequate support measures. The OECD suggests that it would be helpful to combine the many existing tools for assessing teachers and classrooms into a single set of standards. This will provide a better understanding of what makes a good teacher. Furthermore, schools could benefit from clearer guidance for schools on evaluation criteria and quality indicators (OECD 2014b).

A revised curriculum for primary and general secondary education is to enter into force in September 2015. This will increase teaching in the sciences and technical subjects. Contrary to EU recommendations, learning a second foreign language will be made optional for students rather than compulsory, as was the case until now. However, schools must offer students the possibility to learn a second foreign language. With English the only compulsory foreign language, the relatively high proportion (2012 figures) of ISCED (International Standard Classification of Education) level 2 students learning two or more foreign languages may fall.

The Education Act was amended at the end of 2014 to enable schools to purchase some textbooks directly. However, at present limited amounts of money are available for this initiative. Cooperation between the authorities and the private sector on opening up the market for textbooks is still in its early stages.

The national tests at different educational levels are also being used as a means of gathering evidence and feedback on the performance of individual schools. If supported by sufficient

learning materials and accompanied by appropriate support measures for underperforming schools/teachers/students, these tests might be a useful tool to help improve outcomes. Teachers' competences for 'formative assessment' (i.e. assessment to monitor student learning to provide ongoing feedback to improve teaching and learning) could also usefully be improved to complement 'summative assessment' practices (i.e. assessment to evaluate student learning at certain points of the education process by comparing it against standards or benchmarks).

Slovakia's 2020 Strategy for Digitalisation of the Education sector, adopted at the end of 2014, aims to improve ICT usage in classes and teachers' skills in this field. Developing quality digital learning content could help modernise education while also helping solving the continuing problem of textbook shortages in classrooms.

6. Modernising higher education

Slovakia is one of the few EU countries where the tertiary education attainment rate – that had risen rapidly over the last decade – did not increase in 2014 compared to 2013, remaining at 26.9%, compared to the EU average of 37.9%. The rate is among the lowest and the Europe 2020 national target of 40% is at risk of not being met. Slovakia is one of the countries with the strongest correlation between tertiary education attainment and the educational attainment of parents: less than 5% of 20-34 year-olds in tertiary education have parents with a level of educational attainment below the upper secondary level (OECD 2014a). The employment rate of recent tertiary education graduates²²⁶ remained at 76.7% in 2014, i.e. lower than the EU average of 80.5%.

Slovakia remains among the few countries that do not have a quality assurance agency operating independently of the Ministry of Education and where neither completion nor drop-out rates are calculated and monitored systematically. The Accreditation Committee, which carries out quality evaluation, is not a member of the European Association for Quality Assurance in Higher Education (ENQA). Supporting its membership could possibly contribute to improving the work of the Committee.

Slovakia lacks professionally-oriented bachelor's programmes: the vast majority of students continue on to master's programmes (European Commission 2015 and Figure 3). Between 2010 and 2013, Slovakia was the EU Member State with the highest increase in the number of people with a tertiary degree working in a job below their level of qualification (European Commission 2015). This state of affairs is not helping to achieve a higher attainment rate or to use resources in the most efficient manner.

Higher education institutions are also under pressure because of the demographic decline, which is lowering the number of young people entering higher education and forcing institutions to fight to fill their courses. Employers – particularly employers in the automotive sector – point out that graduates do not have the right kinds of qualifications: too many at the master's level, too many from the social sciences and not enough from science, technology, engineering and mathematics (STEM). This may be partly linked to the fact that the largely per capita funding system does not favour technical universities, whereas the labour market needs more graduates precisely from the technical fields. Various sources (the Academic Ranking and Rating Agency, Eurostat, Eurydice, the National Reform Programme) point to a severe brain drain affecting students, teachers and researchers. Many students prefer to study in the Czech Republic rather than in Slovakia.

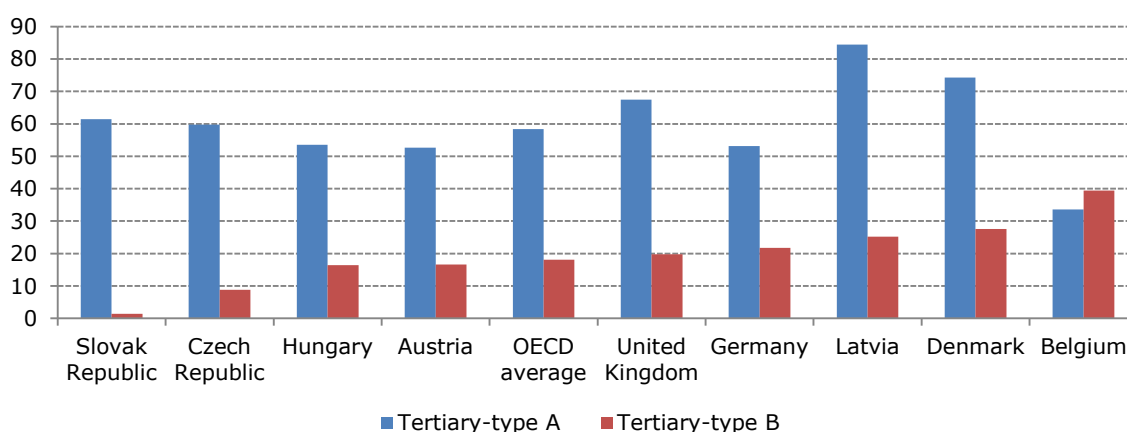
Work on a new Higher Education Act has been postponed until after the next general elections in 2016. The new Act was supposed to simplify the accreditation process and encourage cooperation with employers, something currently being explored through an ongoing EU-funded

²²⁶ People aged 20-34 who left education between one and three years before the reference year.

project. One of the project's results is a recently-launched portal which helps future students to choose where to study by providing employment rates and wages for graduates from individual universities and programmes.

By the end of 2015, the ongoing complex (re)accreditation round following the entry into force of stricter rules for quality assurance in 2013 will come to an end, hopefully bringing qualitative improvements. Funds from the 2014-2020 European Structural and Investment Funds will support the creation of profession-oriented bachelor's programmes. The Ministry of Education has also launched grants to encourage Slovak graduates of prestigious universities to come back to Slovakia and work in public administration.

Figure 3. Entry rates into vocationally-oriented tertiary education (type B) in 2012



Source: OECD (2014a)

7. Modernising vocational education and training and promoting adult learning

Participation of upper secondary students in Slovakia in vocational education and training is far above the EU average (68.1% in 2013, compared to the EU average of 48.9%). The employment rate of recent upper secondary education graduates²²⁷ has increased over the last four years but remains below the EU average (68.3% in 2014, compared to the EU average of 70.8%). However, the figure has now surpassed the 2009 level. Participation of adults in lifelong learning also remains low: 3.1% in 2014, with only two other Member States recording lower participation rates.

Sufficient investment and the quality of graduates remain challenges, both for initial VET (IVET) and continuous VET (CVET). Employers complain about skills mismatches and there is a lack of data collection, such as individual tracking, to ensure that adequate skills are developed. The lack of appropriate data on future skills needs has hampered the development of quality career guidance and counselling for pupils, students and adults. However, such services are being developed through EU-supported projects. To ensure the long-term employability of VET graduates, initial VET needs to be made more relevant to the labour market and a sufficient number of transversal skills need to be taught.

To increase the quality of adult learning, further education programmes are to be accredited using the same qualification standards as in IVET. These standards are based on the National Qualifications System (NQS), an ongoing project of the State Institute of Vocational Education (see below). The current system of information on existing further education programmes could

²²⁷ People aged 20-34 who left education between one and three years before the reference year.

be improved by implementing the NQS qualification standards and linking qualifications with corresponding professions that are facing labour market skills shortages.

Legislative changes were adopted in 2015. These provide financial incentives to employers to invest in further learning and will also improve the recognition of non-formal and informal learning. There is currently no system of tax breaks for people who want to take part in CVET. This is one of the main objectives in the national strategy on lifelong learning still not translated into concrete action. The national 'Further education and guidance for adults as a better competitiveness at the labour market tool'²²⁸ project funded by the European Social Fund (EUR 28 million) creates short-term (2013–15) financial support for individual learners who want to re-skill or up-skill by gaining a qualification required by several sectors of the labour market.²²⁹

The National Qualifications System²³⁰ developed by the European Social Fund-funded project 'Development of National Qualifications System' (EUR 24 million), intends to include all qualifications: general education, VET, higher education, qualifications gained through validation of learning, outcomes gained outside formal education. The National Qualifications Framework (NQF) will be learning outcome-based, with revised descriptors covering knowledge, skills and competence. Linking the NQF to the European Qualifications Framework is planned for mid-2015.

Box 2. The VET reform

A new Act on VET was adopted by the Slovak Parliament in March 2015.²³¹ It aims to improve the labour market relevance of VET by introducing elements of a dual system that includes apprenticeships from September 2015 onwards. The Act also introduces incentives for enterprises to provide training by making costs for practical training provision tax deductible. Furthermore, an additional tax deductible incentive is offered on a per capita principle depending on the number of offered practical training hours.²³²

The Act will also allow for data collection on graduates' employability (broken down by regions, individual schools and programmes) and the extent to which they find work that corresponds to their field of study. The data, which will be published on a dedicated web portal once a year, will complement the current practice of using data on unemployment from VET programmes to determine the success of transition from school to work.

This will be made possible thanks to closer cooperation between the Ministries of Labour and Education, which was formalised in 2014. This will enable a more specific analysis of the labour market relevance of programmes offered.

The VET reform is supported by cooperation with employers and with German, Austrian and Swiss partners. EU-funded projects are also feeding into the reform. Public campaigns have been launched, with the support of EU funds, to encourage enterprises to invest in VET and to make VET more attractive to students in primary education.²³³

The initial response by employers to the reform has been very positive. In April 2015, 130 employers, offering a total of 1 800 apprenticeships, signed up for the 'dual education' programme starting from the 2015/16 school year. Companies employing between 20 and 100 employees and active in retail and tourism, in the car manufacturing industry and in electrical

²²⁸ Project implemented since 2013 by the National Institute for Lifelong Learning — original name: 'Ďalšie vzdelávanie a poradenstvo pre dospelých ako nástroj lepšej uplatniteľnosti na trhu práce.', which is an agency operating under the Ministry of Education.

²²⁹ Electrical, mechanical, automotive, construction, metallurgy, wood processing, agriculture, crafts and services, stationery and printing and mining industry.

²³⁰ The national ESF-funded project 'Development of the National Qualifications System', to develop qualification standards (1 000 by 2015) is ongoing. As social partners are taking part in developing qualification and assessment standards, it is hoped that CVET qualifications aligned with qualification standards will be recognised by the labour market.

²³¹ Zákon č. 61/2015 Z.z. o odbornom vzdelávaní a príprave a o zmene a doplnení niektorých zákonov.

²³² EUR 3 200 per trainee for 400 hours of practical training per year or EUR 1 600 per trainee for 200 hours of practical training per year. Pay for productive work that accounts for 50% to 100% of the minimum wage is also tax-deductible.

²³³ The 'ZENIT' VET competition is helping attract students educated to lower secondary level onto VET courses.

engineering have shown most interest in the programme so far. Interested companies will be screened for suitability and subsequently sign contracts with schools and interested students. For the VET reform to be successful, employers, in particular SMEs, must be helped to build up their capacity to offer in-company training.

References

Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of Slovakia and delivering a Council opinion on the 2015 Stability Programme of Slovakia, 2015/C 272/03, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_slovakia_en.pdf

European Commission (2014), Key data on early childhood education and care in Europe, http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/166EN.pdf

European Commission (2015), The European Higher Education Area in 2015: Bologna Process Implementation Report, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/182EN.pdf

European Union Agency for Fundamental Rights (2014), Education: the situation of Roma in 11 Member States, http://fra.europa.eu/sites/default/files/fra-2014_roma-survey_education_tk0113748enc.pdf

Ministry of Education, Science, Research and Sport of the Slovak Republic (2015), OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools. Country Background Report, Educational Policy Institute, http://www.oecd.org/slovakia/CBR_School%20Resources_SK.pdf

Ministry of Finance of the Slovak Republic (2015), National Reform Programme of the Slovak Republic 2015, http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_slovakia_en.pdf

OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education at a Glance 2014. OECD indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b), Reviews of Evaluation and Assessment. Slovak Republic 2014, <http://www.oecd.org/slovakia/oecd-reviews-of-evaluation-and-assessment-in-education-slovak-republic-2012-9789264117044-en.htm>

OECD (2014c), TALIS 2013 Results: An International Perspective on Teaching and Learning, <http://www.oecd.org/edu/school/talis.htm>

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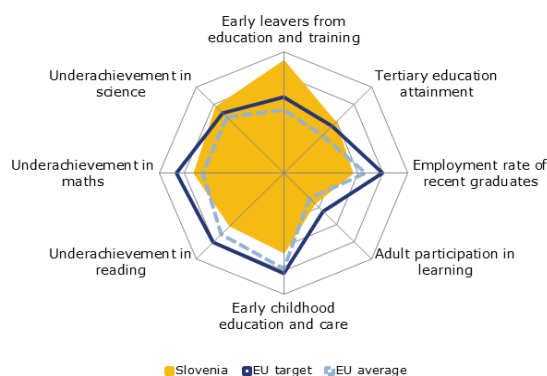
Slovenia

1. Key Indicators and Benchmarks

		Slovenia		EU average	
		2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector					
Share of 15 year-olds with underachievement in:	Reading	•	: 21.1% ¹²	:	17.8% ¹²
	Maths	•	: 20.1% ¹²	:	22.1% ¹²
	Science	•	: 12.9% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		6.6% 6.5% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		13.2% 10.9% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe					
Early leavers from education and training (age 18-24)	Men		5.7% 6.0%	15.2%	12.7%
	Women		2.5% 2.7% ^u	11.5%	9.5%
	Total	•	4.2% 4.4%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		29.4% 30.0%	31.0%	33.6%
	Women		47.3% 53.7%	38.7%	42.3%
	Total	•	37.9% 41.0%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance					
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	89.8% 89.8% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		: : ¹³	:	84.6% ¹³
	Special needs education		: : ¹³	:	32.4% ¹³
	Multicultural settings		: : ¹³	:	13.2% ¹³
	ICT skills for teaching		: : ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		50.4% 48.6% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			65.4% 65.9% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		68.7% 62.5%	71.3%	70.8%
	ISCED 5-8		80.3% 74.3%	82.5%	80.5%
	ISCED 3-8 (total)	•	76.0% 70.1%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		: 1.5% ¹³	:	: ¹³
	Inbound graduates mobility (master)		: 2.6% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	15.9% 11.9%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

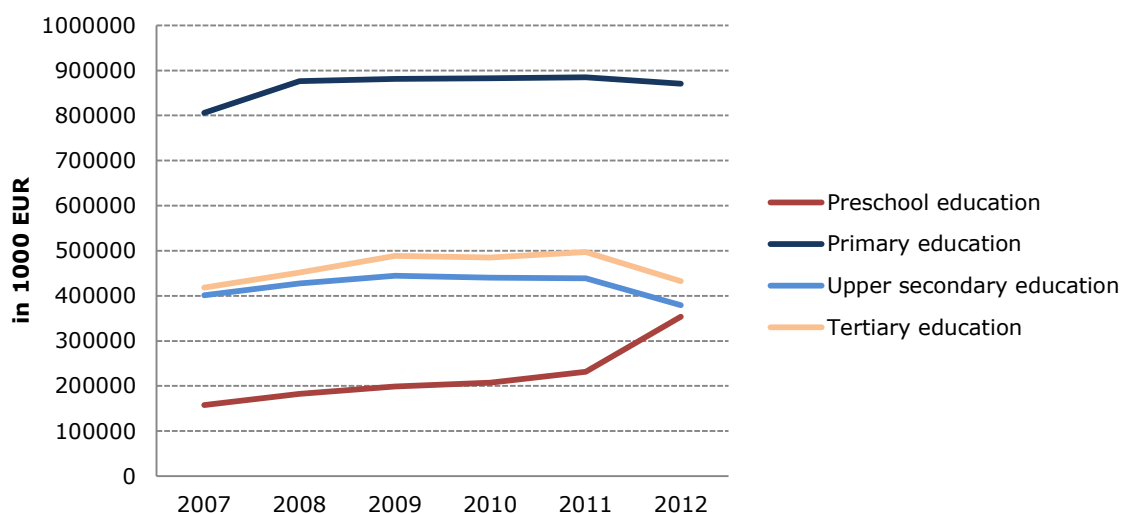
Slovenia has reached the national targets set by the Europe 2020 strategy. Early school leaving is the second lowest in the EU and tertiary education attainment is above the EU average. Basic skills performance of 9-year-olds and 15-year-olds is satisfactory, especially in maths and science. Also the proportion of upper-secondary students following vocational education and training remains above the EU average.

Despite these achievements in terms of quantity, there is room for improvement in the quality of education and training in Slovenia. In particular, the higher education system is marked by a disproportionately high number of study programmes, a high drop-out rate and problems with fictitious enrolment. In addition, the higher education sector is underfunded and as a result, the quality of teaching and resources is unsustainable. In upper secondary education, the reversing demographic trends and the drop in student numbers have caused schools across the country to function beneath their capacity. Finally, there are very marked regional differences in results in national examinations, indicating that socio-economic background has a strong effect on educational achievement.

3. Investing in education and training

Slovenia ranks alongside the Scandinavian countries when it comes to overall investment in education. After a dip in 2012 (6.4% of GDP), in 2013 the percentage of GDP Slovenia spent on education was 6.5%, well above the EU average of 5%.²³⁴ National data differs slightly and puts this figure at 5.5% of GDP (EUR 1.97 billion), down from 5.7% in 2012 (Statistical Office of the Republic of Slovenia 2015a). In 2013, 74% of expenditure by educational institutions went to pay staff salaries and 12% went to investment.

Figure 2. Public expenditure on formal education 2007-2012



Source: Statistical Office of the Republic of Slovenia

Nevertheless, education and training have been hit by austerity measures, with higher education in particular experiencing budget cuts and their consequences. Recent political attempts to reduce the education budget by more than EUR 65 million in 2015 caused revolt among educators, unions, students' organisations and the general public. Higher education spending was reduced by 13% between 2011 and 2012 and by 5% between 2008 and 2012.

The developments are graphically presented in Figure 2, where all sectors except pre-school education show a decrease in public expenditure. Even the growth of public expenditure for pre-

²³⁴ Source: Eurostat, General government expenditure by function (COFOG) database.

school education is the result of the change of the definition of ISCED levels according to the ISCED 2011 classification which, unlike before, includes early childhood education and care of children aged 1-3 years.

4. Tackling inequalities

The figure for early school leaving in Slovenia is the second lowest in the EU (4.4% in 2014). Children born to foreign parents, however, do comparatively worse than native Slovenes. Nevertheless, Slovenia considers that its preventive measures and capacity to detect early those at risk of dropping out of education have been successful and that for this reason no explicit strategy to combat early school leaving in line with the Council Recommendation on policies against early school leaving is required. The preventive measures in Slovenia include early detection of vulnerable students, immediate assistance or advice and, where appropriate, learning assistance. For example, since 1999, around 180 people have been participating in a publicly-funded programme entitled 'Project learning for young adults' (PLYA) where, with the help of mentors, young people solve the problems that contributed to their decision to leave school. After completing the programme, mentors verify for six months whether the school leavers have re-entered education or have found a job. 2014 saw the start of a three-year Erasmus + financed pilot project entitled 'CroCoos' involving 15 vocational schools. The aim is to identify the most effective means of preventing early leaving in Slovene vocational education and training schools, with emphasis on cross-sectoral cooperation and early warning systems.

The basic skills performance of Slovenian 15-year-olds has been constant but relatively stronger in mathematics and science and relatively weaker in reading. The 2012 OECD Programme for International Student Assessment (PISA) showed that the percentages of low achievers in Slovenia were lower than the EU average in mathematics (20.1% compared to 22.1% in the EU) and science (12.9% compared to 16.6%) and worse than the EU average in reading (21.1% compared to 17.8%) (OECD 2013). Both the 2011 TIMSS (Trends in International Mathematics and Science) and PIRLS (Progress in International Reading Literacy) surveys assessing reading literacy and mathematics of younger 9-year-old students showed average overall results compared to other participating countries but significant gaps between Slovenian regions, with the regions in the west of the country outperforming the eastern regions.²³⁵ The reason for this performance gap is not the difference in the quality of the schools but the impact of factors related to families' socio-economic status, as measured by parents' education, their employment status, and the number of books they own. This regional gap has been repeatedly observed over the last two decades and there is awareness of it among education policymakers. However, a long-term strategy to address this problem at the national level has not materialised.

The Slovenian pre-school education system performs relatively well, both in terms of participation levels and the overall quality. The children-staff ratio is very favourable. In 2012, for the age group 1-2 years, the ratio was 6.3 and for the age group 3-5-years it was 9.3, which is a better ratio than the 11.2 in the EU-21 (OECD 2014). Data available for 2011 showed that the average number of hours per week spent in ECEC was 35.7, which is above the EU average and comparable to the situation in countries such as Denmark, Portugal and Sweden (European Commission 2014a). However, participation in early childhood education and care (ECEC) as a percentage of the age group between 4-years-old and the starting age of compulsory education is with 89.8% in 2013 still below the EU average of 93.1%. It is expected that the figure for 2014 will not be significantly higher, when available, because according to national sources, the number of children enrolled in kindergartens in the 2014/15 school year increased by a smaller

²³⁵ For instance, in PIRLS 2011, the average score achieved by students in the eastern *Pomurska* region was 506 points, while their peers from the central *Osrednjeslovenska* region scored 541 points. In TIMSS 2011, the average score of 4th graders from the eastern *Pomurska* region was 487 points, while students from the central *Osrednjeslovenska* region scored on average 524 points.

margin than in previous years, i.e. by 1.3% (Statistical Office of the Republic of Slovenia 2015b).

In terms of access to ECEC, data shows that the participation of children with immigrant status in ECEC is low. In the 2011/12 school year, only 6.5% of immigrant children aged 1 to 2 and 12.7% of those aged 3 to 5 participated in ECEC programmes (Čelebič 2012). At the same time, due to the worsening economic situation, the rise in unemployment and the general increase in the number of enrolments into ECEC, the number of children from families classified as socially deprived increased by 11.4% between 2001 and 2011 (Čelebič 2012).

Quality assurance in the basic school²³⁶ is strong. The National Examinations Centre²³⁷ carries out a mandatory external assessment of students in sixth and ninth grades (12 and 15-year-olds). In the sixth grade, pupils are assessed in the mother tongue, mathematics and foreign language, whereas in the ninth grade the language is replaced by a subject determined by the Minister. The results are distributed to each individual and aggregated results are made available in anonymised form to head teachers and teachers. The school results are comparable only with national averages, not with other individual schools, as the main aim of the measure is school self-evaluation and self-improvement rather than performance ranking.

New performance criteria for pre-school education have been adopted and will enter into force for the 2014/15 school year. These criteria aim to ensure quality curricula and decent working conditions by providing greater flexibility on group sizes. Municipalities are also given more freedom to determine specific conditions. On the other hand, the draft amendments to the Kindergarten Act, which were intended to simplify the establishment of kindergartens within companies, have so far not been adopted. Finally, the state *matura* exams at the end of upper secondary education have been made more inclusive thanks to new legislation in 2015 guaranteeing special conditions for children with autistic spectrum disorders and visual impairments.

5. Modernising school education

In the European Survey on Language Competences in 2011, Slovenian ninth grade students (14-year-olds) achieved above average results in listening and writing skills in their first foreign language (English) and average results in reading comprehension. The results were satisfactory, although the national report (Rutar Leban et al. 2012) emphasised that 41% of students did not achieve the expected skills level in reading comprehension in English as a first foreign language, as determined by the national English language syllabus. Reading comprehension in German as a first foreign language showed better results. Slovenia was below average for the proportion of students learning two or more foreign languages, in particular in vocational upper secondary education.

Slovenia performed relatively well in the 2013 International Computer and Information Literacy Study (ICILS). Students scored significantly higher than the ICILS 2013 average (IEA 2014). The ICT skills of people living in Slovenia are above the EU average, but the proportion of students using computers in school is below average.²³⁸ Slovenes appear very confident about their entrepreneurship abilities: the country is among the Member States scoring highest in the relevant surveys. The ongoing 'Opening my door to new opportunities' (*Vrata odpiram sam*) project encourages young people to become self-employed and promotes an entrepreneurial mind-set and innovation among young people and their teachers.

²³⁶ Slovenia has an integrated model of primary and lower secondary schools called 'basic schools' in which the first nine years of schooling form a single, integrated unit and are usually taught within a single school.

²³⁷ This is a state-funded institution responsible for external evaluation of the education outcomes of school pupils, students and adults in Slovenia. See: http://www.ric.si/ric_eng/general_information/.

²³⁸ The percentage of individuals aged 18-64 with high computer skills increased in 2013 to 31%, compared with the EU average of 26%. Use of computers among 15-year-olds (ISCED 2) increased strongly from 33.3% in 2010 to 45.3% in 2013 but remains substantially below the EU average of 64.7%.

Slovenia is continuing to work on the 'Opening up Slovenia' initiative, launched in April 2014. The goal of the initiative is to complement or redesign existing education practices with innovative, dynamic and open learning approaches and set up a mechanism for quality assurance of open education services and content. The initiative is supported by a wide range of stakeholders and includes research and development of new concepts, models and methods in open education and setting up a nation-wide test bed for open learning environments.

A further update of the rules on the approval of digital textbooks was adopted in May 2015. It determines the procedure for approval of textbooks more clearly and provides definitions of the types of e-textbooks. 'D-textbooks' are electronic versions of hard copies that include only texts and pictures, and 'i-textbooks' include interactive elements, constructions and assignments with feedback options including a 'save' function for answers and for observing the user. The process has been very prolific: 40 i-textbooks are being developed and 32 of them have already been approved in subjects like maths, chemistry, English, Slovenian language, physics and others. Prior to the approval, they have been tested in at least one classroom of 72 different pilot schools. Also a complete technical platform for designing and publishing e-material (including e-textbooks) has been developed as well as compatibility with different devices and operating systems.

According to OECD data, in 2012, 97% of teachers in primary education and 79% of those in lower secondary education were female (OECD 2014). This is the highest percentage of female teachers among all the OECD and EU countries, indicating that the teaching profession, at least at the primary and lower secondary levels, is highly feminised. The reasons for the low rate of males entering the teaching profession are currently not being investigated. Teacher salaries decreased by nearly 17% in the period between 2009 and 2014 (European Commission 2014c). Teacher statutory salaries in Slovenia are low in comparison with the EU average and there is a relatively smaller difference between starting and top salaries.²³⁹ Statutory salaries are also lower than those of other workers with tertiary education (OECD 2014).

6. Modernising higher education

Slovenia has reached its Europe 2020 national target for tertiary education attainment, with 41% of the population aged 30-34 in 2014 having a tertiary qualification. Women are well ahead of men in terms of tertiary education attainment in 2014, with 53.7% of women and only 30% of men having graduated from higher education. The challenge now shifts to the drop-out rate, which is estimated to be as high as 35% (European Commission 2014b). In addition, faulty student record systems and an attractive social benefits package for students have resulted in fictitious enrolments. This is especially acute in post-secondary vocational education, where fictitious enrolments are estimated to account for more than half of all first-year students. The Slovenian Government has recognised the problem and is tackling it via a new electronic student data register called eVŠ (see Box 1 below).

Tertiary education graduates in Slovenia (25-34 year-olds) earn 42% more than those with only upper secondary education in the same age group (OECD 2014). The employment rates of recent tertiary graduates,²⁴⁰ however, are less favourable. From 85% in 2007, the rate fell consistently to 74.3% in 2014, below the EU average of 80.5%. Slovenia has the highest proportion of young people (15-24 years) in temporary employment in the EU (73.2% in 2013). Half of all students hold a regular paid job during the academic year (Eurostudent). This has a negative effect on performance and prolongs the duration of studies. There is a high reliance on occasional student work, accounting for almost 80% of the temporary jobs occupied by young people. This can help explain decreased performance, as students who work more than 15

²³⁹ The starting statutory salaries of teachers in Slovenia are the same, regardless of the level of education at which the teacher is teaching because the same level of university degree qualification is required for primary, lower and upper secondary education.

²⁴⁰ People aged 20-34 who left education between one and three years before the reference year.

hours a week devote considerably less time to studying (Eurostudent 2015). A large number of young people (aged 15-24) in temporary employment was the first to be made unemployed, as companies shed their labour force during the period of low activity caused by the economic crisis.

In response, a reform of student work entered into force in February 2015.²⁴¹ The reform has made employing students less attractive to employers by introducing a minimum hourly wage and social security contributions for student work, while allowing student contracts to remain the cheapest form of employment for employers. The measure was expected to yield an additional EUR 15 million which was planned to be diverted towards scholarships for students in need, with the aim of better fulfilling the original purpose of student work as a social corrective.

The proposed new Higher Education Act was expected to further reform the status of students. However, although the draft was prepared in October 2013, numerous changes in the country's political leadership have delayed its adoption. The government had originally planned to adopt the law in 2015, with entry into force in the 2017/18 academic year, but the current timetable for its adoption is unknown. The principal objective of the amendments is to introduce a sustainable, transparent and efficient funding system; increase the responsibility of higher education institutions for the quality of their study programmes by shifting the focus of quality assurance system to institutions; and support the internationalisation process of higher education.

Box 1. Analytical information system for higher education (eVŠ)

In July 2012, a Records and analytical information system for higher education in the Republic of Slovenia was introduced by the Ministry of Education, Science and Sport. As it contains a complete record of student data and can be used to record, track and analyse student records, it serve evidence-based policy making in higher education. The system is fed with the following types of data:

- higher education institution records;
- study programme records;
- student and graduate records;
- records of calls for enrolment;
- records of people registered for enrolment;
- records of people who have applied for subsidised student accommodation;
- higher education provider records (higher education teaching staff).

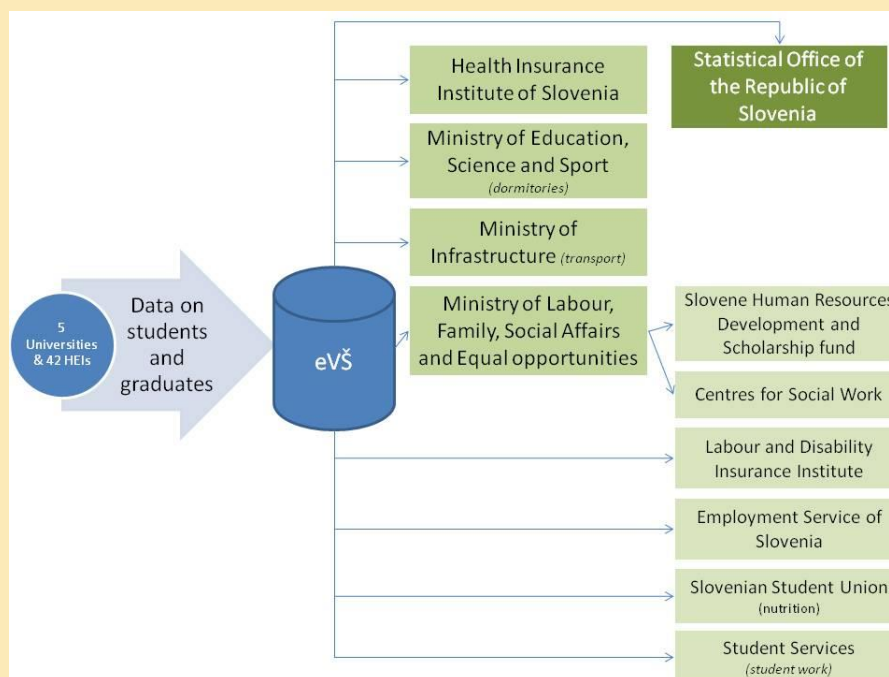
The system also supports an online application system for enrolment into study programmes and as an application system for subsidised student accommodation places. In 2014 users filled 48 595 online applications via this system.

The purpose of eVŠ is to:

- monitor the higher education system and inform policy planning;
- monitor the network of higher education institutions and study programmes;
- electronically determine students' eligibility to enrol in studies;
- provide a dataset for analytical and statistical purposes;
- improve the transparency of data for the public.

The system has become an official source of information on student status and is used by other public institutions to grant scholarships, transport and food subsidies, dormitory places, health insurance and student work, as presented in the diagram below. In 2014 eVŠ registered 1 466 429 views into student data.

²⁴¹ Act on Occasional Student Work was incorporated into the Public Finance Balance Act in December 2014.



The in-built controls in the enrolment application have already been successful in preventing some fictitious enrolment into higher education. Student and graduate records were used to prevent fictitious enrolment into post-secondary vocational education and training. By the end of 2017, the aim is for the eVŠ to become an analytical tool to support evidence-based policy making in higher education available also to higher education institutions and to connect eVŠ data with data from other public records. In this way, it will be possible to analyse the path of students from secondary to tertiary education and on to the labour market.

7. Modernising vocational education and training and promoting adult learning

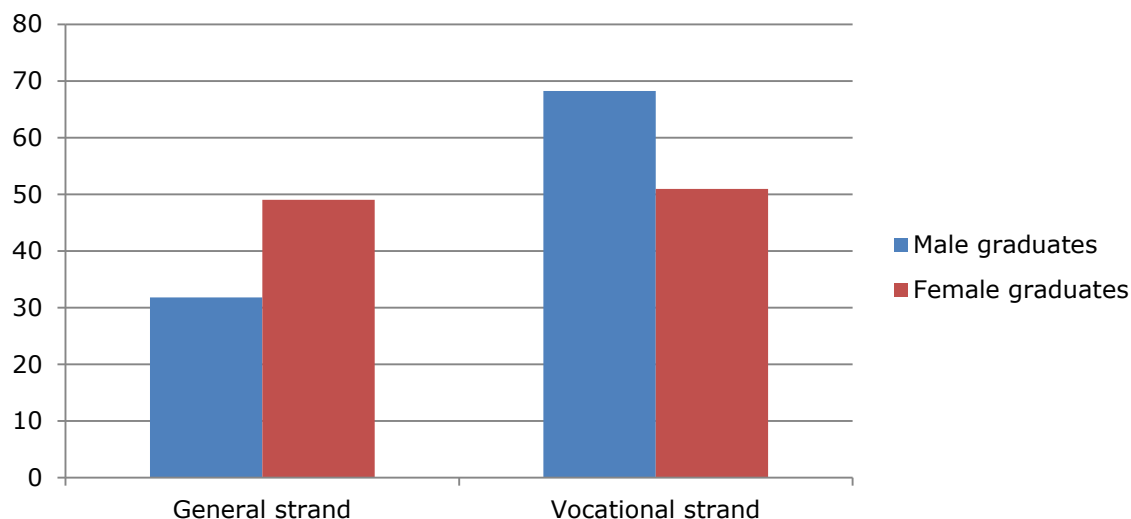
Participation of upper secondary students in vocational education and training (VET) remains above the EU average (65.9% compared to 48.9% in 2013), and the unemployment rate of vocational graduates (aged 25-64) is more than 5 percentage points lower than for those from a general programme (7.8% versus 12.9%) (OECD 2014). Recent upper secondary graduates²⁴², however, have an employment rate below EU average (see section 1). There is a gender dimension to the participation and graduation from vocational programmes (Figure 3). The 11.9% of Slovenes who in 2014 participated in adult learning in the last 4 weeks prior to the survey was higher than the EU average of 10.7%, but the proportion has been gradually declining since 2010 when it was 16.2%.

Currently, the demand for medium-skilled workers is higher than the supply. However the projections show a large increase in the demand for high-skilled workers. The demand for some VET occupations (locksmiths, welders, electricians, pharmaceutical technicians, assistant educators and health technicians) exceeded supply in 2012, while similar professions are also forecast to be in demand in the coming months (workers for simple jobs in manufacturing, salesmen, welders, HGV drivers). Employment opportunities for educated people have

²⁴² People aged 20-34 who left education between one and three years before the reference year.

diminished sharply during the crisis, which has led to emigration. However, longer term projections (Cedefop 2015) show that the demand for high-skilled workers will increase the most in Slovenia (+13% in 2010-20 period), while the demand for low qualifications will substantially decrease (-12.9% in the same period).

Figure 3. Gender imbalances among graduates from upper secondary education in 2013 (%)



Source: Statistical Office of the Republic of Slovenia (Graduates by sex, age and type of education, Slovenia, annually)

The Government plans to introduce apprenticeships via a new law, which will primarily define the role of the apprentice as an employee and clarify the role of the social partners. A coordinating body for vocational education has been set up with the aim to discuss new projects and the strategic direction for vocational education and training with stakeholders. Subsidies for apprenticeships will play and coordination among different ministries will play an important role in setting up the system. Finally, based on learning outcomes, a comprehensive national qualifications framework (NQF) is being successfully implemented in Slovenia covering all types and levels of national qualifications. The allocation of major national qualifications to NQF levels has been agreed, but the NQF legislation is awaiting formal adoption, expected in 2015.

The 2013-20 Adult Education Master Plan adopted in 2013 is a strategic document that defines national policy in the field of adult education and training based on the principle of equal access for all to quality education. It is implemented via annual action plans and provides regulation, a financing framework and a definition of priorities for the development of this sector in cooperation with six ministries and coordinated by Ministry of Education, Science and Sport.²⁴³

References

Cedefop (2015) Slovenia: Skills forecasts up to 2025. 2015 edition, <http://www.cedefop.europa.eu/de/publications-and-resources/country-reports/slovenia-skills-forecasts-2025>

Čelebič, T. (2012), Predšolska raven izobraževanja v Sloveniji in mednarodna primerjava z državami EU, Ljubljana: UMAR, http://www.umar.gov.si/fileadmin/user_upload/publikacije/dz/2012/dz04-12.pdf

European Commission (2014a), Key Data on Early Childhood Education and Care in Europe, http://eacea.ec.europa.eu/education/European_Commission/documents/key_data_series/166EN.pdf

²⁴³ In addition to the ministries in charge of education and labour (primarily competent for adult education), ministries of health, agriculture, culture and internal affairs are involved.

European Commission (2014b), Modernisation of Higher Education in Europe: Access, Retention and Employability, www.ecahe.eu/wp-content/uploads/2014/06/165EN.pdf

European Commission (2014c), Teachers' and School Heads' Salaries and Allowances in Europe, [http://eacea.ec.europa.eu/education/European Commission/documents/facts_and_figures/salaries.pdf](http://eacea.ec.europa.eu/education/European_Commission/documents/facts_and_figures/salaries.pdf)

Eurostudent (2015), Eurostudent IV: Slovenia, www.eurostudent.eu/results/reports

IEA (2014), Preparing for Life in a Digital Age: The IEA International Computer and Information Literacy Study International Report, http://research.acer.edu.au/cgi/viewcontent.cgi?article=1009&context=ict_literacy

OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

Rutar Leban, T. et al. (2012), Povzetki rezultatov Evropske raziskave o jezikovnih kompetencah (ESLC 2011), http://193.2.222.157/UserFilesUpload/file/raziskovalna_dejavnost/ECLS/povzetki%20rezultatov_ESLC%202011.pdf

Statistical Office of the Republic of Slovenia (2015a), Izdatki za formalno izobraževanje, Slovenija, 2013, <http://www.stat.si/StatWeb/prikazi-novico?id=5267&naslov=Izdatki-za-formalno-izobrazevanje-Slovenija-2013>

Statistical Office of the Republic of Slovenia (2015b), More children in kindergartens; the EU 2020 strategic goal for pre-school education not yet met. Retrieved from <http://www.stat.si/StatWeb/en/show-news?id=5162>

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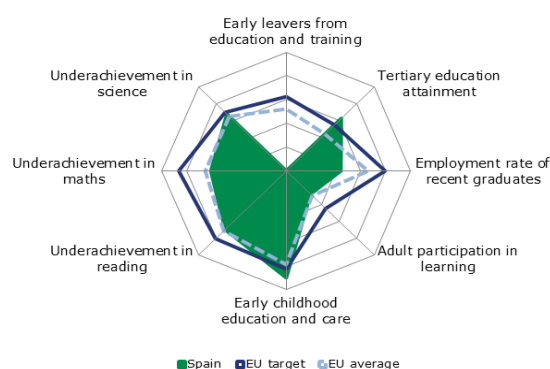
Spain

1. Key Indicators and Benchmarks

			Spain		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	•	:	18.3% ¹²	:	17.8% ¹²
	Maths	•	:	23.6% ¹²	:	22.1% ¹²
	Science	•	:	15.7% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		4.4%	4.0% ^{13,p}	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		9.6%	9.1% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		31.0%	25.6% ^u	15.2%	12.7%
	Women		21.5%	18.1% ^u	11.5%	9.5%
	Total	•	26.3%	21.9% ^u	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		37.2%	36.8%	31.0%	33.6%
	Women		46.7%	47.8%	38.7%	42.3%
	Total	•	41.9%	42.3%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	97.7%	97.1% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	84.3% ¹³	:	84.6% ¹³
	Special needs education		:	19.6% ¹³	:	32.4% ¹³
	Multicultural settings		:	25.1% ¹³	:	13.2% ¹³
	ICT skills for teaching		:	68.2% ¹³	:	51.0% ¹³
Foreign language learning	Share of ISCED 2 students learning two or more foreign languages		40.3%	41.9% ¹²	63.0%	: ¹²
Share of ISCED 3 students in vocational education and training (VET)			45.3%	33.5% ^{13,b}	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		51.9%	54.7%	71.3%	70.8%
	ISCED 5-8		72.5%	68.6%	82.5%	80.5%
	ISCED 3-8 (total)	•	67.1%	65.1%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	0.6% ¹³	:	: ¹³
	Inbound graduates mobility (master)		:	4.7% ¹³	:	: ¹³
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	11.0%	9.8% ^b	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

Participation in early childhood education and care is almost universal for children aged 3 to 6. Spain has one of the highest tertiary education attainment rates in Europe, and enrolment in vocational education and training increased by 13% between 2013/14 and 2014/15 with a particular expansion of the 'dual model' of work-based training combined with vocational school training.

Despite a steady fall in early school leaving over the past six years, Spain still has the highest rate in Europe, with significant differences between regions. There are also great disparities in the performance of school students in basic skills between cohorts, schools and regions, mostly linked to socioeconomic background. Recent reform of the education and training system is expected to reduce the early school leaving rate still further while improving the level of basic skills of low performers. The reform is being implemented at different paths across the different autonomous communities. Employability of higher education graduates, particularly in certain disciplines, remains a major challenge as well as the significant proportion of graduates employed in jobs that do not require a university degree.

3. Investing in education and training

After falling since 2010, general government expenditure on education as a share of GDP stood at 4% in 2013, below the EU average of 5%. As a share of total public expenditure it has slightly decreased from 9.6% in 2011 to 9.1% in 2013.²⁴⁴

The 2015 State Budget provides for a nominal increase in expenditure on education of 4.5% compared with 2014. While the budget for pre-primary and primary school fell by 0.3% compared with 2014, the budget for secondary education increased by 135.2%, mainly to set up a new initial vocational education programme (*Formación profesional básica*).²⁴⁵

After two years in which expenditure on grants and scholarships fell, financial support to vulnerable families increased by 0.2% in 2014.²⁴⁶ A change in the selection criteria led the number of those eligible to fall by 6.7% between 2013/14 and 2014/15,²⁴⁷ although the number of applicants increased due to overall economic circumstances. The 2016 State budget proposal foresees an increase of 0.2% in the financial allocation to scholarships and grants and restores the financial support programme for school books.

4. Tackling inequalities

The early school leaving rate continued to fall, from 23.6 in 2013 to 21.9% in 2014. However, Spain still has the highest rate in Europe, well above the Europe 2020 national target of 15%. The problem is made particularly complex by great disparities in dropout rates between male and female students, between students with different social, cultural and economic backgrounds and between regions. The rate fell from 38% in 2008 to 25.6% in 2014 for males and from 25.1% to 18.1% for females. Early school leaving among foreign-born students, at 37.8%, is twice as high as the rate among those born in Spain (18.9%). Since a lot of early school leaving was encouraged in the past by the 'pull effect' of the labour market on low-skilled workers, mainly male, e.g. of the building industry, the fall in recent years has been partly due to the fall in that labour market demand. Some is also accounted for by the positive impact of specific regional programmes (in Extremadura, for example, early school leaving fell by 5 percentage points in 2013). Finally, great disparities between the regions (from a rate of 14% in the north-east to more than 28% in the south) mirror the different economic structures and labour markets of the regions and their impact on the socioeconomic situation of the student population (Figure 2).

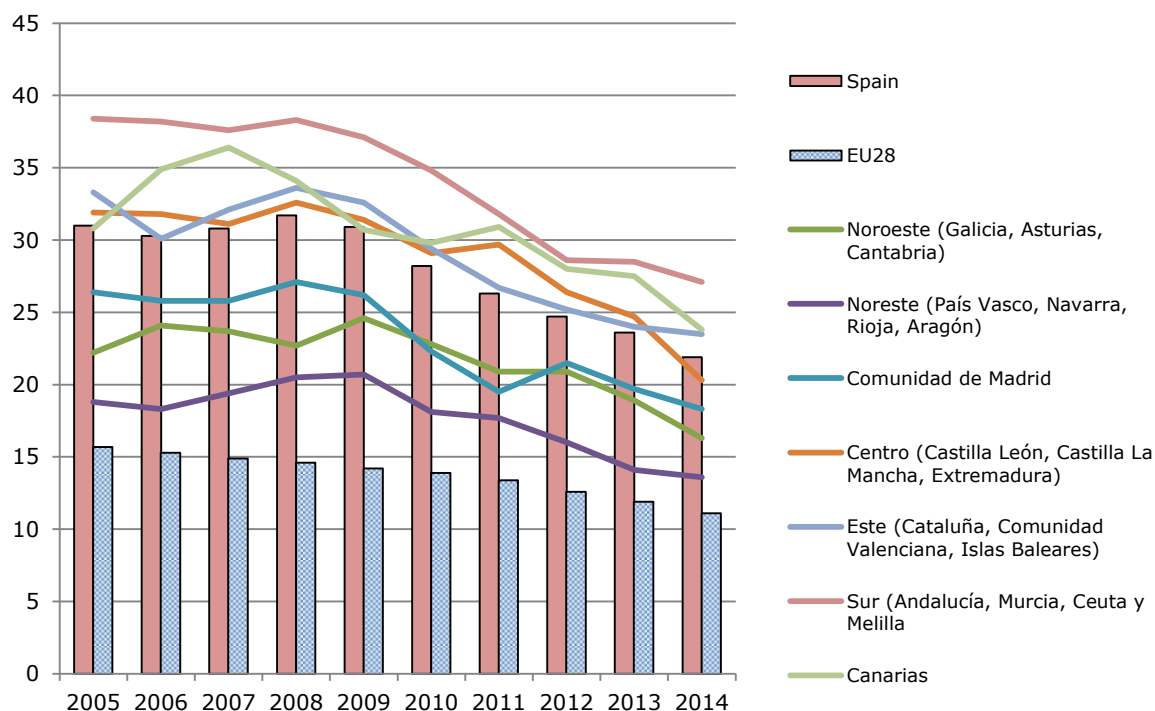
²⁴⁴ Source: Eurostat, General government expenditure by function (COFOG) database.

²⁴⁵ All data are reflected in the National Budget - Presupuestos Nacionales del Estado. El Libro amarillo.

²⁴⁶ MECD, Datos y Cifras curso escolar 2014/2015.

²⁴⁷ MECD, Datos y Cifras curso escolar 2014/2015.

Figure 2. Early school leaving rates per regions in Spain



Source: Eurostat

Low performance and the risk of academic failure have also proved to be critical factors (OECD 2014a). The Programme for International Student Assessment (PISA 2012) shows that Spain's performance in mathematics and reading remains steady at just below the EU average and, here again, there are great disparities between students, schools and regions, correlated with socioeconomic background and early school leaving rates. The PISA survey shows that the proportion of low achievers in mathematics is 23.6% and 18.3% in reading, above the EU average of 22.1% and 17.8%. Yet Spain scores better than average in sciences, with the proportion of low achievers at 15.7%, compared with the EU average of 16.6% (OECD 2013).

Participation by children aged three to six years in early childhood education and care is almost universal and average participation by three-year-olds is 95.8%, far above the EU average of 85.3%. Also the participation rate for children less than three years old more than doubled in the last 10 years, to 39%, quite above the EU average of 30% (Eurydice 2014). There is also a significant percentage of children under three attending non-statutory childcare provisions (over 20%) (Aguilar et al. 2011).

The 2014/2015 school year marked the first implementation phase of the Organic Law for Improvement of the Quality of Education (LOMCE). The law aims to improve student performance and curb early school leaving, which is a proven obstacle to the country's competitiveness and youth employment. The success of this reform will hinge on effective implementation by the Spanish Government and the regional authorities.

In order to make a vocational education and training path more attractive as an alternative to leaving school early, Spain is introducing two-year initial vocational training programmes (*Formación profesional básica FPB*) at lower secondary education level (fourth grade) for students aged 15. This should give students more options in education and upgrade the quality of basic vocational education and training on the basis of three changes: (1) improving the level of basic skills in the FPB curriculum compared with the previous programmes (*PCPI — programas de cualificación profesional inicial*); (2) reducing the number of different teachers per

class group to encourage personal tutoring and follow-up; and (3) introducing teaching through a 'project' approach. The regional administrations have two years in which to adapt their education systems to this new scheme. So far, 59 346 students have enrolled in such programmes or the equivalent (representing 92%²⁴⁸ of the initial estimate).

The LOMCE also introduces measures to improve performance in basic skills and key competencies, such as a new design for curricula and the introduction of new assessments to detect difficulties at an earlier stage.

Teachers are encouraged to follow trainings to improve the teaching of basic skills, based on the PISA tests. Regional administrations request specific training to improve teachers' teaching skills and tackle learning difficulties related to the students' socioeconomic background. Spain has one of the highest rates of lower secondary education teachers reporting having undergone professional development to teach in multicultural and multilingual settings, with a rate of 25.1% according to the OECD's TALIS survey (OECD 2014b). This is well above the OECD average of 16%.

The LOMCE provisions on early childhood education and care took effect in 2014/15. They establish new governmental responsibilities regarding the objectives, skills and evaluation criteria for the core curriculum in early childhood education and care, and the promotion of multilingual education.

The introduction of the LOMCE in 2014/15 spawned disagreements between the national government and a number of Autonomous Communities. However, all regional governments are applying the LOMCE in 2015/16 while adapting their regional laws to their specific needs.

5. Modernising school education

According to the TALIS 2013 survey (OECD 2014b), the proportion of Spanish teachers undergoing professional development is around the EU average, at 84.3%, while the proportion of teachers undergoing information and communication technology (ICT) training is among the highest in Europe, at 68.2%. Finally, 37% of teachers use ICT frequently in their classes, which is above the EU average (34%).

Spain is implementing a national plan to promote the digital culture in schools, based on four pillars:

1. Improving connectivity in education centres;
2. Developing digital educational resources and learning communities;
3. Developing operational standards;
4. Training teachers on teaching using ICT.

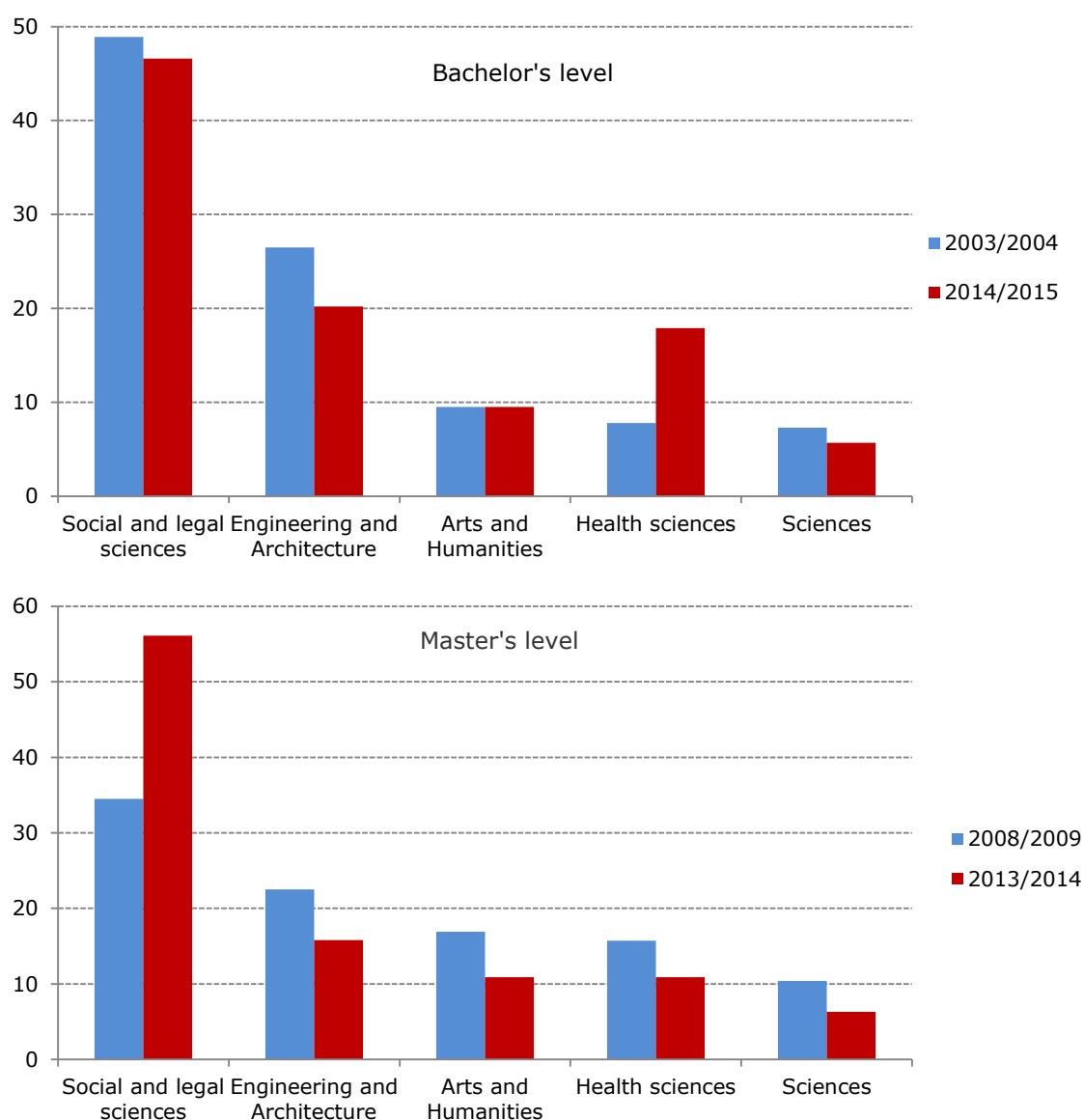
More generally, the LOMCE introduces a new approach promoting skills-based teaching and learning. A State Order of January 2015 spells out the objectives, methodologies, means of evaluation and key skills involved. Teachers are asking for specific training to implement it, and teaching conditions better adapted to the project approach. The new legal framework establishes new requirements and mechanisms to upgrade school leaders' management skills and eventually provide greater autonomy for schools. Discussions between the ministry and teacher unions on new conditions of employment for teachers are still ongoing. The revised conditions would provide for merit-based and performance-based recruitment and promotion of teachers.

²⁴⁸ The estimate was 63 923 students, based on the enrolment rate in PCPIs in 2013/2014.

6. Modernising higher education

Spain has a tertiary education attainment rate of 42.3% for 30-34 year-olds, above the EU average of 37.9% but still below the Europe 2020 national target of 44%. The attainment rate shows a significant gender gap, with the female rate surpassing the male rate by more than 10 percentage points (at 47.8%, compared with 36.8%), and an even wider gap between Spanish-born cohorts, with a tertiary education attainment rate of 46.5%, and foreign-born cohorts, with a rate of only 26.9%. The employability rate of recent tertiary graduates²⁴⁹ is one of the lowest in Europe at 68.6%.

Figure 3. Enrolment in university programmes by field of study (% of total students)



Source: Spanish Ministry of Education, Culture and Sport (MECD)

The Spanish university system comprises 83 universities and 243 campuses, offering 2 534 registered bachelor's degrees, 3 306 registered master's degrees and 1 751 registered doctorates. In 2014/15, 29.4% of the population aged 18-24 years was enrolled in university programmes at bachelor or master level. Since 2003, the enrolment rate in engineering and

²⁴⁹ People aged 20-34 who left education between one and three years before the reference year.

sciences has fallen by about 24%, while enrolment in health studies has increased by more than 80%. Enrolment in humanities and social sciences has remained stable.

In October 2014, the Ministry of Education presented the first report on the employability of university graduates, drafted with institutional partners. The report is based on the social security enrolment rates and shows that 56% of graduates are unemployed one year after graduation and 35% four years after graduation, while 44.5% of the graduates employed four years after graduation have jobs that do not require a university degree (MECD 2014a). The figures are particularly poor for the humanities and social sciences, whose enrolment rates have changed little over the past 10 years (Figure 3). The publication of the report is expected to raise awareness among university applicants and attract their interest to higher education programmes with greater labour market relevance.

In February 2013, the Commission of Experts for the Reform of the Spanish University System²⁵⁰ presented *Proposals for the Reform and Improvement of the Quality and Efficiency of the Spanish University System* to the Ministry (MECD 2013). The text presents the experts' analysis of: the selection of teaching and research staff, quality assurance, university governance, university funding, and university studies and degrees.

University tuition fees have significantly increased in some regions since 2012/2013 as Royal Decree-Law 14/2012 adjusted the fee thresholds and linked them to the cost of provision. At the same time, the eligibility criteria for grant awards became stricter. These public spending reforms could cause university enrolment to fall in the next few years unless new programmes with better job prospects are proposed (Albert Verdú and Roig Cotanda 2013).

For vocationally oriented tertiary education, the trend is in the other direction, with a 5.5 percentage point increase in the enrolment rate of the population aged 18-24 years over the past five years, to 29.9% in 2012/2013, slightly above the university rate.

Box 1. Progressive reform of the university system

Since the new law on education (the LOMCE) was approved, the government has progressively reformed key aspects of the Spanish university system.

1. Access: The LOMCE removes the university entrance examination for official bachelor degree programmes, instead favouring candidates' qualifications. Each university will set its own admission procedures as long as they meet certain criteria set in the LOMCE. The grants system has also been reformed to take account of students' performance.

2. Internationalisation: The 2015-2020 strategy (MECD 2014b) aims to build a strong, internationally attractive university system and to promote mobility among the best students, teachers and researchers. As a cornerstone of the reform, in February 2015 the government approved a Royal Decree-Law that allows universities to adjust the credits given for degree courses and at master's level in order to move to the 3+2 years scheme (from the current 4+1) in line with the prevailing standard in Europe. This '3+2 decree' triggered strong protests leading to a general strike in March 2015. University governing boards complain of the difficulty of adapting study plans to continuous reforms. Students' unions complain about the impact on the cost of studying, particularly at master's level, while the government argues that on the contrary, degree courses could be shorter and thus cheaper. The decisive factor seems to be employability, i.e. whether the new three-year degree will be seen as a 'good enough' qualification for access to a job requiring higher education.

In addition, the Spanish Qualifications Framework for Higher Education was amended in 2014 to include some particular bachelor degrees at level 3 (master — ISCED 7) of the framework and thus give Spanish graduates access to doctoral programmes abroad. Moreover, in January 2015 the Ministry of Education agreed on the equivalence of the levels of the Spanish Qualifications Framework for Higher Education and the European Qualifications Framework.

²⁵⁰ This expert working group was appointed in April 2012 by the Minister's Cabinet.

3. Improved quality: The government is exploring the scope for introducing performance criteria in the internal governance system and financial support for higher education institutions. In May 2014, two more legislative initiatives were approved: the Royal Decree 415/2015 that simplifying the accreditation procedure for university teachers, with more objective criteria and more transparency, and the Royal Decree 420/2015 simplifying the procedure for founding and recognising public and private universities.

4. Increased usefulness and relevance of university outcomes: Together with the OECD and the European Commission, the Ministry of Education has launched the initiative 'Building up a National Skills Strategy', which has brought together seven different ministries and opened a multisectoral dialogue between central government, regional authorities and social and economic stakeholders. A skills strategy diagnostic report was presented in September 2015 (OECD 2015). A decision on action to be taken, based on the report, is to be taken at a later stage.

The wider aim of the employability report (see section 6) is to promote better decision making among future university students. However, whether the outputs can be put to real use to foster employability and in particular to better align teaching provision to labour market needs remains unclear.

The Spanish university system needs to improve the labour market relevance of its outcomes, foster mobility among teachers and students, and rationalise the over-wide scope of study programmes to favour greater quality. This will require consensual, comprehensive and gradual change in the system beyond one-off reforms.

7. Modernising vocational education and training and promoting adult learning

The introduction of basic VET opportunities at an early age (see section 4) might result in greater participation in upper secondary VET, as well as better tutoring and career guidance services at school level. The employment rate for recent upper secondary graduates²⁵¹ in Spain has fallen by 50% since 2009 reaching its lowest rate of 40.9% in 2013. In 2014, the employment rate for upper secondary graduates has grown again to 54.7%. The participation of adults in lifelong learning stood at 9.8% in 2014, slightly below the EU average of 10.7%.

Spain is reforming the VET system to better adapt young people's skills to labour market needs and to increase the attractiveness and acceptance of VET programmes, by reforming the catalogue of diplomas offered both for medium-level and high-level VET and increasing the flexibility of the curricula of medium-level VET programmes.

Royal Decree 1529/2012 introduced measures to develop training and apprenticeship contracts (of one to three years depending on the qualifications) and established the legal basis for dual vocational training (work-based training and vocational school training, for a range of careers) whereas the implementation rests with the 17 autonomous communities. In 2014/15, dual VET programmes were run in all autonomous communities. The number of educational institutions (728) and companies (4 878) has risen dramatically since the beginning of implementation and the number of students enrolled in dual VET (16 199) has quadrupled since 2012. Integration of work-based components into school-based programmes is ensured through periods in real businesses and by other means such as on-site labs, workshops and business simulations. In 2014, new financial incentives to enterprises (public calls for expressions of interest) have been offered to support participation in dual training under the strategy for entrepreneurship and youth employment. Dual training via distance learning is facilitated by e-learning platforms developed with quality criteria common to those of traditional learning.

The measures on VET seem appropriate, but continued work will be required, jointly involving public authorities, education providers and employers, to extend and consolidate the dual VET

²⁵¹ People aged 20-34 who left education between one and three years before the reference year.

system in Spain, implementing work-based learning and increasing apprenticeship opportunities. Clarification of the roles of all stakeholders in work-based learning needs to be sought to match the positive rapid extension of this approach. The Chambers of Commerce are getting progressively involved in the scheme at national and regional level to encourage participation by local businesses, but the low capacity of small and medium-sized enterprises (SMEs) to absorb trainees and the lack of training for tutors in companies are still obstacles to building good-quality dual VET and ensuring greater employability of students. Finally, better coordination between labour market policies and education policies would boost the effectiveness of the reforms.

In September 2015, Spain finalised the reform of the training for employment subsystem (the TES — *subsistema de formación para el empleo*) started in March 2015. The recent Law 30/2015 (9 September) does not make significant changes to the aims of the system. The key point is the change in governance. The new model leaves the system basically in the hands of the public employment service, thus substantially reducing the influence of social stakeholders — both trade unions and employers' associations. Nevertheless, their participation in the consultative General Council of the Employment National System (*Consejo General del Sistema Nacional de Empleo*) (Royal Decree 1722/07) is guaranteed. The Training for Employment Tripartite Foundation is now called the Training for Employment State Foundation (*Fundación Estatal para la Formación en el Empleo*) as the public employment service now has a majority on its management board, rather than workers' and employers' representatives. It is still responsible for technically helping the public employment service to design and implement training for the employment subsystem.

Other changes introduced by the reform in 2015 are linked to the last 2012 labour market reform (Law 6/2012) to boost lifelong learning programmes targeted at employed workers, such as the right to a 20-hour period of training leave for all workers with at least one year of seniority, and the option of introducing an individual training account for workers.

References

- Aguilar M., Escobedo A. and Montagut T. (2011), Local welfare policies in Spain: Employment, housing and child care, *WILCO Publication No 6*, http://www.wilcoproject.eu/wordpress/wp-content/uploads/WILCO_WP2_Report_06_ES1.pdf
- Albert Verdú C. and Roig Cotanda J. M. (2013), Tuition fees in the Spanish universities in the academic year 2012/2013, <http://www.ieb.ub.edu/files/PapersWSEE2013/Roig.pdf>
- European Commission (2014), Key data on early childhood education and care education in Europe, http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/166en.pdf
- MECD (2013), Propuestas para la mejora de la calidad y la eficiencia del sistema universitario español, <https://www.usc.es/export/sites/default/gl/web/descargas/propuestas-reforma.pdf>
- MECD (2014a), Inserción laboral de los egresados universitarios. La perspectiva de la afiliación a la Seguridad Social, <http://www.mecd.gob.es/mecd/dms/mecd/educacion-mecd/areas-educacion/universidades/estadisticas-informes/informes/Insercion-laboral-egresados-universitarios.pdf>
- MECD (2014b), Strategy for the internationalisation of the Spanish universities 2015 – 2020, <http://www.mecd.gob.es/educacion-mecd/dms/mecd/educacion-mecd/areas-educacion/universidades/politica-internacional/estrategia-internacionalizacion/EstrategiaInternacionalizacion-ENGLISH.pdf>
- MECD (2015), Datos básicos del sistema universitario español, <http://www.mecd.gob.es/dms/mecd/educacion-mecd/areas-educacion/universidades/estadisticas-informes/datos-cifras/Datos-y-Cifras-del-SUE-Curso-2014-2015.pdf>

OECD (2013), PISA 2012 results: What Students Know and Can Do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education Policy Outlook Spain,
http://www.oecd.org/edu/EDUCATION%20POLICY%20OUTLOOK%20SPAIN_EN.pdf

OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

OECD (2015), OECD Skills Strategy Diagnostic Report Spain 2015,
http://skills.oecd.org/developskills/documents/Spain_Diagnostic_Report.pdf

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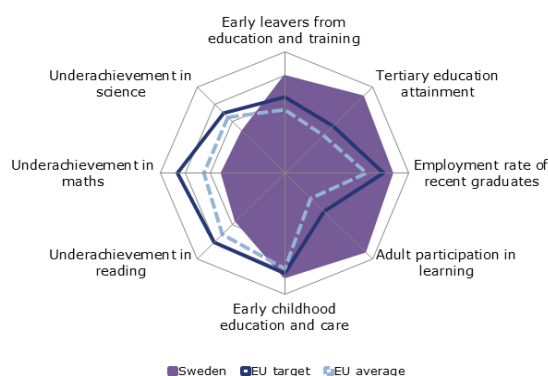
Sweden

1. Key Indicators and Benchmarks

			Sweden		EU average			
			2011	2014	2011	2014		
Educational poverty and spending cuts: challenges for the education sector								
Share of 15 year-olds with underachievement in:	Reading	•	:	22.7% ¹²	:	17.8% ¹²		
	Maths	•	:	27.1% ¹²	:	22.1% ¹²		
	Science	•	:	22.2% ¹²	:	16.6% ¹²		
Education investment	Public expenditure on education as a percentage of GDP		6.5%	6.6% ¹³	5.1%	5.0% ¹³		
	Public expenditure on education as a share of total public expenditure		12.6%	12.4% ¹³	10.5%	10.3% ¹³		
Education attainment levels of young people across Europe								
Early leavers from education and training (age 18-24)	Men		7.8%	7.3%	15.2%	12.7%		
	Women		5.4%	6.0%	11.5%	9.5%		
	Total	•	6.6%	6.7%	13.4%	11.1%		
Tertiary education attainment (age 30-34)	Men		40.5%	42.4%	31.0%	33.6%		
	Women		53.5%	57.9%	38.7%	42.3%		
	Total	•	46.8%	49.9%	34.8%	37.9%		
Policy levers for inclusiveness, quality and relevance								
Early childhood education and care (participation from age 4 to starting age of compulsory education)		•	95.3%	95.7% ¹³	93.2%	93.9% ¹³		
Teachers' participation in training	Any topic (total)		:	83.4% ¹³	:	84.6% ¹³		
	Special needs education		:	24.1% ¹³	:	32.4% ¹³		
	Multicultural settings		:	12.7% ¹³	:	13.2% ¹³		
	ICT skills for teaching		:	46.8% ¹³	:	51.0% ¹³		
Foreign language learning			Share of ISCED 2 students learning two or more foreign languages	76.4%	77.5% ¹²	63.0%	:	¹²
Share of ISCED 3 students in vocational education and training (VET)				56.3%	46.9% ¹³	50.4%		48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		79.4%	79.7%	71.3%	70.8%		
	ISCED 5-8		91.1%	90.8%	82.5%	80.5%		
	ISCED 3-8 (total)	•	84.6%	85.0%	77.1%	76.1%		
Learning mobility	Inbound graduates mobility (bachelor)		:	2.5% ¹³	:	:	¹³	
	Inbound graduates mobility (master)		:	24.0% ¹³	:	:	¹³	
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	•	24.9%	28.9%	8.9%	10.7%		

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The Swedish education system performs well in many areas. These include early childhood education and care, students' civic knowledge and linguistic competence in English as a foreign language, tertiary education attainment rates and adult participation in lifelong learning. Sweden has continued to invest heavily in education and training, with annual expenditure per student being among the highest of the EU countries.

However, school outcomes have deteriorated in terms of basic skills proficiency, and equity in Swedish schools has declined. The fact that younger cohorts perform worse than their predecessors by international comparison is of concern, as a highly skilled workforce is crucial to sustaining competitiveness, living standards and innovation capacity in the long run. The transition from school to work remains difficult for young people who leave school without having completed upper secondary education. Integrating in the education system the large number of newly arrived students is an important challenge.

3. Investing in education and training

General government expenditure on education as a share of GDP (6.6% in 2013) is among the highest in the EU.²⁵² Sweden invests more in tertiary education and research at higher education institutions than all other EU countries, with more than half of the expenditure per student being allocated to research. 9% of the funding comes from private sources, which is twice as high as in other Nordic countries²⁵³ (Swedish Higher Education Authority 2014). The financing of education at ISCED 0-4 levels has been fully decentralised to the 290 municipalities since the 1990s, with both municipalities and schools having a high degree of autonomy on resource allocation. Most of the investment is public (97%), regardless of whether education is delivered through municipal or independent schools. Pre-schools and schools account for more than 40% of the municipal budget (European Commission 2014), although the allocations and the capacity to use the resources differ greatly among municipalities (National Agency for Education 2012a).

4. Tackling inequalities

The early school leaving rate (6.7% in 2014; 7.3% for boys and 6% for girls) remains below both the new Europe 2020 national target²⁵⁴ of below 7% and the EU average of 11.1%. The rate is 12.6% for those born abroad. However, one in four young people do not successfully complete upper secondary education by the age of 20.²⁵⁵ The figure has remained constant over recent years and is higher than in the 1990s (National Agency for Education 2014a). Participation in early childhood education is above the EU average (95.7% in 2013 compared with an EU average of 93.1%). The system of pre-schools is well developed and in high demand, with almost 50 % of 1-year-old and 93 % of 3-4 year-old children participating in their programmes (OECD 2014a).

The performance of 15 year-olds in the OECD's Programme for International Student Assessment (PISA) surveys deteriorated steadily between 2000 and 2012 in all three core subjects measured — mathematics, reading and science. The decline over the past decade has been greater than that of any other country participating in PISA — Sweden now performs below both the EU and OECD averages. Student performance is on the decline throughout the school system, regardless of the type of school (i.e. municipal or independent), socioeconomic status, migrant background or the gender of students (OECD 2015a). The decline in

²⁵² Source: Eurostat, General government expenditure by function (COFOG) database.

²⁵³ A relatively large proportion of the research undertaken at higher education institutions in Sweden is funded by private foundations and non-profit organisations.

²⁵⁴ Sweden announced its new national target of below 7% (previous target: below 10%) on 21 September 2015 in the 2016 draft Budget Bill.

²⁵⁵ 69% of students complete upper secondary school in 3 years and 76% complete it in 4 years, as shown by the statistics collected by the National Agency for Education.

performance is particularly noticeable in mathematics, where the proportion of top performers has roughly halved over the past decade and one in four students does not reach the baseline level of performance.²⁵⁶ The negative trend in PISA is reflected in other international assessments. In the Trends in International Mathematics and Science Study (TIMSS), Sweden showed the largest decline in mathematics performance of Year 8 students (14-15 year-olds) between 1995 and 2011 of all OECD-EU countries²⁵⁷ (National Agency for Education 2012b).

According to PISA 2012, socio-economic background is not closely associated with students' performance. However, evidence suggests that equity in education has been declining. There is a rapid increase in the number of schools where more than 20% of students do not obtain the necessary grades to continue their studies in an upper secondary 'national programme' — either vocational or academic, preparing students for university education (National Agency for Education 2012a). The selective use of the school choice system risks penalising those students whose parents do not make an active choice and weakens students' right to an equal education (National Agency for Education 2013a). Furthermore, resource allocation does not seem to support schools facing challenges: only a limited number of municipalities reallocate resources to schools with low-performing and/or socially underprivileged students (National Agency for Education 2013b) and state grants do not reach those schools that need them the most (National Audit Office 2014).

Newly arrived students are the most disadvantaged in the education system. A high proportion (59.2%) of first generation migrants do not achieve the baseline in mathematics. Only 52% of students who migrated after the age of seven qualify for a 'national programme' at upper secondary level, compared with the national average of close to 90% (National Migration Agency 2015a). The other half of all newly arrived students are steered towards one of the five upper secondary 'introductory programmes'. Evidence suggests that better integration is hindered by poor mapping of students' previous knowledge, the physical separation of newly arrived students from the mainstream and a lack of individualised support (Bunar 2010; Swedish School Inspectorate 2009).

Sweden is taking steps to improve school outcomes and improve equity. Since 1 July 2014, municipalities have been obliged to consider socio-economic factors in school financing, although the law does not quantify any targets (Swedish Government 2014). The government prioritises 'early intervention' (lågstadieöföft) in schools, including allocating a budget of SEK 1 987 billion for 2015. Municipalities and independent school providers may use the grant to reduce class sizes or to employ more specialist teachers, depending on their needs. A knowledge requirement in literacy will be introduced in the first grade (age 7) and an assessment tool will be developed in Swedish and mathematics for the same grade. A government inquiry will make proposals by 30 September 2016 on how to improve the teaching of reading, writing and mathematics in grades 1-3. In addition, an ongoing government inquiry will examine the options for introducing 10 years of compulsory schooling starting in primary schooling at the age of 6.²⁵⁸

Measures aiming at the better integration of newly arrived students are described in Box 1. Sweden has also strengthened measures to tackle early school leaving. Most importantly, since 1 January 2015, municipalities have not only been required to keep records of and provide

²⁵⁶ 27.1% of 15-year-olds are low achievers in mathematics; the corresponding figure for reading is 22.7% and for science is 22.2%. The significant gender gap in reading remains, with 31.3% of boys being low-achievers compared with 14% of girls.

²⁵⁷ In the latest 2011 TIMSS study, 15 OECD-EU countries performed better than Sweden in mathematics and four performed less well.

²⁵⁸ The recommendations of the inquiry will be presented on 30 September 2015. These will cover: 1) how a mandatory preschool class for 6-year olds can be best introduced, 2) how the pre-school class can become part of the primary school, and 3) a timetable and necessary constitutional amendments.

appropriate individual measures to young people under the age of 20 who are not in education, but also to document and follow-up the measures' implementation.²⁵⁹

Box 1. Integration of newly arrived students in the Swedish school system

Sweden was the second largest recipient of asylum seekers in the EU in 2014. Around 18% of the 81 000 asylum seekers were children of school age, including 7 000 unaccompanied minors. According to the National Migration Agency, between 2015 and 2018 an estimated 310 000 asylum seekers are due to arrive in Sweden, including 55 000 children of school age (Migration Agency 2015b).

The rights and obligations of newly arrived students are defined in the education legislation (Swedish Government 2010) and also regulated by migration legislation (Swedish Government 2005).

On 18 December 2014, the government presented a comprehensive proposal (Swedish Government 2014) for reforming the process of receiving and schooling newly arrived students in Sweden. The proposal is currently undergoing parliamentary review, and the law will be enacted on 1 January 2016, as an amendment to the Education Act (2010:800).

The main points of the proposal are as follows:

- Definition of newly arrived students: Newly arrived students are defined as students aged 7-18, who have migrated to Sweden and who do not have a basic knowledge of Swedish. A student will be considered as newly arrived for up to four years after starting in a Swedish school.
- Assessment of a student's knowledge: Diagnostic tests on a student's previous schooling and level of academic knowledge in various school subjects will be conducted within two months of the student's arrival at the school. Based on this assessment, the school principal will decide on the grade and type of class (i.e. introductory class or mainstream class) the student is to be placed in, and on the allocated teaching time for subjects. Parents will be consulted but the decision cannot be appealed to a higher judicial institution.
- Introductory class: The proposal introduces the concept and organisational form of 'introductory class', legalising a practice that has existed for decades. Students can be taught in introductory classes for a maximum of two years. After this, students need to be accommodated in mainstream classes but with special educational support, if needed. The government also recommends that introductory and mainstream classes should be located close to each other physically, although this is not mandatory.
- Teaching hours: Newly arrived students will be granted at least the same number of teaching hours as all other students. During a short introductory period, some teaching hours are to be reallocated to Swedish and Swedish as a second language.

On 22 February 2015, the government presented further details on the proposal (Swedish Government 2015a). Measures would target students (diagnostic tests, tuition in mother tongue), teachers and school principals (professional development of teachers and principals, training of newly arrived adults as teachers / tutors in their mother tongue) and education providers (support to schools in neighbourhoods with large migrant populations).

The National Agency for Education has been tasked with providing support to schools and municipalities to improve the integration of newly arrived students. The National Agency has already developed support material for evaluating student education levels and command of Swedish. It also offers professional development for both teachers and school principals. To inform parents and students about school choice, information material has been produced in various languages (OECD 2015a).

²⁵⁹ The modification to the Education Act (2010:800) follows the recommendation made by a government inquiry: 'Statens offentliga utredningar (2013): Ungdomar utanför gymnasieskolan — ett förtydligt ansvar för stat och kommun. SOU 2013:13'. The National Agency for Education has been tasked with providing support to municipalities and evaluating how they respond to the new requirement.

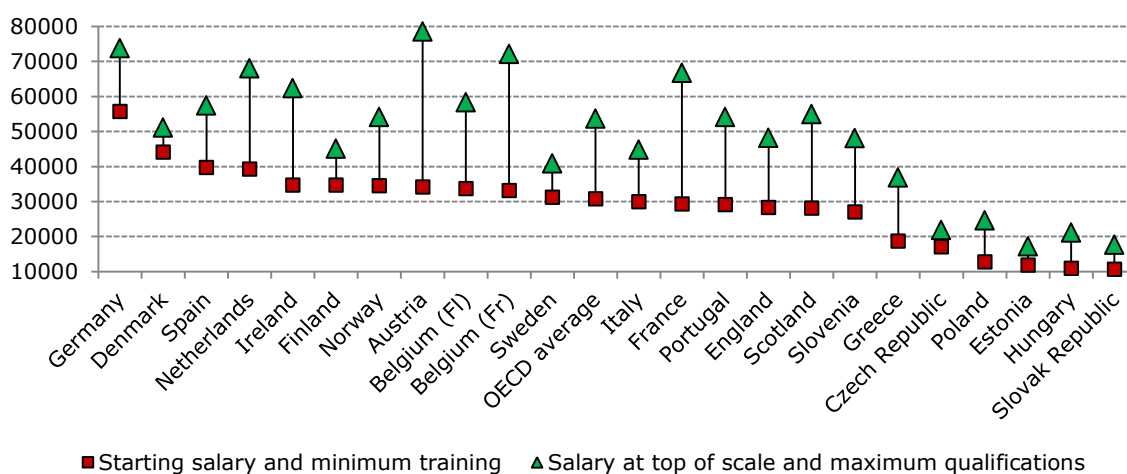
5. Modernising school education

Since the mid-1990s, municipalities have been at the forefront of implementing nationally set goals and requirements in school education. However, smaller municipalities in particular have lacked the local capacity to manage their new responsibilities and decentralisation has taken place without adequate support from the central authorities (OECD 2014b). The introduction of school choice, along with independent education providers, was intended to create incentives for schools to offer better quality. However, according to recent research, there is little evidence that this has had a positive effect on the different student groups (Edmark et al. 2014). The findings suggest that being able to choose independent voucher schools is positively associated with increased school segregation between migrants and natives (Böhlmark et al. 2015).

Sweden faces a serious deterioration in the status and quality of the teaching profession, which is contributing to an overall decline in the performance of its schools. Teachers perceive their status as extremely low (OECD 2014c): only 5% of teachers report that their profession is valued in society, compared with 60% in Finland and 19% in the EU as a whole. Teacher recruitment and retention are also hindered by a perceived high workload and deteriorating working conditions. Teachers in Sweden spend more of their working time on administration and feel they have less influence on pupils and the learning environment. This, in turn, has led to a decline in the status of teacher education at university level relative to other career choices, which has resulted in less demanding selection criteria for entering these programmes (OECD 2015a). The proportion of teachers that have undergone some form of professional development in the last 12 months is close to the EU average (83.4% compared to 85%). Only 33.8% of teachers reported using information and communication technologies (ICT) for student projects or class work, and 25.5% reported needing further training to develop their ICT skills for teaching (OECD 2014c). Children and young people, however, are avid users of new technologies²⁶⁰ (OECD 2015b).

Teachers' salaries have not been given priority and do not reflect increased levels responsibility. Teachers' starting salaries are within the OECD average but the wage progression, and thus the possibility to make an attractive career out of teaching, is very limited. The highest wage levels are around 25% lower than the OECD average (Figure 2). Furthermore, teachers' salaries are on average 20% lower than the salaries of other professionals with comparable education levels (OECD 2014a).

Figure 2. Lower secondary teachers' salaries at different points in their careers (2012)



Source: OECD (2014a)

²⁶⁰ In Sweden, 57% of 2-year-olds have started to use the internet occasionally while 80% of 11-year-olds use the internet and new ICT daily. 12- to 15-year olds report that the internet is one of their most important sources of information.

The teaching workforce is ageing: 15% of secondary school teachers in Sweden were over 60 years old in 2012, well above the OECD average of 8%. At the other end of the age spectrum, the proportion of young teachers — those under 30 — is only 7% compared with the OECD average of 11% (OECD 2014a). Current projections point to a widening teacher shortage: by 2020 the school system may lack over 40 000 qualified teachers (Swedish Union of Teachers 2012). Moreover, nine out of ten employers already signal a shortage of newly qualified teachers in mathematics and science at upper secondary level (Statistics Sweden 2014). In addition, only half of mathematics and science teachers have sufficient subject knowledge and are qualified teachers (National Agency for Education, 2014b). There is a particularly wide gap (0.76 index points) between advantaged and disadvantaged schools regarding the shortage of qualified teachers (OECD 2013a).

The government's top priorities are to strengthen the evidence base of reforms and reform the teaching profession. An independent school commission was appointed in April 2015 to analyse in more depth the shortcomings of the school system and propose long-term comprehensive school reforms, including national goals. The school commission builds its work on OECD's recent in-depth analysis of the Swedish school system (OECD 2015a). The Institute for School Research, responsible for disseminating information on education research results to teachers and school principals, became operational on 1 January 2015.

The government has launched 'a coalition for the teaching profession' and invited social partners to engage in a discussion on better wage progression for teachers, also linked to teachers' competence development. To this end, the government has proposed an additional SEK 3 billion per year for teacher salaries from 2016. The career development reform — initiated by the previous government — remains in place and continues to provide an increase in salary and career advancement steps for one in six teachers, i.e. for so-called 'first-class teachers' — teachers who stand out in their teaching practice — and 'senior lecturers' — teachers with a licentiate degree. The government also supports teachers' continuous professional development through two initiatives — 'Boost for Mathematics' and 'Boost for Reading', the most significant collaborative learning programmes ever developed in Sweden. Between 2012 and 2016 around 37 000 teachers and almost half of the country's schools will have benefited from the in-service training in mathematics, which has a budget of EUR 72 million. In-service training in reading (2015-18), based on the same principle and with a similar budget, should strengthen the quality of teaching in writing and reading comprehension.

6. Modernising higher education

Sweden's tertiary education attainment rate was at an all-time high, 49.9%²⁶¹ in 2014 for 30-34 year-olds, well above the EU average of 37.9% and matching Sweden's new Europe 2020 national target of 45-50%.²⁶² The current upward trend is likely to slow down, as the number of higher education entrants has started to decline since the peak year of 2009/10. The 16% drop in enrolment between the academic years 2009/10 and 2012/13 is largely due to the phasing out of the temporary study places created in the wake of the economic crisis. Although the overall number of higher education entrants remains high, there has been a drop of almost 30% in foreign students, following the introduction of tuition fees for students from outside the EU/EEA and Switzerland in the autumn of 2011 (Swedish Higher Education Authority 2014).

The drop-out rate in higher education is very high (47% in 2011), although the data includes students who enrol on single courses and may never have intended to study for a full degree²⁶³

²⁶¹ In 2014, the tertiary attainment rate was 57.9% for women and 42.4% for men. The number of women in higher education has risen more than the number of men over the past 30 years and as a result the proportion of women continues to grow gradually.

²⁶² Sweden announced its new national target of 45-50% (previous target: 40-45%) on 21 September 2015 in the 2016 draft Budget Bill.

²⁶³ In 2011, 53% of students graduated from the programme they entered, in comparison with the OECD average of 68%. However, an estimated 40% of students enrol for only a few courses as part of lifelong learning and/or up-

(OECD, 2013b). The average age of university entrants has traditionally been high, although over the past four years the number of 19-year-old higher education entrants has grown significantly. This is partly due to the size of the 19-year-old cohort but also to recent changes in the admission regulations which favour younger applicants. About 14% of students who received their first qualification in the 2012/13 academic year had studied abroad at some time in the preceding six years (Swedish Higher Education Authority 2014). Inbound graduate mobility is also high, especially at master level.

The employment rate of recent tertiary graduates²⁶⁴ is far above the EU average (90.8% compared to 80.5% in 2014) and almost 2 percentage points higher than in 2010. The same trend is confirmed by Statistics Sweden (2015), although with major differences between graduates in different disciplines — those graduating in the fields of technology, medicine and healthcare find it the easiest to get a foothold in the labour market. Furthermore, calculations by the Swedish Higher Education Authority indicate a future shortage of graduates from first and second cycle programmes in engineering, pharmacy, nursing and dentistry. The reasons for these shortages are two-fold: a lack of student interest in these programmes and insufficient places at higher education institutions.

The government proposes 14 300 new study places in higher education by 2018 to boost participation. To broaden participation and increase the proportion of students from under-represented groups, including those whose parents have not studied at a higher education institution, a 1-year survey is being carried out by the Swedish Council for Higher Education (Swedish Council for Higher Education 2015). The government has also appointed an expert group to strengthen gender equality in higher education. The expert group will propose measures to increase the proportion of female university professors and break the gender bias that influences educational choices (Swedish Government 2015b).

To raise the quality of higher education, the government has proposed investing SEK 125 million in 2015 and SEK 250 million per year in 2016-18 in humanities, social sciences and teacher and pre-school teacher education in the 2015 Spring Fiscal Policy Bill. In addition, from 2013 onwards the government has allocated a small proportion of funding for first and second cycle programmes, and courses based on the outcomes of the quality evaluations by the Swedish Higher Education Authority. Quality-based funding totalled SEK 95 million in 2013 and SEK 195 million in 2014, and will amount to just under SEK 300 million, i.e. almost 1.5% of all direct funding, when the system has been fully rolled out in 2015. However, there are indications that quality-based funding will be discontinued by the current government and a new funding model for higher education proposed by 2017. The government has also started a review of the principles of the quality assurance system.

The number of graduates in Sweden is also rising as a result of immigration: Sweden enjoys net migration of individuals with tertiary qualifications.²⁶⁵ Labour migration together with the assessment and recognition of migrants' qualifications are indispensable if Sweden is to keep its employment-population ratio at today's level.

7. Modernising vocational education and training and promoting adult learning

The participation of upper secondary students in vocational education and training (VET) is decreasing. While the proportion of students attending academic and vocational programmes at upper secondary level was the same until 2009, almost twice as many students opted for an academic programme in 2014. This shift coincides with the 2011 upper secondary school

skilling. In addition, not all students decide to see out their degree diploma; thus the actual completion rate for the first and second cycles is higher.

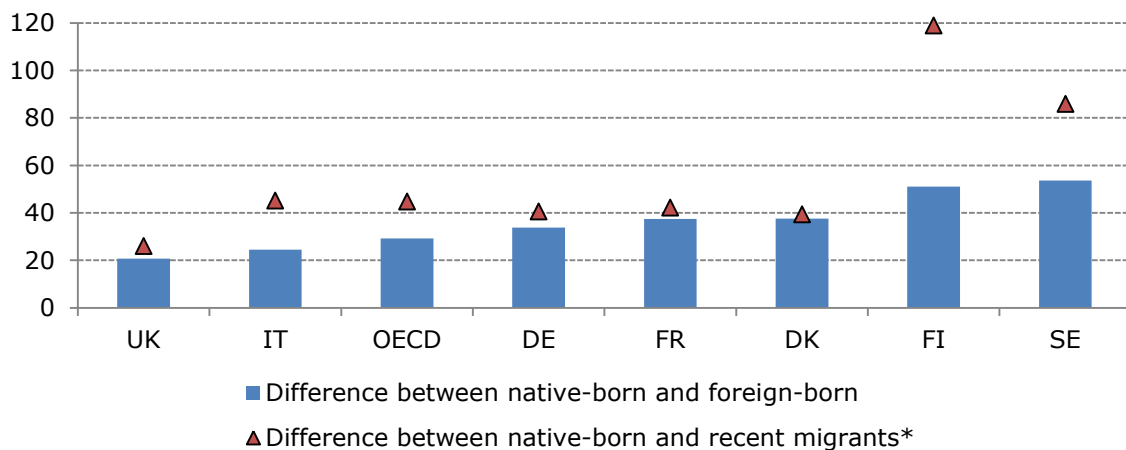
²⁶⁴ People aged 20-34 who left education between one and three years before the reference year.

²⁶⁵ A total of 16 600 migrants with higher education qualifications entered Sweden in 2013, and over 6 500 applications for recognition were made to the Swedish Council for Higher Education in the same year.

reform, whereby vocational programmes no longer grant basic eligibility to higher education. The employment rate of recent upper secondary graduates²⁶⁶ (79.7% in 2014) is far above the EU average. Although the proportion of young people (15-24 year olds) not in employment, education or training (NEET) is low compared with the EU average (7.2% compared with 12.4% in 2014), it is higher than in other Member States with similarly good labour market outcomes.

Adult participation (25-64 year olds) in lifelong learning has traditionally been high and remains one of the highest in the EU (28.9% compared to 10.7% in 2014). However, the high participation rate masks significant gender differences — while the participation rate for women is 36%, it is only 22.1% for men. Furthermore, participation by the low-educated, who stand to benefit the most, is lagging behind (19.6% in 2014). Adult education is a long-term investment in Sweden, particularly for those aged between 18 and 24 who left school early, almost half of whom go on to higher education after participating in municipal adult education (Nordlund et al. 2013). Adults (aged 16-65) in Sweden perform above the EU average in literacy, numeracy and problem solving in technology-rich (ICT) environments. In fact, Sweden has the largest proportion of adults attaining the highest scores in problem solving in technology-rich environments in the EU (OECD 2013c). Young adults (aged 16-24) score significantly above the EU average in both literacy and numeracy. There is however a pronounced skills gap between the employed and the unemployed for both literacy and numeracy. The gap in literacy proficiency between those born in Sweden and those born abroad is particularly marked (Figure 3).

Figure 3. OECD – PIAAC, Literacy proficiency scores



* Recent migrants = foreign-born adults having lived in the host country for less than 5 years

Source: OECD (2013c)

Sweden is building on recent VET reforms to provide new and broader pathways from school to work. A legal framework to monitor the transition from school to the labour market has been in place since 2010, and it is further supported by the systematic tracking of VET graduates. The system, built on the national register and statistical data, surveys employer organisations and enterprises, and young adults, one, three, and five years after graduation. The apprenticeship reform adopted in 2014 is being implemented and a government inquiry is currently looking into the conditions for testing so-called 'industry apprenticeships' with employers having a greater influence on programme content. National competence centres will be piloted for selected occupations from 2017, enabling apprentices to gain practical training. Another government inquiry is examining the conditions so that students completing VET programmes can again be eligible to enter higher education. 2016 will be the 'Year of Vocational Training' in Sweden; the tripartite initiative aims at further raising the attractiveness of VET pathways.

²⁶⁶ People aged 20-34 who left education between one and three years before the reference year.

Higher vocational education programmes have been developed since 2009 to meet the needs of the labour market for qualified labour. Quality assurance of the system is well-established and there is a strong partnership between employers and training providers. Labour market outcomes have been very positive, with nine in ten students being employed within a year after graduation (Lind et al. 2015). To meet the increasing demand, the government proposes additional resources to finance 2 500 new study places in 2016 and a further 6 000 places in 2017.²⁶⁷ Transition from higher vocational education to higher education could however be further facilitated through systematic arrangements for credit transfers (OECD 2013d).

Swedish Tuition for Immigrants (SFI) is provided free of charge to all migrants above compulsory school age, except Norwegians and Danes. There is a strong incentive to participate since non-participation can result in the loss of benefits. To optimise its effectiveness, SFI will be included in the municipal adult education system from 1 January 2016. The home municipality will be required to offer educational and career guidance to those who wish to participate in municipal adult education and develop individual study plans for them. Municipalities will need to consider students' learning history and adapt study schedules to individual needs.

References

Böhlmark, A., Holmlund, H. and Lindahl M. (2015) School choice and segregation: evidence from Sweden, IFAU Working paper 2015:8, <http://www.ifau.se/Upload/pdf/se/2015/wp2015-08-School-choice-and-segregation.pdf>

Bunar, N. (2010), Nyanlände och Lärande, Vetenskapsrådet, <http://www.forskning.se/download/18.7d3d370412800b1f670800067/1387284163202/Rapport+6.2010.pdf>

Edmark, K., Frölich, M. and Wondratschek, V. (2014) Sweden's school choice reform and equality of opportunity, IFAU Working paper 2014:16, <http://www.ifau.se/en/Research/Publications/Working-papers/2014/Swedens-school-choice-reform-and-equality-of-opportunity/>

European Commission (2014), National Sheets on Education Budgets in Europe 2014, Eurydice – Facts and Figures, http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/National_Budgets.pdf

Lind, P., Westerberg A. (2015) "Yrkeshögskolan – vilka söker, vem tar examen och hur går det sedan?", IFAU Report 2015:12, Stockholm <http://www.ifau.se/Upload/pdf/se/2015/r-2015-12-Yrkeshogskolan.pdf>

National Agency for Education (NAE) (2012a), Likvärdig utbildning i svensk grundskola? En kvantitativ analys av likvärdighet över tid., Report No. 374, http://www.skolverket.se/om-skolverket/publikationer/visa-enskild-publikation?_xurl_=http%3A%2F%2Fwww5.skolverket.se%2Fwtpub%2Fws%2Fskolbok%2Fwpubext%2Ftrycksak%2Fblob%2Fpdf2816.pdf%3Fk%3D2816

National Agency for Education (NAE) (2012b), TIMMS 2011: Svenska grundskoleelevers kunskaper i matematik och naturvetenskap i ett internationellt perspektiv, http://www.skolverket.se/om-skolverket/publikationer/visa-enskild-publikation?_xurl_=http%3A%2F%2Fwww5.skolverket.se%2Fwtpub%2Fws%2Fskolbok%2Fwpubext%2Ftrycksak%2Fblob%2Fpdf2942.pdf%3Fk%3D2942

National Agency for Education (NAE) (2013a), An Assessment of the Situation in the Swedish School System

National Agency for Education (NAE) (2013b), Resource Allocation to Schools by Municipalities. A summary of two reports from the Swedish National Agency for Education, Stockholm

National Agency for Education (NAE) (2014a), Statistik & utvärdering, <http://www.skolverket.se/statistik-och-utvardering/statistik-i-tabeller>

National Agency for Education (NAE) (2014b), Beskrivande data 2012, Tabellbilagan till fördjupningskapitlet

National Audit Office (2014), Specialdestinerade statsbidrag – Ett sätt att styra mot en mer likvärdig skola?, RiR 2014:25, http://www.riksrevisionen.se/PageFiles/20896/RiR_2014_25_Statsbidrag%20skolan_anpassad.pdf

²⁶⁷ In 2014, approximately 44 000 students were enrolled in post-secondary, higher vocational education programmes. The government's proposal would therefore increase the study places by around 20%.

National Migration Agency (2015a), Statistics, <http://www.migrationsverket.se/Om-Migrationsverket/Statistik.html>

National Migration Agency (2015b), Verksamhets- och kostnadsprognos, <http://www.migrationsverket.se/download/18.2bbf7de914c17a2ed262854/1431009651143/Migrationsverket+aprilprognos+P3-15.pdf>

Nordlund M., Stehlik T. and Strandh M. (2013), Investment in Second-Chance Education for Adults and Income Development in Sweden, *Journal of Education and Work*, Vol. 26, No. 5.

OECD (2013a), PISA 2012 Results: What makes Schools Successful (Volume IV): Resources, Policies and Practices, Paris: OECD Publishing

OECD (2013b), Education at a Glance: OECD Indicators, [http://www.oecd.org/edu/eag2013%20\(eng\)--FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf)

OECD (2013c), Survey of Adult Skills (PIAAC), <http://www.oecd.org/site/piaac/surveyofadultskills.htm>

OECD (2013d), A Skills beyond School Commentary on Sweden, OECD Review of Vocational Education and Training, <http://www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnSweden.pdf>

OECD (2014a), Education at a Glance: OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b), Shifting Responsibilities - 20 Years of Education Devolution in Sweden: A Governing Complex Education Systems Case Study, *Education Working Papers*, No. 104, Paris

OECD (2014c), TALIS 2013 Results: An International Perspective on teaching and Learning, <http://www.oecd.org/edu/school/talis-2013-results.htm>

OECD (2015a), Improving Schools in Sweden: An OECD Perspective, <http://www.oecd.org/edu/school/improving-schools-in-sweden-an-oecd-perspective.htm>

OECD (2015b), The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence, Paris: OECD Publishing

Statistic Sweden (SCB) (2014), Ökande elevkullar kan förvärra lärarbrist, http://www.scb.se/sv_/Hitta-statistik/Artiklar/Okande-elevkullar-kan-forvarra-lararbrist/

Swedish Government (2005), Utlänningslagen 2005:716, Stockholm

Swedish Government (2010), Skollagen 2010:800, Stockholm

Swedish Government (2013), Lagkrav på socioekonomisk fördelning till skolor, <http://www.regeringen.se/sb/d/16835/a/226967>

Swedish Government (2014), Utbildning för nyanlända elever – mottaganda och skolgång, Government's proposal 2014/15:45, Stockholm

Swedish Government (2015a), Utbildningspolitik för en bra start i Sverige, <http://www.regeringen.se/contentassets/ebca86785c9b4ac5a0e6a0b0bb631970/pm-utbildningspolitik-for-en-bra-start-i-sverige>

Swedish Government (2015b), <http://www.regeringen.se/pressmeddelanden/2015/03/helene-hellmark-knutsson-utser-nationell-expertgrupp-for-okad-jamstalldhet-i-hogskolan/>

Swedish Council for Higher Education (2015), <http://www.uhr.se/sv/Om-UHR/Uppdrag/Breddad-rekrytering/>

Swedish Higher Education Authority (2014), Higher education in Sweden, 2014 Status Report, Report 2014:10, <http://english.uk-ambetet.se/download/18.7ff11ece146297d1aa65b4/higher-education-in-Sweden-2014-status-report.pdf>

Swedish School Inspectorate (2009), Utbildning för Nyanlända Elever. Rätten till en God Utbildning i en Trygg Miljö, Stockholm

Swedish Union of Teachers (Lärarförbundet) (2012), Varifrån ska alla nya lärare komma?, <https://www.lararforbundet.se/artiklar/perspektiv-pa-lararloner-del-9-varifran-ska-alla-nya-larare-komma>

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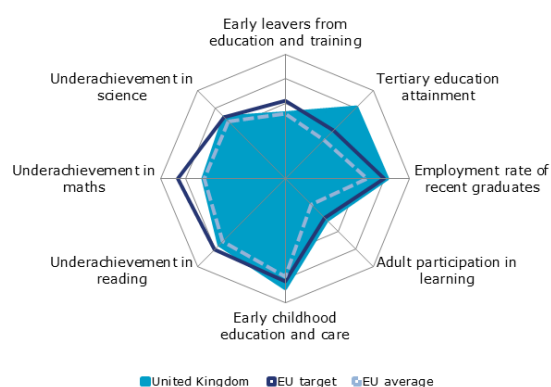
United Kingdom

1. Key Indicators and Benchmarks

			United Kingdom		EU average	
			2011	2014	2011	2014
Educational poverty and spending cuts: challenges for the education sector						
Share of 15 year-olds with underachievement in:	Reading	●	:	16.6% ¹²	:	17.8% ¹²
	Maths	●	:	21.8% ¹²	:	22.1% ¹²
	Science	●	:	15.0% ¹²	:	16.6% ¹²
Education investment	Public expenditure on education as a percentage of GDP		6.0%	5.5% ¹³	5.1%	5.0% ¹³
	Public expenditure on education as a share of total public expenditure		12.9%	12.0% ¹³	10.5%	10.3% ¹³
Education attainment levels of young people across Europe						
Early leavers from education and training (age 18-24)	Men		16.1%	12.8%	15.2%	12.7%
	Women		13.8%	10.7%	11.5%	9.5%
	Total	●	14.9%	11.8%	13.4%	11.1%
Tertiary education attainment (age 30-34)	Men		42.6%	44.2%	31.0%	33.6%
	Women		48.3%	51.1%	38.7%	42.3%
	Total	●	45.5%	47.7%	34.8%	37.9%
Policy levers for inclusiveness, quality and relevance						
Early childhood education and care (participation from age 4 to starting age of compulsory education)		●	95.8%	96.1% ¹³	93.2%	93.9% ¹³
Teachers' participation in training	Any topic (total)		:	91.7% ^{13,ENG}	:	84.6% ¹³
	Special needs education		:	38.3% ^{13,ENG}	:	32.4% ¹³
	Multicultural settings		:	12.9% ^{13,ENG}	:	13.2% ¹³
	ICT skills for teaching		:	38.9% ^{13,ENG}	:	51.0% ¹³
Foreign language learning			:	:	63.0%	:
Share of ISCED 2 students learning two or more foreign languages			:	:	12%	:
Share of ISCED 3 students in vocational education and training (VET)			36.0%	43.8% ¹³	50.4%	48.9% ¹³
Employment rate of recent graduates by education attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4		75.7%	78.5%	71.3%	70.8%
	ISCED 5-8		85.4%	86.2%	82.5%	80.5%
	ISCED 3-8 (total)	●	81.0%	83.2%	77.1%	76.1%
Learning mobility	Inbound graduates mobility (bachelor)		:	15.7% ¹³	:	:
	Inbound graduates mobility (master)		:	46.1% ¹³	:	:
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	●	15.7%	15.8%	8.9%	10.7%

Sources: Eurostat (LFS, UOE, GFS); OECD (PISA, TALIS). Notes: • ET 2020 benchmark; data refer to weighted EU average, covering a different number of Member States depending on the source; b= break in time series, d= definition differs, p= provisional, u= low reliability, ¹²= 2012, ¹³= 2013, ENG= England. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2014 and UOE 2013) and OECD (PISA 2012, TALIS 2013). 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 figure).

2. Main strengths and challenges

The education systems in the UK²⁶⁸ perform well in many areas, including participation in early childhood education and care for children aged 4 and over, digital skills acquired at school, teachers' engagement in continuing professional development, tertiary education attainment rates and adult participation in lifelong learning. A major reform of the primary and secondary curricula is underway. Pioneering work has been done in the area of introducing computer programming skills (coding) into the primary school curriculum.

Main challenges for the UK's education systems include access to early childhood education and care for children under the age of 4, literacy of 18-24 year-olds with only lower secondary education, numeracy skills among 15 year-olds and continued reduction in the early school leaving rate. In terms of transition to employment, whilst the employment rates of recent graduates at each level of education attainment in the UK are higher than the EU average, the availability of higher vocational and technical education trails behind other European systems.

Box 1. The 2015 European Semester country-specific recommendation on education and training

The 2015 European Semester country-specific recommendations (CSRs) to the United Kingdom (Council of the European Union 2015) includes the following recommendation on education and training:

CSR 3: Address skills mismatches by increasing employers' engagement in the delivery of apprenticeships. Take action to further reduce the number of young people with low basic skills. Further improve the availability of affordable, high quality, full-time childcare.

3. Investing in education and training

The UK's general government expenditure on education as a proportion of GDP, which stood at 5.5% in 2013, is above the EU average (5%). However, this is the lowest rate the UK has witnessed since 2007 and represents a significant drop from 6.6% in 2010.²⁶⁹

In June 2015, the newly-elected government announced further budgetary cuts in the areas of pre-primary, further and higher education as part of a broader fiscal savings agenda. These savings are expected to come from departmental underspends, increased efficiencies and some small budgetary reductions and will affect both the Department for Education (savings of GBP 450 million) and the Department for Business, Innovation and Skills (again GBP 450 million). The schools budget will not be affected by cuts at this stage and will increase in line with demographic increases, but it will not be protected against inflation in the coming years.²⁷⁰

The Summer Budget 2015 has ushered in a number of novelties affecting funding of education and training, including replacing maintenance grants with maintenance loans for new higher education students from England, paid back only when their earnings exceed GBP 21 000 a year, saving GBP 2.5 billion by 2020-21. An announcement was made that from 2017/18 institutions will be allowed to increase their tuition fees in line with inflation if they demonstrate high teaching quality.

In addition, changes are apparent in the levels and ways of funding skills in England and this particularly affects funding of adult skills. Whereas previously state-funded adult provision has

²⁶⁸ Each of the four UK countries (England, Northern Ireland, Scotland and Wales) has devolved responsibility for their own education policy. The UK country sheet therefore presents an overall picture on system performance, where relevant, but recognises the substantial variation in the policies, organisation, funding and delivery of education across each of the devolved administrations.

²⁶⁹ Source: Eurostat, General government expenditure by function according to the Classification of the Functions of Government (COFOG) database.

²⁷⁰ Disclaimer: The 2015 Budget may not provide an aggregate picture of changes to education spending across all UK.

been the dominant form of adult learning, there has been a significant fall in the money available for such provision, and training providers are being encouraged to find alternative sources of funding. At the same time, the Conservative Manifesto and subsequently the Summer Budget 2015 announced a push to deliver 3 million new apprenticeships by 2020, funded by a levy on large employers. By comparison, in the last five years, 2.2 million apprenticeships have been delivered. This shows a willingness to shift to a more work-based learning model in post-16 education.

The budget for 2015, presented in March 2015, announced a focus on funding for PhDs (the highest level of university degree) and apprenticeships, in addition to supporting science and innovation and addressing skills shortages in some areas. Since demand for individuals with a PhD is outstripping supply and UK PhD enrolment rates have remained relatively flat over the years, the government will be introducing measures and financial instruments to support PhDs and research-based master's degrees. Scientific research and infrastructure will receive a significant amount of extra funding in the period until 2020/21 in recognition of the impact of science on productivity, jobs and societal well-being.

4. Tackling inequalities

The early school leaving rate in the UK fell from 14.9% in 2011 to 11.8% in 2014, which is close to the EU average of 11.1%. Unlike in other EU countries, the instances of early school leaving are less prevalent among students born outside the UK (9.4%) than those born in the UK (12.2%) with rates among males and females closer than on average across the EU (12.8% and 10.7% respectively).

The UK performs somewhat better than the EU average in literacy and science skills at age 15, as measured by the 2012 OECD Programme for International Student Assessment (PISA). However, underachievement in mathematics remains above the EU target. When these results are broken down by gender, the UK exhibits the third highest gender difference in mathematics performance across all EU countries, with more girls underachieving than boys.²⁷¹ In science and literacy, the picture is better, with the gender gap in science performance being the lowest in the EU and reading underperformance existing in fairly equal measure among boys and girls (OECD 2013).²⁷²

The performance in mathematics of students born in the UK compared to those born elsewhere is less equal. Compared to non-immigrants (among which 20.3% were low achievers), a higher share of first and second generation immigrants struggled to achieve the basic level in mathematics (26.5% and 27.2% respectively). The UK is a rare example where children of second generation immigrants achieve worse than first generation immigrants.

England's average position in the PISA 2012 study compared to above average performance in the IEA's Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) of fourth and eighth graders (years 5 and 9 in the UK), indicates that the problem of underachievement worsens in the final years of lower secondary education. The root of the problem may already be in primary school, when we consider that England's share of underperformance according to TIMSS and PIRLS is actually also relatively high compared to the UK's overall position.

Despite the international evidence, national sources point to significant gaps in relation to gender, ethnicity and socioeconomic background in the English education system. For example, there is a gap of 27 percentage points between low-income students and other students in achieving the

²⁷¹ 23.8% of 15-year-old girls and 19.7% of 15-year-old boys failed to achieve the basic level of mathematics at the age of 15, which is a higher percentage difference among genders than in all EU countries but Luxembourg and Austria.

²⁷² According to PISA 2012, 19.8% of boys and 13.5% of girls underachieve in reading. In science, 13.9% of boys and 16% of girls underperform.

GCSE (lower secondary examinations) benchmark (five good GCSEs including English and maths) that has not narrowed, and a gap of 10 percentage points between girls and boys, which is widening. The geographical location of poorer children plays a major role in their chances of doing well at school, with the London area performing significantly better than rural and coastal areas (Social Mobility and Child Poverty Commission 2014).

The rate of 4-year-olds enrolled in early childhood education and care remains stable and is above the EU average (96.6% compared to the EU average of 93.1% in 2013), despite average monthly childcare fees for younger children being the third highest in the EU (European Commission 2014a).

The compulsory education leaving age is 16 in Northern Ireland, Scotland and Wales, but was raised from 16 to 17 in 2013 in England and to 18 in 2015, which may bring the proportion of early school leavers below the Europe 2020 target of 10%. Importantly, this has the potential to reduce skills inequalities in the UK. Nevertheless, the concern is that young people in England will be able to complete compulsory education by doing a series of short courses (including part-time) with a low level of English and mathematics, which may minimise the effect of their continued education on reducing inequalities. Young people in other parts of the UK will still be leaving school at a relatively young age.

Several initiatives to improve basic skills are being implemented across each of the UK countries. In England, '16 to 19 Study Programmes' require students who have not achieved the required standard in English and/or mathematics (GCSE grades A* to C or equivalent qualification) to continue to study these subjects. In 2013/14, this applied to around 39% of all pupils aged 16-18. Implementation has led to a proliferation in 'functional skills' courses at the same level as GCSEs for apprentices, with the expectation that they pass the tests in order to obtain their apprenticeship qualification (Ofsted 2014). The remaining challenge is the training of teachers and trainers to teach maths and English and to incorporate this teaching effectively into vocational courses (Education and Training Foundation 2015). The Office of Qualifications and Examinations Regulation (Ofqual) is considering what improvements could be made to the standards, last reviewed in 2000, quality and assessment of functional skills. Finally, in the absence of a higher level applied mathematics qualification in England, the Department for Education in England recently announced a new post-GCSE core mathematics qualification, but no similar qualification exists for English as yet.

By focusing efforts on making the content and assessment of key subjects more demanding, the other devolved administrations are taking a long-term approach to improving young people's basic skills. The 'Curriculum for Excellence' is in its fourth year of implementation in Scotland and continuously being improved in line with twice-yearly implementation plans. In October 2014 the Welsh Government published 'Qualified for Life', an education improvement plan for the period up to 2020. The plan, which covers education for 3- to 19-year-olds, consolidates the Welsh Government's key education priorities of raising standards in literacy and numeracy and breaking the link between deprivation and low attainment. It also announces the Welsh Government's ambition for Wales to achieve scores of 500 in reading, mathematics and science in the 2021 PISA test round. The 'Entitlement Framework' in Northern Ireland (introduced in 2007 and statutory since 2013) aims to guarantee pupils aged 14 and above access to a broad and balanced curriculum on an area basis, by requiring the offer of a minimum number of courses. Area Learning Communities have been established to help post-primary schools and further education colleges work collaboratively to ensure that the courses offered in a given area meet pupils' needs and the minimum required by statute.

The UK government funds 15 hours a week of free early education for all 3- and 4-year-olds in England and it has announced that this will be doubled to 30 free hours a week for working families from September 2016. In Scotland, funding for 30 hours free a week will be phased in

over a 5-year period. The offer of 15 free hours has also been available to 40% of the most disadvantaged 2-year-olds since September 2014 in England. But unofficial data from a survey conducted among nurseries in England has found that despite demand from the parents, 1 in 7 nurseries has not been able to increase their capacity owing to insufficient local government subsidies (National Day Nurseries Association 2015). A future challenge will therefore be to determine the new process and funding mechanism to support this increase in funded early education. In addition, the Early Years Pupil Premium of GBP 300 per eligible child will become available to preschool education providers in 2015/16. The government announced a new tax-free childcare scheme from autumn 2015 for working families not already in receipt of tax credits (HM Treasury 2014).

Box 2. Curriculum reform in England

The comprehensive curriculum reform consists of the following initiatives, designed to raise expectations of how young people perform in the basic skills:

- The introduction of the new slimmed-down national curriculum in September 2014, which is expected to improve children's numeracy, language and literacy skills and knowledge. The curricula for English, mathematics and science have been made more demanding, while other subjects have been slimmed down. The changes to the English and mathematics curriculum are being introduced in phases since September 2014, with the new national tests introduced for Key Stage 2 (end of primary school) in 2016. This reform is fully in line with the CSRs made to the UK between 2011 and 2014 which encouraged the UK to reduce the number of young people with low basic skills.
- Reform will be accompanied by the tracking of schools' performance using national tests on literacy and numeracy against threshold targets for achievement, which are the statutory assessment results in English, maths and science published nationally. By 2016 primary schools will be judged against a new floor standard of 65% of students achieving the required standard in English and maths and making sufficient progress. Aside from the curriculum changes, school performance tracking is one of the most effective policy levers used in this reform.
- Implementation of the GCSE reform, with the introduction of stricter assessment for English language examinations in summer 2014 and the development of reformed GCSEs in English language and maths to be introduced in September 2015 for examinations in summer 2017 (and science from September 2016). This reform will raise the bar for learners but will lead, at least in the short term, to a perceived fall in achievement. The more demanding GCSEs are likely to put some young people at risk of being categorised as 'not in employment, education or training' (NEET) in the short term, while the reduction in adult skills funding will make some of those pathways unsustainable.
- Subject knowledge enhancement courses to improve teaching effectiveness through continuing professional development in areas with teacher shortages such as mathematics (at both primary and secondary level) and science are being provided by 'teaching school' alliances to supplement programmes provided by professional bodies and subject associations that have some government funding.
- Implementation of the reforms to the A-level (upper secondary examination), with the introduction of the first group of reformed A-levels to be taught in September 2015 for examinations in summer 2017. The government has recently announced that the new curriculum for A-level mathematics will not be introduced until September 2017, one year later than planned, so that students will be better prepared, having already worked towards the new, more challenging mathematics GCSE.

5. Modernising school education

England fares well in terms of teacher training, as shown in the 2013 OECD Teaching and Learning International Survey (TALIS, OECD 2014b). 91.7% of teachers report having undertaken some professional development activities in the previous 12 months (compared to the EU average of 84.6%). Information and communications technology (ICT) is widely used in classrooms, by 37.1% of teachers compared to 34% in the EU as a whole. This also reflects the percentage of teachers having been trained in ICT (38.9%). A particularly high number of teachers report giving different work to students with learning difficulties and/or to those who can advance faster (63.2% compared to the EU average of 46.0%). This reflects a high percentage of teachers trained in special needs education (38.3% compared to the EU average of 32.4%).

The number of schools failing to reach the national minimum standard set by the Department for Education in England²⁷³ fell in both 2013 and 2014. General improvements are being reported at the end of key stage 2 (age 11) with improvements in 2014 over 2013 in the proportion of children achieving at least the expected level in reading (from 86% to 89%), writing (76%) and maths (86%) and an increase in the proportion performing above the expected level (Department for Education 2014). On the other hand, secondary schools have not exhibited similar progress along national standards.

A major transformation underway in England concerns the rapid rise in the number of academies from 203 in May 2010 to 4 676 in June 2015. This has been achieved by changing the governance status of existing schools (especially schools assessed as 'failing' upon inspection) or creating new schools that are no longer accountable to local education authorities and free to employ senior management to bring about improvements in teaching and student behaviour. Today over half of all secondary schools in England are academies. The new government intends to convert an additional 1 000 schools that were ranked 'inadequate' into academies by bringing in new leadership to promote 'discipline, rigour and higher standards'. On 3 June 2015, an Education and Adoption Bill was brought before Parliament to that purpose.

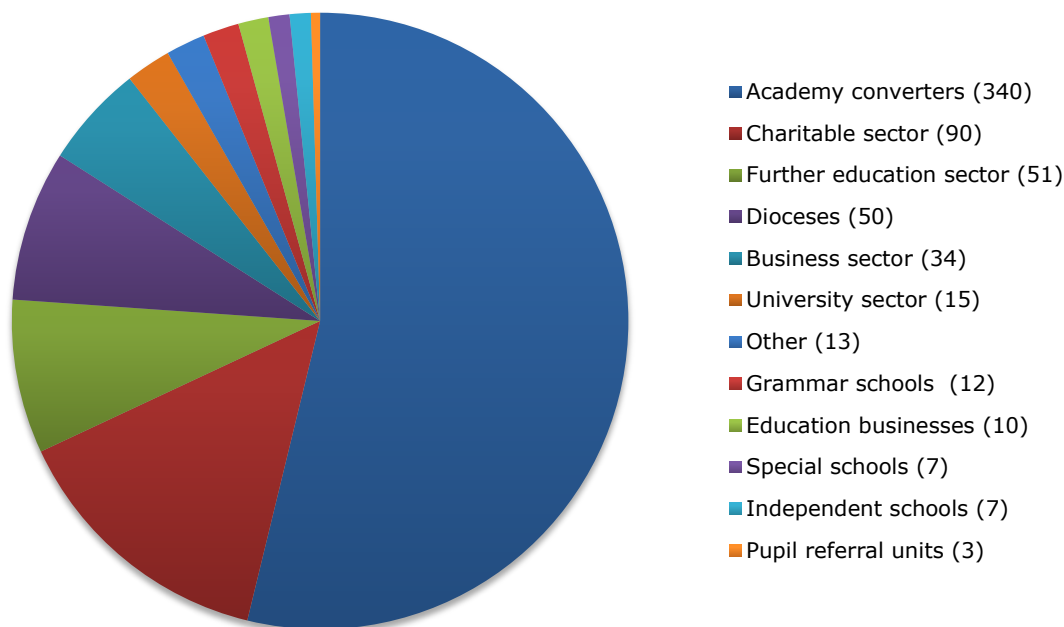
There are mixed views on whether changing the governance status of schools to academies makes any lasting difference. It is still too early to judge the full impact of converter academy status on school performance, but some independent assessments have been done, albeit with inconclusive findings. A recent assessment showed that although results for young people with low prior attainment have generally fallen across all school types, on average the fall was less dramatic for chains than for other types of school, and a few chains succeeded in significantly improving the attainment of this group (Sutton Trust 2015). Nevertheless, when analysed against a range of Government indicators on attainment, a majority of the chains analysed still underperform the mainstream average on attainment for their disadvantaged pupils (Sutton Trust 2015). Other research has shown the amount of attainment progress made by pupils in sponsored and converter academies is not greater than in maintained schools with similar characteristics (NFER 2015). However, evidence was found that the attainment gap between pupils eligible for free school meals (disadvantaged pupils) and those that are not is narrower in converter academies than similar maintained schools (NFER 2015).

National pupil projections in England report a continued increase in the primary school population since 2009, particularly in London. The rate of increase is forecast to drop, and pupil numbers are expected to become stable by 2024. The secondary school population has been falling since 2005, however numbers will start to rise in 2016 as a result of increases in the birth rate since 2002. While schools have been encouraged to expand, the forecasts require that new schools be created. Although keeping up with demand continues to be a challenge, there have been few

²⁷³ In 2014, a primary school was seen as underperforming if fewer than 65% of pupils at the end of key stage 2 (14- to 15-year-olds) achieved level 4 or above in reading, writing and maths (in 2013 the threshold was 60%). A secondary school was seen as underperforming if fewer than 40% of pupils achieved five or more GCSEs at grade A*-C or equivalent in both English and maths.

reported instances of children failing to secure a school place. However, the supply of newly-qualified teachers is starting to be cause for concern. While places for initial teacher training were increased for 2014/15, particularly for the School Direct programme that offers on-the-job training and qualifications for newly-qualified teachers, around a third of School Direct places were not taken up in 2013/14 (Universities UK 2014).

Figure 2. Diversity of academy sponsors (absolute numbers)



Source: Department for Education (2015b)

In terms of new skills, in England, computing (which includes programming skills) has been introduced as a compulsory subject from primary school onwards. When it comes to the ability of 15-year-olds to use a foreign language, England is one of the lowest achievers in the EU. The 2011 European Survey on Language Competences showed that only 9.3% of students achieved a B1 level of proficiency in their first foreign language,²⁷⁴ compared to 43.5% in the EU as a whole. The average number of foreign languages learnt in secondary education in the UK is one language per student, compared to the EU average of 1.5 languages. However, for the first time, the national curriculum includes the option of teaching foreign languages at key stage 2 (ages 7-11). The English Baccalaureate, introduced in 2011, has also led to an increase in the number of students taking modern foreign languages at GCSE level.

6. Modernising higher education

The UK tertiary education attainment rate (the proportion of the population aged 30-34 having completed tertiary or equivalent education) has been increasing continually since 2000, reaching 47.7% in 2014, which is one of the highest rates in Europe and well above the EU average (37.9% in 2014).

The employment rate of people having completed tertiary or equivalent education in the UK is above the EU average (86.2% compared to an EU average of 80.5%).²⁷⁵ Labour market analysis shows that the past decade has seen gradually decreasing high skill employment rates among graduates (as well as non-graduates and postgraduates) from 70.9% to 66.4% in the general

²⁷⁴ According to the Common European Framework of Reference for Languages, B1 is the threshold or intermediate level. Level descriptors can be found here: http://www.coe.int/t/dg4/linguistic/Cadre1_en.asp

²⁷⁵ People aged 20-34 who left education between one and three years before the reference year.

working age population (BIS 2015). However, the government reported that 43% of recent graduates (21-30-year-olds) are not using higher skills (BIS, 2015). An independent study has produced an analysis of overqualification of graduates on the UK labour market and concluded that the underutilisation of graduates is one of the highest in the EU27 (CIPD 2015). However, there is no decisive evidence in terms of the relevance of graduate skills for the labour market. For instance, while employer surveys lament shortages and difficulties with recruitment of science, technology, mathematics and engineering (STEM) graduates, the employability rates of STEM graduates suggest that the gap is not that significant (CBI 2014; UKCES 2013).

Another remaining challenge for the UK higher education sector is to provide equal opportunities of studying at higher education level to students from all socio-economic backgrounds as well as to provide sufficient alternative routes to higher skills. In 2012/13, there was an increase in the overall number of young people entering university and at the same time the proportion of students from state schools, working class backgrounds and low-participation areas has increased. Nevertheless, very few children eligible for free school meals (disadvantaged students) progress to the top universities and the most disadvantaged among them are still six times less likely to enter an elite institution than the most advantaged (Social Mobility and Child Poverty Commission 2014).

In England, as part of efforts to widen access to and improve participation in higher education, the cap on the number of students attending publicly-funded higher education institutions was removed in September 2015. Diversifying study programmes also has the potential to attract non-traditional learners to higher education, which is the hope with 'Degree Apprenticeships', due to start in September 2015. These allow young people to gain a full bachelor's or master's degree from a university while earning a salary and without paying tuition fees. Finally, student loans will become available for postgraduate studies in 2015/16.

Scotland has set a policy to increase the number of students from state-funded schools, students from further education and mature students from disadvantaged background in higher education. It appointed a Commission on Widening Access consisting of key figures from education and business and student leaders in April 2015, whose role is to advise on meaningful milestones, targets and activities that will accelerate progress on widening access to higher education. In Wales, a Review of Higher Education Funding and Student Finance Arrangements is ongoing and will report in 2016. It will address issues of widening access and increasing part-time and postgraduate provision in Wales. Finally, Northern Ireland published 'Access to Success' in September 2012, an integrated regional strategy for widening participation in higher education, which includes the development of non-traditional routes into higher education through Adult Access Courses and increased part-time opportunities.

7. Modernising vocational education and training and promoting adult learning

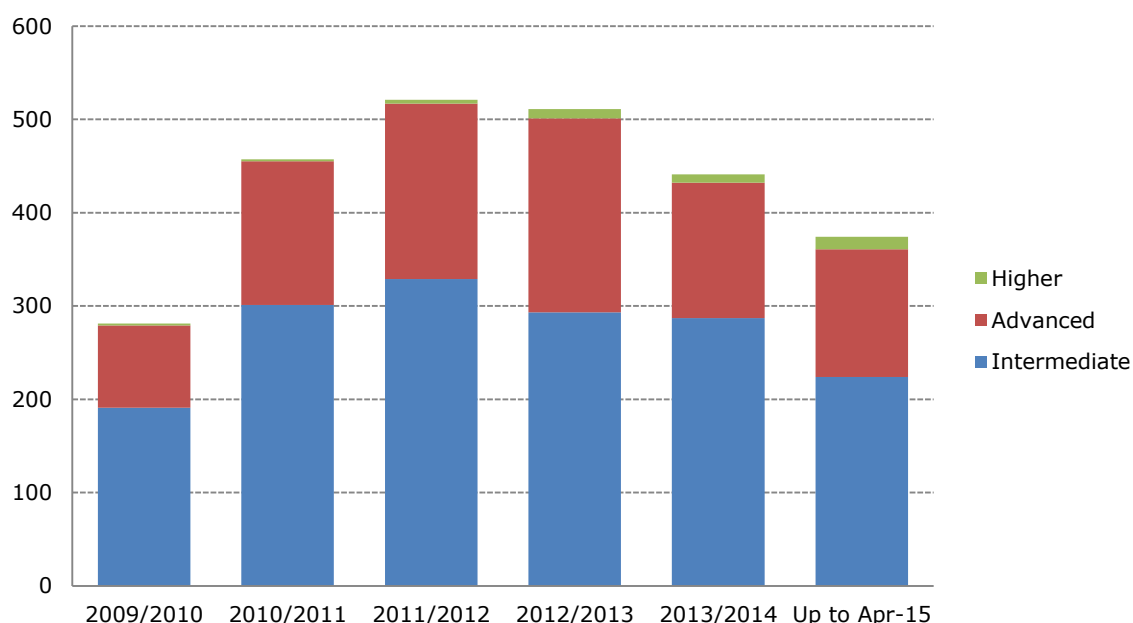
Despite initial measures to reform it, the vocational qualifications system remains complex. While the UK has a firmly-established set of qualifications frameworks, there is also training that is not part of these frameworks but is instead certificated by companies, charities and independent training agencies. The proportion of upper secondary students enrolled in initial vocational education and training in the UK is below the EU average (43.8% compared to 48.9% in 2013). In line with the wider EU trend, initial vocational education and training graduates in the UK have an employment rate that is 4 percentage points higher than their counterparts from general education.

UK adult participation in learning, at 15.8%, is significantly higher than the EU average (10.7% in 2014). However, the participation of people from less advantaged backgrounds is significantly lower than that of other groups, and participation among unemployed people and those over 55 appears to be declining. The announced cuts of 24% in funding for further education colleges

(and 40% since 2010), which offer a wide range of adult courses from basic numeracy and literacy to vocational training, are estimated, by a national body representing further education colleges, to cause 190 000 adult education places to be lost (Association of Colleges 2015).

The previous government published a plan to reform adult vocational qualifications with a view to simplifying the qualifications regime and ensuring that qualifications are recognised by employers before being approved. Following the Wolf Report (Wolf 2011), Tech-levels were introduced from September 2014 as an equivalent to A-levels for those who want to take a vocational route. The new UK government has announced that it will legislate to set a target of creating three million apprenticeships by 2020, to ensure their quality and to raise their reputation as part of a career path.

Figure 3. Apprenticeship starts by level of qualification (in 1000s)



Source: BIS (2015b)

Many further education colleges, previously offering a wide range of general and vocational courses for the over-16s, have to reinvent themselves in response to the cut in 16-19 skills funding and the increase in funding for apprenticeships. It was announced that the word 'apprenticeships' would be legally protected by the Enterprise Bill, similarly to the word 'degree', in a bid to enhance the status of apprenticeships. This is justified, as for now, the latest figures show that the number of apprenticeship starts has fallen. In 2013/14 there were 440 000 apprenticeship starts in England, which is 70 000 fewer than the number of starts in the 2012/13 academic year. This is a result of the fall in the number of apprenticeship starts among people over the age of 25 as a result of removing of apprenticeships from the scope of the loans programme. This has so far deterred older people from enrolling. However, it has not yet encouraged a higher number of young people to enrol.

Most apprentices chose to study for the service sector, with three quarters of starts concentrated in three sectors: business, administration and law; health, public services and care; and retail and commercial enterprise. Encouragingly, the percentage of men and women in apprenticeships is roughly equal, with women only slightly ahead (52% of women compared to 48% of men). The level of qualification acquired through apprenticeships tends to be low, with the highest level of apprenticeships making up only 2% of total apprenticeship starts (see Figure 3).

References

Association of Colleges (2015) <http://www.aoc.co.uk/news/aoc-warns-the-end-adult-education-and-training-provision-2020>

BIS (2015a), Graduate Labour Market Statistics, April-June Q2 2015, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/458101/BIS-15-484-graduate-labour-market-statistics-Q2-2015.pdf

BIS (2015b) Statistical First Release: Further Education and Skills Skills: Learner Participation, Outcomes and Level of Highest Qualification Held, 25 June 2015, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/438131/SFR_commentary_June_2015.pdf

CIPD (2015), Policy report: Over-qualification and skills mismatch in the graduate labour market, <https://www.cipd.co.uk/binaries/over-qualification-and-skills-mismatch-graduate-labour-market.pdf>

Department for Education (2014), National curriculum assessments at key stage 2 in England, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/347653/SFR30_2014_Text.pdf

Department for Education (2015a), Academies Annual Report 2013/2014 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/439953/Annual_Academies_Report_2013-14.pdf

Department for Education (2015b), Statistical First Release: Revised GCSE and equivalents results in England, 2013 to 2014, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/406314/SFR_02_2015-revised_GCSE_and_equivalents.pdf

Council of the European Union (2015), Council recommendation of 14 July 2015 on the 2015 National Reform Programme of the United Kingdom and delivering a Council opinion on the 2015 Convergence Programme of the United Kingdom 2015/C 272/06, http://ec.europa.eu/europe2020/pdf/csr2015/csr2015_council_uk_en.pdf

European Commission (2012), Supporting the Teaching Professions for Better Learning Outcomes, SWD (2012) 374, http://ec.europa.eu/education/policy/school/doc/teachercomp_en.pdf

European Commission (2014a) Key Data on Early Childhood Education and Care in Europe, http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/166en.pdf

European Commission (2014b) Modernisation of higher education in Europe: access, retention and employability, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/165EN.pdf

European Survey of Language Competences (ESLC) at www.surveylang.org

CBI (2014), Gateway to growth: CBI/Pearson education and skills survey 2014, <http://www.cbi.org.uk/media/2807987/gateway-to-growth.pdf>

HM Treasury (2015), Summer Budget 2015, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/443232/50325_Summer_Budget_15_Web_Accessible.pdf

National Day Nurseries Association (2015), Annual Nursery Survey 2015 England

National Foundation for Educational Research (NFER) (2015) Analysis of academy school performance in GCSEs 2014: Final report, <http://www.nfer.ac.uk/publications/LGGA03/LGGA03.pdf>

OECD (2013), PISA 2012 results: What Students Know and Can do. Student Performance in Mathematics, Reading and Science (Volume I), <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-I.pdf>

OECD (2014a), Education at a Glance 2014. OECD Indicators, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>

OECD (2014b), TALIS 2013 Results: An International Perspective on Teaching and Learning, Paris: OECD Publishing

Ofsted (2014), Transforming 16 to 19 education and training: the early implementation of 16 to 19 study programmes

Social Mobility and Child Poverty Commission (2014) State of the Nation 2014: Social Mobility and Child Poverty in Great Britain,

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/365765/State_of_Nation_2014_Main_Report.pdf

Sutton Trust (July 2015) Chain Effects 2015: The impact of academy chains on low-income students, <http://www.suttontrust.com/wp-content/uploads/2015/07/Chain-Effects-2015.pdf>

The Conservative Party (2015) The Conservative Party Manifesto 2015, St. Ives PLC, London, <https://s3-eu-west-1.amazonaws.com/manifesto2015/ConservativeManifesto2015.pdf>

UCAS (2014), Undergraduate applications end of cycle report

UKCES (2013), The supply and demand for high level STEM skills, Evidence report 77, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302973/evidence-report-77-high-level-stem-skills_1_.pdf

Universities UK (2014), The impact of initial teacher training reforms on English higher education institutions, <http://www.universitiesuk.ac.uk/highereducation/Documents/2014/ImpactOfITTReformsOnEnglishHEIs.pdf>

Wolf, A. (2011), Review of Vocational Education – The Wolf Report, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf

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European Commission
Directorate-General for Education and Culture

Education and Training - Monitor 2015 - Country analysis

Luxembourg: Publications Office of the European Union

2015 — pp. 288 — 21 x 29.7cm

ISBN 978-92-79-50635-2

ISSN 2466-9911

doi: 10.2766/120051

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