



European
Commission



Education and Training Monitor 2014

Germany

1. Key indicators and benchmarks

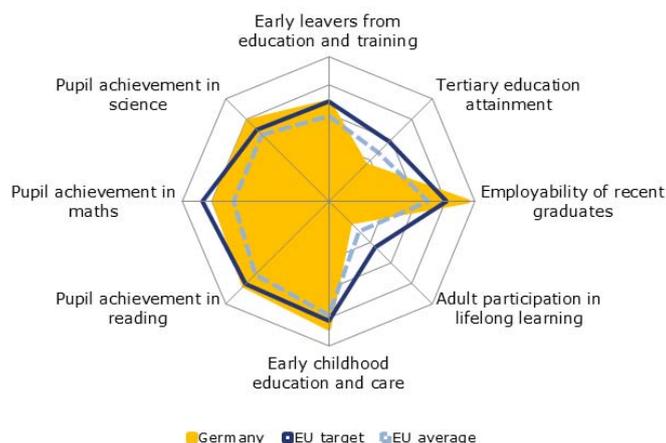
		Germany		Trend	EU28 average		Europe 2020 target / Benchmark			
		2010	2013		2010	2013				
<i>Europe 2020 headline target</i>										
1. Early leavers from education and training (age 18-24)		11.9%	9.9%	▼	13.9%	12.0%	EU target: 10% National target: <10%			
2. Tertiary educational attainment¹ (age 30-34)		29.8%	33.1%	▲	33.6%	36.9%	EU target: 40% National target: 42% ¹			
<i>ET 2020 Benchmarks</i>										
3. Early childhood education and care (4-years-old until the starting age of compulsory education)		96.0% ⁰⁹	96.5% ¹²	▲	92.1% ⁰⁹	93.9% ¹²	95%			
4. Basic skills		Reading			18.5% ⁰⁹	14.5% ¹²	▼	19.7% ⁰⁹	17.8% ¹²	15%
Low achievers (15 year-olds; Level 1 or lower in PISA study)		Mathematics			18.6% ⁰⁹	17.7% ¹²	▼	22.3% ⁰⁹	22.1% ¹²	15%
		Science			14.8% ⁰⁹	12.2% ¹²	▼	17.8% ⁰⁹	16.6% ¹²	15%
5. Learning mobility		Initial vocational training (IVET)		a. Students participating in Leonardo da Vinci programmes as a share of vocational students at ISCED 3	0.8%	1.2% ¹²	▲	0.6%	0.7% ¹²	
		Higher Education		b. Erasmus inbound students as % of student population in host country	-	0.9% ¹²	:	-	1.2% ¹²	
				c. Inbound international degree mobile students as % of student population in the host country	6.4% ¹¹	6.3% ¹²	=	6.0%	6.9% ¹²	
6. Employment rate of recent graduates (age 20-34) having left education 1-3 years before reference year		ISCED 3-6			86.1%	89.7%	▲	77.4%	75.5%	82%
		ISCED 3-4			83.7%	86.5%	▲	72.1%	69.5%	
		ISCED 5-6			90.2%	94.1%	▲	82.7%	80.9%	
7. Adult participation in lifelong learning (age 25-64)		7.7%	7.8%	=	9.1%	10.5% ^b				15%
<i>Other ET 2020 Indicators</i>										
8. Investment in education and training		a. General government expenditure on education (% of GDP)			4.4%	4.3% ¹²	=	5.5%	5.3% ¹²	
		b. Annual expenditure on public and private educational institutions per pupil/student in € PPS		ISCED 1-2	€ 6,288	€ 6,472 ¹¹	▲	€6,063.74 ^e	€6,297.16 ^{11, e}	
				ISCED 3-4	€ 8,437	€ 8,754 ¹¹	▲	€7,022.35 ^e	€6,650.87 ^{11, e}	
				ISCED 5-6	€ 12,451	€ 12,579 ¹¹	▲	€9,764.30 ^e	€9,474.80 ^{11, e}	
9. Transversal competences		Digital competences		a. Pupils in grade 4 (ISCED 1) using computers at school	37.5% ⁰⁷	51.0% ¹¹	▲	60.7% ⁰⁷	64.7% ¹¹	
				b. Individuals aged 16-74 with high computer skills ³	28.0% ⁰⁹	21.0% ¹²	▼	25.0% ⁰⁹	26.0% ¹²	
		Problem solving in technology rich environments		c. Low achievers (no or insuff. computer experience) ⁴	:	11.6% ¹²	:	:	16.9% ^{12, EU17}	
				d. High achievers (PIAAC level 2 and above)	:	36.0% ¹²	:	:	33.2% ^{12, EU13}	
		Entrepreneurial competences		e. Individuals aged 18-64 who believe to have the required skills and knowledge to start a business	:	38.0%	:	:	42.3% ^{a, EU18}	
		Foreign language skills		f. ISCED 2 students at proficiency level B1 or higher in first foreign language ⁵	:	: ¹¹	:	:	43.5% ^{11, EU13}	
				g. ISCED 2 students learning two or more foreign languages	:	: ¹²	:	60.6%	63.0% ¹¹	
10. Basic skills of adults		Literacy		Low achievers (< PIAAC proficiency level 2)	:	17.5% ¹²	:	:	19.9% ^{12, EU17}	
				High achievers (PIAAC proficiency level 3 and >)	:	47.1% ¹²	:	:	43.3% ^{12, EU17}	
		Numeracy		Low achievers (< PIAAC proficiency level 2)	:	18.4% ¹²	:	:	23.6% ^{12, EU17}	
				High achievers (PIAAC proficiency level 3 and >)	:	49.2% ¹²	:	:	40.9% ^{12, EU17}	
11. Skills for future labour market		High qualification			:	-0.5%	:	:	+12.4%	
Projected change in employment 2010-2020 in %		Medium qualification			:	-1.3%	:	:	+2.1%	
		Low qualification			:	-4.9%	:	:	-13.2%	
12. Teachers		a. Teachers aged >50 teaching in public and private at ISCED 2-3 - as % of total teachers teaching in ISCED 2-3 ⁶			50.3%	48.8% ¹²	▼	:	: ¹²	
		b. Percentage of teachers who undertook some professional development activities in the previous 12 months			:	:	:	:	84.6% ^{EU19}	
13. Vocational education and training		Percentage of vocational students at ISCED 3			51.5%	48.3% ¹²	▼	50.1%	50.4% ¹²	

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

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

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

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



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

2. Main challenges

Germany has an effective vocational education and training system — one of the reasons for the country's low youth unemployment rate — and has made some progress in improving the educational achievement of those from disadvantaged backgrounds. Nonetheless, the link between educational achievement and socioeconomic background remains strong, and continues to have an effect throughout people's working lives. Increasing participation in education and training and improving educational outcomes is crucial for Germany, as the country requires sufficient skilled graduates at medium- and high-skill levels if it is to maintain its growth as an export-oriented and skills-intensive economy. The effects of demographic ageing are particularly severe in Germany, and skills shortages are already emerging in certain sectors and regions. While some progress has been made in increasing the number of places available in full-time early childhood education and care and in extending the provision of all-day schools, there are still concerns relating to the quality of the education and care being provided, and regional disparities persist. Despite plans for additional investment, spending in education and training remains low when compared to the EU average.

The 2014 European Semester country specific recommendations relating to education and training focused once again on: (i) using of the available scope for increased and more efficient public investment in infrastructure, education and research (ii) further raising the educational achievement of disadvantaged people and (iii) addressing regional shortages in the availability of full-time childcare facilities and all-day schools while improving their overall educational quality.

3. Improving resource efficiency and effectiveness

3.1 Investment in education

General government expenditure on education as a proportion of GDP is significantly lower than the EU average (4.3% compared to 5.3% in 2013).¹ Public and private spending on education both decreased slightly in recent years relative to GDP.² Annual expenditure per student on state-funded and private education institutions is, however, higher than the EU average.³ Germany spends below the EU average on primary education, but above average on upper secondary and tertiary education.⁴

Germany reached the 3% target for investment in research and innovation in 2012 (and its level of investment is thus above the current EU average of 2%). Its national reform programme stipulates that investment in

¹ Bundesfinanzbericht 2013. Data on public expenditure are not fully comparable with other EU countries due to the disproportionately higher contribution made by businesses through the 'dual system' of vocational education and training.

² Public spending on education fell from 4.4% of GDP in 2011 to 4.3% in 2012 and 2013 (Eurostat: COFOG data).

³ The EU average expenditure per student (calculated on the basis of 27 Member States, excluding Croatia) provided by Eurostat was EUR 6 900.10 for 2010. Germany ranked eight with expenditure of EUR 7 796.80, behind Belgium, Denmark, Cyprus, the Netherlands, Austria, Sweden and the United Kingdom.

⁴ Eurostat calculated Germany's expenditure on higher education to be EUR 12 579.10 per student, only behind Denmark (EUR 13 308.80 per student), the Netherlands (EUR 13 308.80), Finland (EUR 13 541.00) and Sweden (EUR 15 659.70).

education and research will not be affected by budgetary consolidation. The government put forward a proposal to amend the constitution which would allow central government to fund the operation of higher education institutions and to allocate an additional EUR 9 million of government spending to education, science and research.⁵ This would allow the number of student grants to be increased, greater support to be given to PhD students and young scientists, and to promoting cooperation between universities.

The German Länder have increased expenditure on education (usually amounting to about one third of their total spending) to varying degrees.⁶ Schools were the area which benefited the most from increased spending with a total increase in funding of 82.6% for all-day schools,⁷ followed by a 39.1% increase for higher education and 32.7% for schools in general.

3.2 A focus on teachers

German teachers are on average relatively old, with 46% being 50 or above.⁸ As a result, around 50% of current teachers will need to be replaced over the next ten years. Two thirds of teachers aged 30 to 60 are women compared to approximately 50% of those aged above 60. The female bias in the 30-60 age group is stronger in the German Länder formerly part of East Germany, with 76% of teachers between these ages being women. The increasing move to all-day schooling also means that more teaching hours are required.

Continuing training of teachers varies by German Land and by school type. On average, 14% of primary school teachers and 27% of lower secondary school teachers are teaching mathematics, a subject they have not been trained for. Furthermore, 18% of primary teachers teaching German language and mathematics and 24% of teachers at lower secondary level teaching mathematics or natural sciences reported having received no training during the past two years. There is significant variation between the German Länder, with the proportion of primary teachers having received no training in the past two years ranging from 11% in Thuringia to 27% in Hamburg. Amongst teachers at lower secondary schools teaching German language and mathematics, the proportion having received no training in the past two years varied from 14% in Thuringia to 39% in Rhineland-Palatinate. There is a notable difference in the amount of continuing training received by teachers at different levels of education, with only 25% of teachers at lower secondary level following five or more training events compared to 44% of those teaching in primary schools.⁹

In 2013, the government and the German Länder launched a new programme for improving the quality of teacher training (*Qualitätsoffensive Lehrerbildung*),¹⁰ covering both the training to qualify as a teacher and further learning and development for qualified teachers. The policy also aims to improve the recognition of educational achievement and qualifications across regions, thus improving the mobility of students and teaching postgraduates.

4. Increasing employability

4.1 Work-based learning, apprenticeships and adult learning

Of all students in upper secondary education in Germany, 48.3% are following vocational education and training courses, compared to an EU average of 50.3%. The proportion of students in initial vocational education and training who are enrolled in programmes combining in-company and school-based learning ('dual vocational education and training') is far above the EU average, at 88.2% compared to 27%. This is one of the reasons for Germany's very low youth unemployment rate and for the low numbers of young people not in education, employment or training (NEET). In 2013, only 6.3% (half the EU average of 13.0%) of young people between the ages of 15 and 24 were not in education, employment or training. The employment rate of those having recently completed education at ISCED levels 3-6 is one of the highest in the EU, at 89.7% compared to an EU

⁵ The government explained in the Federal Council (Bundestag,18/2477) to spend 6 billion euros for education and 3 billion euros for science.. The former will allow to relieve the German Länder from all costs related to Bafög as of 2016/17 additional amounts will allow to finance the higher education pact.

⁶ German Education Report, <http://www.bildungsbericht.de/> „In den Ländern wurden im Jahr 2010 durchschnittlich 35,0 % (2009: 33,4 %; 1995: 29,2 %) und in den Gemeinden 13,1 % (2009: 12,5 %; 1995: 9,4 %) für Bildung verausgabt.“

⁷ Over 50% of public expenditure at local, regional and federal level is spent on schools.

⁸ German Education Report, <http://www.bildungsbericht.de/>.

⁹ German Education Report, <http://www.bildungsbericht.de/>.

¹⁰ See Germany's 2014 national reform programme http://ec.europa.eu/europe2020/pdf/csr2014/nrp2014_germany_en.pdf.

average of 75.6%.¹¹ Nonetheless, demographic change is making it increasingly difficult to recruit a sufficient number of apprentices in some regions and sectors.

Adult participation in lifelong learning increased slightly between 2010 and 2013, from 7.7% to 7.8%, but is still below the 2013 EU average of 10.5%.¹² The percentage of older people, the unemployed and those with relatively low qualifications participating in lifelong learning remains lower in Germany than in the EU as a whole.¹³ 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.¹⁴ The survey also shows that the proportion of Germans with low skills in literacy is slightly above the EU average, and the proportion with low skills in numeracy is slightly below it. 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 showed Germany to have one of the strongest links between socioeconomic 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.

As mentioned above, participation in lifelong learning has increased slightly in recent years. In-house training provided by employers saw the most significant increase in participation rates. Whilst the middle age group, 35-50 years, devote the most time to training, participation of those aged 50-65 has also increased recently. Adults with migrant background participate around with significantly less often than those without.¹⁵ Only about 10% of Germans with migrant background use or have access to specific language courses designed to facilitate social and professional integration.

The training pact formed between the government and social partners (*Ausbildungspakt*) has been extended to 2014. In 2013, it helped to create 66 600 new training places in additional 39 100 businesses. The proportion of apprentices having followed a dual training course (combining work placements and school-based learning) who, at the end of the apprenticeship period, were offered a job by the company where they completed the apprenticeship increased by 12% in recent years, and is above the EU average.¹⁶ Nonetheless, the figures vary significantly according to the region, size of company and economic sector.¹⁷

The *Jobstarter* programme, which has, since 2006, supported around 310 regional projects designed to improve dual training in small and medium-sized enterprises, is being continued (as *Jobstarter plus*) and will also allow students who dropped out of tertiary education to enrol on dual training programmes. The 'Education pathways' initiative (*Bildungsketten*) aims to improve information and guidance on education and training.¹⁸ This is achieved by systemic intervention supporting both initiatives on national and on Länder level

Germany's Länder are investing in the training of teachers working in vocational education and training. In 2013, for example, Baden-Württemberg launched a programme designed to professionalise teaching and to improve teachers' ability to adapt their teaching style to different individuals.¹⁹ Furthermore, the course content used in the transition system (*Übergangssystem*),²⁰ which prepares students for vocational education and training, has become more similar to the content of the regular dual education and training curricula. The reform of the transition phase introduced in Hamburg has served to ensure that all content related to dual training is equivalent.

¹¹ In 2013, the employment rate amongst 15-30 year olds having recently completed upper secondary education was 89.7% in Germany, compared to 91.8% in Malta, 90.2% in Austria and 75.6% in the EU on average. Eurostat, LFS. Eurostat, Labour Force Survey.

¹³ Cedefop, country report on Germany http://www.cedefop.europa.eu/EN/Files/3066_en_VetCountryOverview_DE.pdf.

¹⁴ At EU level, low-skilled adults are five times less likely to participate in job-related learning than high-skilled adults.

¹⁵ AES 2012: Adults without migrant background participate with 52% compared to 33% of those with migrant background.

¹⁶ In 2009, 83.9% of those aged 20-34 were offered a job in these circumstances, compared to 79.1% in the EU as a whole. Cedefop, country report on Germany http://www.cedefop.europa.eu/EN/Files/3066_en_VetCountryOverview_DE.pdf. On completing vocational education and training, the employment rate of students having followed this route is 26.2 percentage points higher than that of those coming from general secondary education. This is well above the EU average difference in these rates of 5.6 percentage points.

¹⁷ Companies based in former West Germany remain seven percentage points more likely to employ apprentices at the end of the apprenticeship period than are their counterparts in former East Germany (doing so in 67% compared to 60% of cases). The economic sectors more likely to employ apprentices include financial services, investment, consumer goods and public administration, whilst those less likely to offer a job include hospitality and other services and agriculture and forestry.

¹⁸ One way in which information and guidance is provided is through a cross-sector programme providing information on different professions and allowing comparisons to be made, *Berufsorientierungsprogramm im überbetrieblichen und vergleichbaren Berufsbildungsstätten*, <http://www.bmbf.de/de/16071.php>.

¹⁹ 2014 German contribution to the 2020 Education and Training progress report.

²⁰ This transition system serves two purposes: providing training to those students who could not find an apprenticeship place in the dual system and equipping weaker students with the skills necessary to start an apprenticeship.

In addition to the central and federal state governments, local authorities are also increasingly becoming involved in more active management of lifelong learning. Local actors in education in 35 districts have signed up to an initiative promoting local learning (*Lernen vor Ort*).²¹

Germany's priorities in planning the use of financing from the European Structural and Investment Funds for the period 2014-20 are promoting access to initial vocational education and training for low-skilled people and improving the skill level of low-skilled adults.

4.2 Modernising and internationalising higher education

At 33.1 % in 2013, Germany's tertiary education attainment rate remained below the EU average of 36.9%. (This figure does not include post-secondary training at ISCED level 4, which is included in the figure set as Germany's national Europe 2020 target.) The tertiary education attainment rate for women was 34 % and for men 32 %. The gender gap has therefore been reversed since 2010, at which time there was a 0.2 percentage point difference in attainment rates in favour of men. Implementation of the Bologna reforms is progressing: in 2012, close to 60 % of graduates completed a bachelor's degree, a more than 60 % increase on the proportion doing so in 2010 (37 %). Although student numbers remain highest in law and social sciences, engineering has seen an increase in popularity between 2007 and 2010. The proportion of students not completing university courses remains high at undergraduate level (bachelor's degrees), with a drop-out rate of 28 % overall. Drop-out rates vary across disciplines and are typically lower in universities of applied sciences (*Fachhochschulen*). A much lower proportion, around 10 % of students, drop out of master's programmes.²²

Those with a tertiary level qualification have a much better chance of finding work than those with a lower level of education. In 2012, the graduate unemployment rate remained at 2.5%. This is half the rate of unemployment of those having completed dual training (combining work placements and school-based learning) and far below the unemployment rate of 12 % of those without qualifications.²³ Increasingly, however, graduates have to take short-term work at first and only later succeed in finding long-term employment.

In April 2013 the Federal government and the Länder have, as part of their internationalisation strategy, set the objective that by 2020 every second student should have gathered some experience abroad during his or her studies.. The proportion of students spending time abroad as part of their studies has, however, remained around 30 % for the last decade. Students attribute this to the structure of studies and difficulties in obtaining recognition for courses taken abroad.²⁴

In 2012, over 500 000 young people left school with results giving them the right to continue to higher education. This represents about 50 % of the overall age cohort.²⁵ The percentage of girls leaving school with the right to a place in higher education was 58 %. In 2012, over half a million young people did in fact enrol in tertiary education, with 73 % starting bachelor's degrees. Students not having obtained the right to a place via the traditional route can also satisfy the entry requirements for higher education through alternative routes, including by completing a dual vocational education and training course. In 2013, 2.6 % of those enrolled on higher education programmes had followed an alternative route into higher education.²⁶ The higher education pact (*Hochschulpakt 2020*), agreed between the central and the Länder governments, aims to ensure that additional study places are created to satisfy the increased demand for higher education.²⁷ Cooperation between universities, research institutions and industry is also to be further strengthened. National and regional clusters are to be made an integral part of the innovation strategies developed by the federal states.

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

German employers report a lack of skilled labour in science, technology, engineering and mathematics (the 'STEM' subjects). Around 38 000 positions for ICT staff remain unfilled.²⁸ ICT is an important sector for the

²¹ 2014 German contribution to the 2020 Education and Training progress report.

²² <http://www.bildungsbericht.de/>.

²³ Eurostat: lfsa_urgaed

²⁴ According to research from *Wissenschaft Weltoffen 2014* (German Academic Exchange Service), many students believe that the current structure of bachelor and master courses means that they risk having to study for longer if they spend time abroad during their studies than they would if they stay in Germany.

²⁵ This is corrected for the dual cohort of upper secondary school leavers ("doppelte Abiturjahrgänge") due to the reduction of upper secondary education from 9 to 8 years in several Länder.

²⁶ German Education Report.

²⁷ The pact, concluded on 13 June 2013, sets the objective of financing an additional 625 000 study places between 2011 and 2015.

²⁸ Some sources report that 39.000 positions for IT staff are unfilled or are difficult to fill. Präsident of BitCom in Sueddeutsche Zeitung, 10.03.2014.

German economy, and one particularly exposed to the risks brought about by demographic change. In 2013, there were 2.1 million active academics holding degrees in mathematics, computer science, natural science or engineering in the 56-65 age group. The proportion of individuals aged 16-74 fell from 28.0% of the population in 2010 to 21.0% in 2013. The digital competence of students in their fourth year of formal education has improved from 37.5% in 2010 to 51.0% in 2013, but remains below the best performance in EU countries of 85.8%. Student numbers in ICT-related fields have increased over recent years. The number of students starting a degree in computer science rose by 17% between 2010 and 2011, to just over 48 400. There was also a 7.5% increase in enrolments for courses in electrical engineering and information technology in 2010, as compared to the previous year. The number of women starting degrees in STEM subjects rose by 11% between 2009 and 2010. Only 38.0% of 18-64 year olds consider themselves to have the skills and knowledge needed to start a business. This is below the EU average of 42.3% and significantly lower than in the country with the highest score of 52.0%.

The government presented a new Digital Agenda in August 2014. Education does feature in the plans set out, but is not one of the main focuses. The agenda presents policies for greater use of digital media in general, including in vocational education and training. Existing funding programmes are to be used to promote the use of digital media in vocational education and training and in higher education.²⁹ The agenda also states that the central government will — as set down in the coalition agreement between the parties forming the current government — develop a strategy for digital learning, in conjunction with the German Länder. Non-government stakeholder in education policy will also be consulted.

The adoption of the German qualification framework (DQR) in May 2013 is expected to facilitate the validation of qualifications, including those acquired in an informal or non-formal way. Its eight levels have been referenced to the European qualifications framework.

5. Tackling inequalities

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

Germany's early school leaving rate fell to 9.9% in 2013, and is thus now clearly below the EU average of 12%. There was a more marked change in the rate of early school leaving amongst boys than girls, but the proportion of girls leaving school early is still lower at 9.3%. The early school leaving rate varies significantly between the German Länder³⁰ and also between different types of school. Increased investment and the availability of vocational education and training appears to have contributed to the overall reduction in early school leaving. Early child education and care is shown to significantly reduce the likelihood of an individual leaving school early, and can thus compensate for the effect of the level of education and training of the parents — also a considerable influence on early school leaving.

In 2013, the participation rate in early childhood education at four years of age was 96.5% in Germany, above the EU average of 93.9%. Around 600 000 children of below three years of age participated in early childhood education and care in 2013, 29% of the reference population.³¹ Although there was a noticeable increase in participation in early childhood education between 2006 and 2013, rates continue to vary significantly across age groups and German Länder. Participation of one year olds quadrupled in the German Länder formerly part of West Germany to 23%, but is still far below the participation rate of 62% seen in the former East German states. The participation rate for two year olds was 83% in the eastern German Länder. For three year olds, the participation rate was 87% in German Länder in the Western part of the country and around 95% in Eastern regions.

Germany does not have a national strategy for tackling early school leaving. As part of the strategy to support low-achieving students launched in 2010, the German Länder are implementing a range of initiatives designed to: improve the quality of early childhood education and care, increase levels of teacher training, improve counselling and social work in and outside of schools, and develop the use of teaching and learning methods tailored to the needs of individuals as a way of reducing early school leaving.³² Other measures which play a role in tackling early school leaving include those relating to improving initial teacher training and providing

²⁹ See also e-skills in Europe, 2014 country report for Germany.

³⁰ The highest numbers are in Sachsen-Anhalt and Mecklenburg-Vorpommern: <http://www.bildungsbericht.de/>.

³¹ 394 148 in the federal states in former West Germany and 202 141 in those in former East Germany, [German Education Report 2014](#).

³² An example is the initiative *Zukunftsschulen NRW-Lernkultur Individuelle Förderung* in North Rhine-Westphalia. Saxony, Mecklenburg-Western Pomerania and Saxony-Anhalt also all invest in early childhood education and care, teacher training, the development of teaching methods tailored to the needs of individuals and counselling.

information and guidance to students at an early stage, as set out in the 'Education pathways' initiative (*Bildungsketten*) mentioned above.³³ The German Länder are also keen to support measures addressing early school leaving through programmes funded by the European Social Funds.

High quality early childhood education and care has been shown to have long-term positive effects on an individual's performance in education later on.³⁴ The German Länder and the central government are together investing in childcare, in order to drastically increase the number of childcare places available for under three year olds and to support local authorities in covering the operating costs of such facilities.³⁵ The rapid increase in places and the corresponding need for qualified staff, combined with the large variation in quality seen between the different *German Länder*, has triggered a discussion around the issue of quality of childcare, the need for national quality standards and the potential shortage of teaching staff.³⁶

The all-day school system is being continuously expanded, but it still does not satisfy ever increasing demand.³⁷ There are a large variety of models and alternatives that are classified as 'all-day', varying in terms of: requirements for students to attend the afternoon sessions (sometimes compulsory and sometimes optional), timetable and content of the course, school hours, rhythm of the school day and the type of school. Around 50% of primary schools offer all-day schooling, compared to 85% of the integrated comprehensive secondary schools (*Gesamtschule*). According to the latest German Education Report, eight out of ten all-day primary schools make attendance in the afternoons optional and do not use the extended school hours for developing more innovative methods of teaching and learning. The extent of variation in the way all-day schooling is being put into practice has prompted experts to call for a clear pedagogical model for all-day schools, which would set guidelines for all types of school and all regions.³⁸

5.2 Basic skills of students

Germany's results in the 2012 OECD Programme for International Student Assessment (PISA) survey showed an improvement on those from 2009 and thus confirmed that the positive trend seen in earlier years' surveys is continuing. Overall, the proportion of low achievers³⁹ 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 performers⁴⁰ 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 results also show that the influence of socioeconomic status on students' performance is still stronger in Germany than in the EU as a whole.⁴¹ The relative level of variation in performance is greater for mathematics and science than for reading.⁴² The latest PISA survey did not give results for the individual German Länder. National testing conducted by the German Institute for Educational Quality Improvement (*IQB-Ländervergleich 2012*) did however identify a clear East-West divide. In mathematics and science, students at the end of lower secondary education perform significantly better in the federal states formerly part of East Germany than in those in former West Germany.⁴³

The German Conference of Ministers of Education (KMK) has in recent years given significant attention to issues relating to quality. A number of strategies have been developed to address these concerns, including: setting agreed national education standards in an increasing number of subjects;⁴⁴ putting systems in place in schools to ensure certain standards of quality; introducing mechanisms for regular monitoring of standards; and conducting joint research in the area of education.⁴⁵ A number of measures have been put in place to support low-achievers, including migrants. Early testing of competence in German language is being encouraged at pre-primary level and additional support provided accordingly. The German Länder are also introducing measures designed to improve students' basic skills. These include offering increased support to teachers during their

³³ The *Bildungsketten* initiative aims provide preventive support and information in order to reduce early school leaving and to facilitate the transition into vocational education and training.

³⁴ From the expert opinion *Frühkindliche Sozialisation*, published jointly by *Nationale Akademie der Wissenschaften Leopoldina*, *Acatech – Deutsche Akademie der Technikwissenschaften*, and *Union der deutschen Akademie der Wissenschaften*, July 2014.

³⁵ Germany's 2014 national reform programme.

³⁶ German Education Report 2014; weekly report from the German Institute for Economic Research (*DIW Wochenbericht*) 21/2014, *KITA Qualität und Erwerbsverhalten; Ländermonitor für frühkindliche Bildungssysteme*, 2014 (Bertelsmann Stiftung).

³⁷ *Ganztagschulen in Deutschland: Die Ausbaudynamik ist erlahmt*, 2014 (Bertelsmann Stiftung).

³⁸ German Education Report 2014; *Zwischenbilanz Ganztagsgrundschulen: Betreuung oder Rhythmisierung?*, 2013 (Aktionsrat Bildung) DIW.

³⁹ Below performance level 2.

⁴⁰ Those at proficiency levels 5 and 6. In the 2012 PISA survey, 12.2 % of students achieved this level in Germany, with only Spain (12.8 %) and Finland (17.1 %) performing better on this measure.

⁴¹ <http://www.oecd.org/pisa/keyfindings/PISA-2012-results-germany.pdf>.

⁴² See additional contextual indicators at <http://www.ec.europa.eu/education/monitor>.

⁴³ <https://www.iqb.hu-berlin.de/laendervergleich/lv2012>. Similarly, a recent study conducted by the Cologne Institute for Economic Research, found there to be significant differences in performance across the regions.

⁴⁴ <http://www.kmk.org/bildung-schule.html>.

⁴⁵ <http://www.zib-cisa.de/startseite.html>.

initial and continuing training, involving professional advisers more in education and making greater use of the internet.⁴⁶ Coming from a strong tradition of supporting students with special needs in special schools, the *German Länder* are making a significant effort to promote inclusive education and to implement the UN Convention on the rights of persons with disabilities.

⁴⁶ 2014 German contribution to the 2020 Education and Training progress report.