European Commission

Education and Training Monitor 2013

Austria

Education and Training

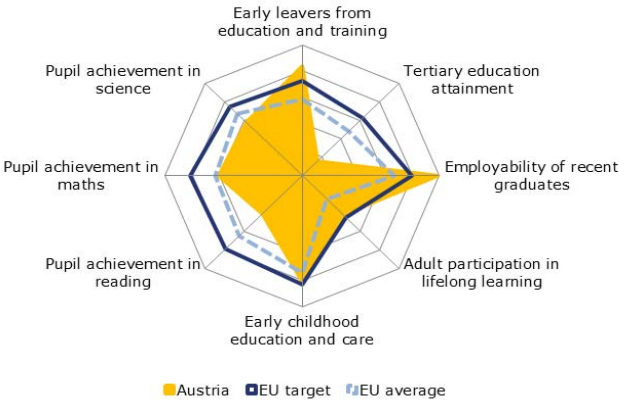
1. Key indicators and benchmarks

Europe 2020 headline targets			Austria 2009	Austria 2012	EU average 2009	EU average 2012	Europe 2020 target / Benchmark
1. Early leavers from education and training (age 18-24)			8.7%	7.6%	14.2% [EU28]	12.7% [EU28]	**EU target: 10%** National target: 9.5%
2. Tertiary educational attainment (age 30-34)			23.5%	26.3%	32.1% [EU28]	35.7% [EU28]	**EU target: 40%** National target: 38%[4]
ET 2020 Benchmarks							
3. Early childhood education and care (4 years old - year before start of compulsory primary)			91.3%	94.3% [11]	91.7%	93.2% [11]	**95%**
4. Basic skills Low achievers (15 year-olds; Level 1 or lower in PISA study)	Reading		27.5%	:	19.6%	:	**15%**
	Mathematics		23.2%	:	22.2%	:	**15%**
	Science		21.0%	:	17.7%	:	**15%**
5. Learning mobility	Initial vocational training (IVET)	**a.** Students participating in Leonardo da Vinci programs as a share of vocational students at ISCED 3	0.1%	0.8% [11]	0.6%	0.7% [11]	
	Higher Education	**b.** Erasmus inbound students as % of student population in host country		1.5% [11]		1.1% [11]	
		c. Inbound degree mobile students as % of student population in the host country		14.7% [11]		7.0% [11]	
6. Employment rate of graduates (age 20-34) having left education 1-3 years before reference year			88.6%	91.2%	78.3%	75.7%	**82%**
7. Adult participation in lifelong learning (age 25-64)			13.8%	14.1%	9.3%	9.0%	**15%**
Proposed ET 2020 benchmark							
8. Foreign languages skills	**a.** ISCED 2 students at proficiency level B1 or higher in first foreign language[1]		:	:	:	43.5% [11]	
	b. ISCED 2 students learning two or more foreign languages		8.2%	9.4% [11]	58.6%	60.8% [10]	
Other ET 2020 Indicators							
9. Investment in education and training	**a.** General government expenditure on education (% of GDP)		5.7%	5.6% [11]	5.5%	5.3% [11]	
	b. Annual expenditure on public and private educational institutions per pupil/student in € PPS	ISCED 1-2	€ 8,156 [08]	€ 8,774 [10]	€ 5,732 [08]	€ 6,021 [10]	
		ISCED 3-4	€ 9,311 [08]	€ 9,136 [10]	€ 6,964 [08]	€ 7,123 [10]	
		ISCED 5-6	€ 12,278 [08]	€ 11,895 [10]	€ 9,309 [08]	€ 9,168 [10]	
10. Digital competences	**a.** Pupils in grade 4 (ISCED 1) using computers at school		37.4% [07]	42.8% [11]	60.7% [07]	64.7% [11]	
	b. Individuals aged 16-74 with high computer skills[2]		29.0%	33.0%	25.0%	26.0%	
11. Entrepreneurial competences	Individuals aged 18-64 who believe to have the required skills and knowledge to start a business		:	50.0%	42.3% [a]	42.0% [a]	
12. Vocational education and training	Share of vocational students at ISCED 3		77.3%	76.1% [11]	49.6%	50.3% [11]	
13. Skills for future labour markets Projected change in employment 2010-2020 in %	High qualification		:	32.0%	:	19.1% [EU28]	
	Medium qualification		:	-0.7%	:	4.6% [EU28]	
	Low qualification		:	-9.3%	:	-20.2% [EU28]	
14. Low-skilled adults	Literacy		:	15.3%	:	19.9% [EU17]	
	Numeracy		:	14.3%	:	23.6% [EU17]	
	Problem solving in technology rich environments[3]		:	23.6%	:	26.9% [EU13]	

Source: Cedefop: 13 / EAC: 10a,b / European Survey on Language Competences (ESLC): 8a / Eurostat (Government finance statistics): 9a / Eurostat (LFS): 1, 2, 6, 7 / Eurostat (ISS): 10b / Eurostat (UOE): 3, 8b, 9b, 10c, 12 / IEA TIMSS: 10a / Global Entrepreneurship Monitor: 11 / OECD (PIAAC): 14 / OECD (PISA): 4

Notes: [07] =2007, [08] =2008, [09] =2009, [10] =2010, [11] =2011, e= estimate, a= unweighted average b= break, p= provisional
Number of countries included in EU average: PISA=25, Entrepreneurship=18, Language skills=13, ICT/Computers at school=13, others: EU27
[1]= average of skills tested in reading, listening, writing, [2]= having carried out 5-6 specific computer related activities, [3]= Results cover people with scores below level 1 as well as people who have no computer experience or failed the ICT test [4]= Tertiary educational attainment: the national target is defined differently and includes postsecondary attainment qualifications at ISCED level 4/4a (following this national definition, the 2012 value is 38.3%)

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



Source: DG EAC calculations on the basis of data from Eurostat (LFS 2012 and UOE 2011) and OECD (PISA 2009). *Note:* all scores are set between a maximum (the highest performers visualised by the outer ring) and a minimum (the lowest performers visualised by the centre of the chart).

2. Main challenges

The Austrian education system needs to improve performance in order to mitigate demographic trends and the trend towards a more skills-intensive economy. Education outcomes as measured by PIRLS, TIMSS and PISA tests are below average both among 10 and 15 year olds, even though Austria's investment in education and training for primary and secondary schools is slightly above EU average. More than one out of four young people aged 15 have poor reading skills, and results are only slightly better in mathematics. These young people face difficulties to access initial vocational education and training, which is crucial for later access to the labour market[1].

The socio-economic background continues to have one of the most important impacts on educational achievement with a distinct achievement gap also for young people from a migration background. A main challenge remains addressing this issue and in particular raising the participation and attainment level of migrants that constitute a growing part of the young population in education, in particular in urban areas[2].

In higher education, increasing numbers of enrolled students put pressure on financial and organisational aspects, while the share of students completing their programmes successfully has started to increase only recently[3]. As a consequence, relatively high dropout rates from universities combined with a comparatively low share of people having completed tertiary or equivalent education remain distinct challenges in Austria.

Therefore the Commission proposed for 2013 the following country specific recommendations (CSR 5): "Improve educational outcomes, in particular of disadvantaged young people, including by enhancing early childhood education and reducing the negative effects of early tracking. Further improve strategic planning in higher education and enhance measures to reduce drop-outs."

3. Investing in skills and qualifications

Investing in education in times of crisis

Austria has kept its investment in 2011 in education relatively stable with 5.6% of GDP compared to 5.7% both in 2010 and 2009. This remains slightly above the EU average of 5.3%. As part of the 2012 consolidation package, Austria envisages additional public funds for tertiary education of about 1 bn €.

Austria has one of the highest levels of expenditure-per-student among all OECD countries. It spends considerably more per student per year than the OECD average in primary and secondary education.[4] The share of private expenditure is one of the smallest among OECD countries.[5]

1 A recent regional study for Upper Austria finds that 92 per cent of employers complain about the lack of skills of apprentices at the moment when they are hired (ibw-Forschungsbericht Nr. 168 - Fachkräftebedarf der Wirtschaft in Oberösterreich, page 115).

2 Children with a migration background are three times more likely to leave the school system without an upper secondary qualification than the children of natives.

3 The rate of first-time graduates of tertiary-type A programmes has increased by 5%-points to 35% between 2010 and 2011 (table A3.1a, Education at a Glance 2013.

4 OECD Education at a Glance, Country Note Austria.

5 OECD: Austria registers only 5% private expenditure of expenditure on primary through post-secondary non –tertiary education institutions compared to the 8% OECD average and 12% on tertiary education compared to a 32% OECD average.

Skills

Education outcomes as measured by PIRLS, TIMSS and PISA tests are below average both among 10 and 15 year olds[6]. More than one out of four young people aged 15 have poor reading skills, and results are only slightly better in mathematics. These young people face difficulties to access initial vocational education and training, which is crucial for later access to the labour market.

Skills as measured by PISA for 15 year-olds have deteriorated between 2006 and 2009 for reading, mathematics and science and remained below the EU average[7] the distance even increased in particular in reading from 1.8 to 7.9 percentage points. Girls perform significantly better in reading and better in science but worse in mathematics than boys.[8] PIRLS 2011 confirms the below average performance as Austria ranks only 14th out of the 20 participating EU countries for reading of 4th grade, 10 year old, having girls performing better than boys[9] and also registering a declined compared to 2006.[10] TIMSS 2011 registers a slight reverse of the downward trend in mathematics for 4th grade.[11] The same trend could be observed for TIMMS 4th grade science where Austria is in addition better positioned 6th out of 21 participating EU countries and above average.[12]

Austria shows a strong influence of socio-economic background on educational achievement. In Austria, students from low socio-economic status are 2.27 times more likely to be low performers than their peers with high socio-economic status, according to PISA 2009, which is below the OECD average (2.37 times). Students with a migrant background are also at higher risk of low performance by 2.16 times, and so are boys in comparison to girls (1.74 times)[13].

The average number of foreign languages learned per pupil at ISCED 2 level in 2011 was 1.1[14] and this is below the longstanding EU average of 1.5.

In Austria 33% of individuals (16-74 age group) showed high computer skills in 2012, up by 3 percentage points compared to 2009 and above the 2012 EU average of 26%.[15] In 2007 37.4% of fourth graders used computers in schools. This was below the EU 13 average (60.7%) at the time.

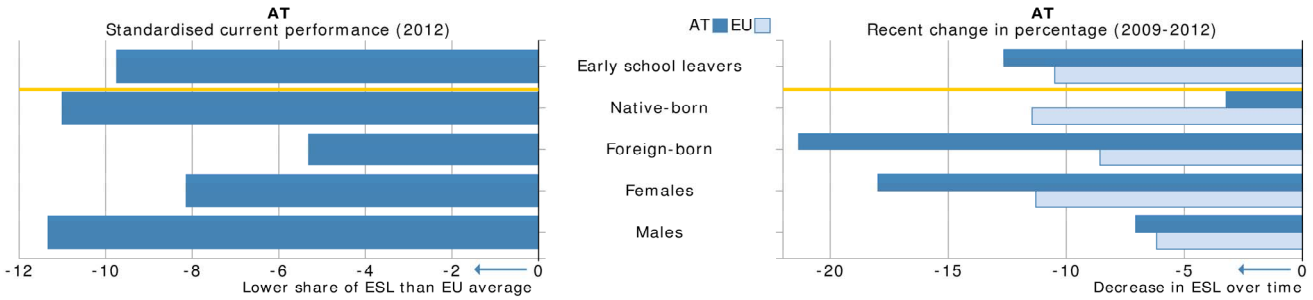
In 2012 50 per cent of the 18-64 age group believed in Austria having the right skills to start a business. This places Austria among the best performing European countries with regard to entrepreneurial skills.[16]

The development of the National qualifications framework (NQF) started in 2007 and is a long-term and comprehensive reform that is touching at all levels of education and needs close involvement of all stakeholders. At this stage it covers higher education, VET and pre-VET programme qualifications, but it does not yet integrate qualifications from general education, which is currently discussed. The NQF is being developed in consultation with all relevant stakeholders.[17]

4. Tackling early school leaving and raising the bar in school education

Austria performs well with regard to early school leaving (ESL): the ESL rates are decreasing (8.3% in 2011 and 7.6% in 2012) and they are already below the national 2020 target of 9.5%. Even so the gap between foreign-born and native-born could be narrowed (22.5%/6.2% (2009) to 17.7%/6% (2012)) the rate of early school leavers remains significantly higher under foreign-born.

Figure 2. Early leavers from education and training: sub-groups



Source: JRC-CRELL. *Note:* ESL = early school leaving. See Annex 2 for further information.

6 Reading 2006 AT: 21.5% (EU 23.1%), 2009 AT: 27.5% (EU 19.6%)
Mathematics 2006 AT: 20% (EU 24%, 2009 AT 23.2% (EU 22.2%)
Science 2006 AT: 16.3% (EU 20.3%), 2009 AT 21% (EU 17.7%)

7 PISA 2006: mathematics (20%), reading (27.5%), science (16.3%) /2009: mathematics(23.2%), reading (27.5%), science to be provided by A4.

8 PISA 2009: Reading 20.3% girls/35.2% boys, science 20.3% girls/21.6% boys, mathematics 25.1% girls/21.3% boys.

9 PIRLS 2011 girls 533, boys 525.

10 PIRLS 2011 reading 529 (2006:538).

11 TIMSS 1995: 531; 2007: 505; 2011: 508 and shows that boys (513) do better in mathematics than girls (504).

12 TIMSS 1995: 538; 2007: 526; 2011: 532 and shows that boys (513) do better in mathematics than girls (504.

13 OECD: Equity and Equality in Education: Supporting disadvantaged Students and Schools, 2012, Paris).

14 Source: Eurostat

15 Source: Eurostat ICT household survey

16 Global Entrepreneurship Monitor registered for 2012, Poland 54%, Slovenia 51%, Austria, Spain and the Slovak Republic all 50%.

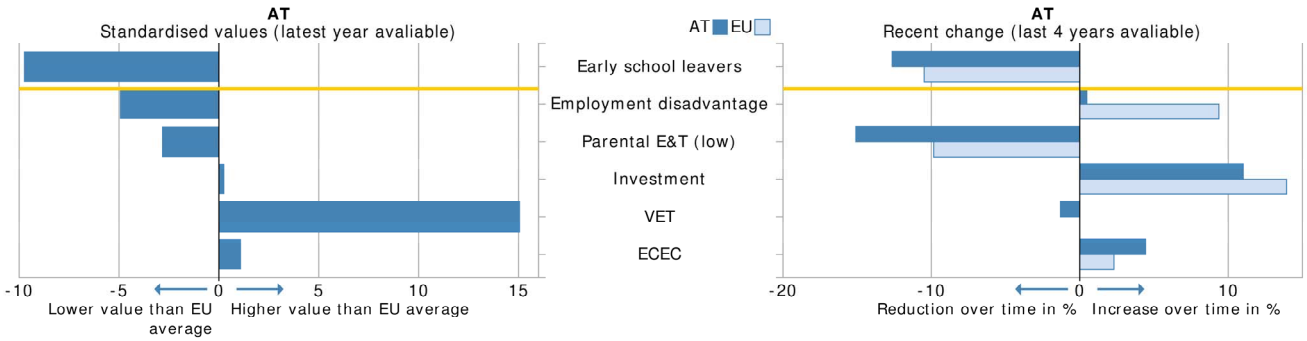
17 Analysis and overview of NQF developments in European countries. Annual report 2012.

Participation in early childhood education and care (ECEC) has been improving from 84.6% (2000) to 94.3% (2011). A strategy against ESL following the Council Recommendation has been adopted, even if full implementation remains lacking so far.

A sustainable strategy underpinned by sufficient financial resources is necessary for early language learning since 23% of pupils entering schools have difficulties in the language of instruction. The additional EUR 5 million a year (to be topped up by the Länder), which will be allocated to early German language training in kindergartens from 2012 until 2014 are an important first step, but do not appear fully adequate to meet the challenge.

The employment rate of graduates[18] has consistently increased to 91.2% in 2012 and remains significantly above the EU average of 75.7% (2012). Participation in initial vocational education and training is significantly higher in Austria 76.8% (2010) than the EU average of 49.8% (2010)[19]. An attractive VET system has assisted in keeping the rate of early school leavers low, also among foreign born, compared to the EU average. It might also explain the fact that the unemployment rate among early school leavers remains low with 24.8% compared to the EU average of 40.1%.

Figure 3. Early leavers from education and training: sub-indicators



Source: JRC-CRELL. *Note:* see Annex 2 for an explanation of the sub-indicators.

Austria is currently implementing the replacement of General Secondary Schools (Hauptschule) by New Secondary Schools (Neue Mittelschule). The New Secondary School reform does not abolish the issue of early streaming, i.e. the early tracking of children into either Hauptschule or Gymnasium (secondary academic school, lower level) at the age of ten. By 2018/19 all classes of the General Secondary Schools are supposed to be transformed into the new system. New pedagogical concepts as an integral part of the reform entail a more individualised approach to learning, a more differentiated teaching, including team teaching, and a more favourable teacher-pupil ratio, which go hand in hand with supplementary financial support[20].

High quality teaching is one key element for maintaining and improving the quality of education. Basic agreements at government level have been reached for the important reform of teacher education. However, specific legal and administrative measures have still to be passed and it is planned to implement the reform in steps starting 2014/15. Quality should be further improved by introducing competence oriented teaching, a central administered "Matura", upper secondary leaving exam as of 2014/15 that is meant to increase transparency and to facilitate access to higher education. A quality process was initiated in schools in 2013/14. The initiative 'Quality of general Education at Schools'[21], introduced education standards and a continuous process of quality assurance in schools.

The comprehensive reform of teacher education (*new teacher education - PädagogInnenbildung NEU*) launched in 2009/2010 has been adopted in Parliament in June 2013 (BGBl. 124/2013). It established concrete requirements and recommendations for the education, training and continuing professional development of persons in the teaching professions with the intention to offer the first new teacher education courses in the 2014/2015 academic year. It was approved by the government in December 2012 but is still awaiting the adoption of specific legal and administrative measures in Parliament. One of the suggested measures is the harmonization of teacher education for primary and secondary academic school teachers at university level[22]. However, educators of preschool education and care are not subject to the current legal efforts to harmonise the education requirements of teachers.

18 From upper secondary and tertiary education (20-34 years).
19 CEDEFOP, "On the way to 2020: data for vocational education and training policies" (2013) EU-27 average.
20 Compare the remark to the Austrian ESL strategy.
21 Schulqualität Allgemeinbildung, or SQA.
22 The curricula of the teachers education are adapted to the new structure recommended by the Bologna Process consisting of four years of bachelor studies and two years of master studies.

Finally, in order to increase efficiency Austria will implement a six point plan for simplifying and improving the governance of the education system, including the abolition of school authorities at district level.

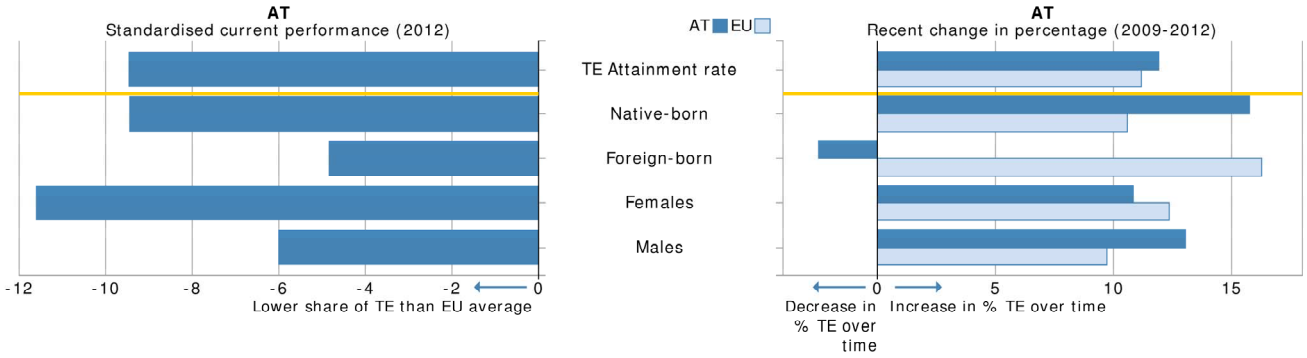
5. Encouraging participation in tertiary education and modernising higher education

Austria's tertiary attainment (ISCED levels 5 and 6) is 26.3% in 2012, which is low in comparison to the EU average of 35.7%. However due to the specific role of VET in Austrian education, a large part of its higher-skilled labour force graduated from VET colleges that grant ISCED 4a level qualifications. Austria decided to include these categories into its Europe 2020 national target of 38% for 2020, which lifts its current performance according to this specific national definition to 38.3% in 2012.

In response to the challenges in the area of higher education, notably the steadily growing number of students, high drop-out rates[23], and long study periods as well as partially over crowded subjects, additional budgetary resources have been made available since 2012 to start implementing the Austrian Higher Education plan step by step until 2021. The Austrian Higher Education plan has been designed to deal with these issues including the fact that certain disciplines have known unusually high incoming mobility from abroad[24] and the difficulties in combining work and studies. The additional funds are intended inter alia to create additional study places, to promote mathematics, science and technology (MST) subjects and to mitigate quality problems in oversubscribed disciplines.

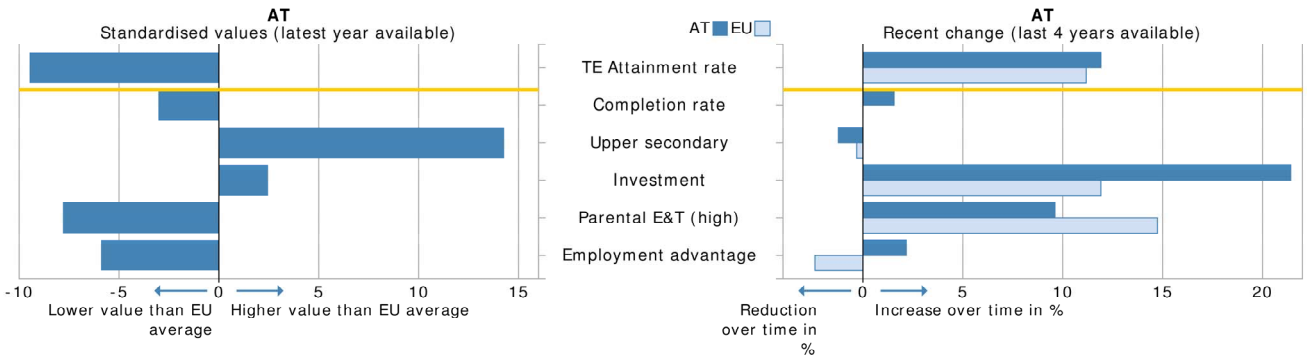
Austria is implementing a reform on university funding in order to increase tertiary attainment and to reduce university drop outs leading to targeted investments in university education combining structural and capacity-based funding.[25] It is envisaged to linking university funding to the capacity and the number of students attending university. Funding is scheduled to start gradually from 2016 onwards targeting 2019/2020 for full implementation. After a constitutional court ruling in 2011 challenged the rules for tuition fees there were reintroduced targeting foreign students and those that overrun standard study time by two semesters.

Figure 4. Tertiary education attainment: sub-groups



Source: JRC-CRELL. *Note:* TE = tertiary education. See Annex 2 for further information.

Figure 5. Tertiary education attainment: sub-indicators



Source: JRC-CRELL. *Note:* see Annex 2 for an explanation of the sub-indicators.

23 In Austria, 65% of students in general tertiary education and 73% in vocationally oriented tertiary study, complete their studies. The former is below the EU 21 average (69%) and the latter is above (59%). The relatively low completion rate may indicate inefficiency of the education system, the ability of students to find employment during their studies, or the need of student to change the degree programme. Source: OECD Education at a glance 2013.

24 In particular students from Germany that don't find access to certain study disciplines due to the numerus clausus opted to inscribe themselves in Austrian faculties, like medicine.

25 Compare, Austria's 2012-2016 stability package (Second Stability Act 2012, Federal Law Gazette I 32/2012) and as key control instrument include the University Structural Funds Ordinance (Hochschulraum-Strukturmittelverordnung).

6. Facilitating the transition from education to work and reshaping vocational training

The employment rate of graduates (age 20-34 from upper secondary and tertiary level) is high (91.2% in 2012 compared to the EU average of 75.7%). It actually increased by 2.6 percentage points since 2009.[26] In particular the Austrian dual VET system facilitates integration into the labour market due to its intensive company based component.

However the Cedefop skills forecast points to future challenges, as the number of jobs that require tertiary attainment is forecast to increase by 32% until 2020 and the number of jobs that require medium and low qualifications to decrease by -0.7% and -9.3%, respectively.[27] Efforts are under way to increase tertiary attainment, to reinforce counselling[28] both at pre-university and at university level to enable students to make informed choices and to facilitate the transition school to work. Starting in January 2013, a youth coaching programme is being implemented in stages throughout all of Austria's federal provinces providing advising and support for youths from the 9th year of school onward. It is designed to help them find an educational or vocational path which suits their personal needs.

Each young person who wants to take up an apprenticeship is entitled to a training slot as promised by the Training Guarantee, which was introduced in 2008 under the Youth Employment Package (Jugend-beschäftigungspaket) - youth guarantee.[29]

In addition to improving higher education, improvements in initial educational outcomes and a continued focus on vocational training are essential with a view of ensuring the provision of skilled labour. There is still scope to facilitate transfer in the education system between different types of education since the Austrian education system starts to segregate at the age of 10. Even so the education system segregates early it remains conceptually fully open.

The Austrian VET system is performing well but there is still room for improvement with regards to school drop outs, in particular for those coming from a disadvantaged social or migrant background. The VET Quality Initiative[30] aims to implement systematic quality management in vocational schools. This quality management system not only comprises the level of individual schools, but also includes all control levels (including management of the education system and school supervision).

7. Upgrading skills through lifelong learning

Adults (aged 16-65) in Austria score far above the EU average in the numeracy proficiency tests of the Survey of Adult Skills (PIAAC[31]). The same holds true for young people (aged 16-24). Austrian adults perform slightly above the EU average in the literacy tests.

The gap in literacy proficiency between the foreign- and native-born is close to the EU average. The share of people with low literacy or numeracy skills (at most level 1) is significantly below the EU average. However, low-skilled people are 6 times less likely to participate in job-related learning compared to high-skilled people[32].

Adult participation in lifelong learning (LLL) in 2012 was at 14.1% and hence clearly above the EU average of 9%. It has overall increased by 1 percentage point since 2006, but not with a straight pattern.[33]

In Austria, a very high share of employees has in principle access to continuing vocational training, since 87% of enterprises in Austria report to provide training. This is far above the EU average of 66% and the time of training spent per participant amounts to 30 hours, which again is more than the EU average (25%). However, only 31% of the workforce benefit from training, that is below the EU average of 48%.[34]

A particular challenge is to increase the participation of the foreign- born since they are participating significantly less compared to natives and the EU average, and because Austria has one of the largest shares of working-age immigrants in the OECD.

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26 Source: CRELL calculations based on Eurostats LFS data.

27 Cedefop, 2012 forecast

28 E.g. Studienchecker.

29 If upon completion of compulsory education young apprenticeship-seekers cannot be placed in a formal apprenticeship programme, they will be offered ('guaranteed') the opportunity to enter a full-fledged apprenticeship programme in a supra-company training entity. The public employment service's support to would-be apprentices does not end with their entry into supra-company training but will continue throughout training with the aim of eventually placing them in a company-based apprenticeship for the remainder of their training period, as this promises better integration into the labour market. If this fails, apprentices may also receive all of their training under the supra-company scheme and take the officially recognised final apprenticeship examination there.

30 QualitätsInitiative BerufsBildung, or QIBB.

31 Volume I of the Education and Training Monitor (chapter 6) provides an overview of the results of the survey. Skills levels are presented either in terms of average score points or proportion of adults at a given proficiency level in literacy or numeracy (level 1 to 5) or problem solving in technology-rich (ICT) environments (level 1 to 3 or no ICT experience).

32 At EU level, low skilled adults are 5 times less likely to participate in job-related learning than high skilled adults.

33 Eurostat (LFS): 2006 (13.1%), 2007 (12.8%), 2008 (13.2%), 2009 (13.8%), 2010 (13.7%), 2011 (13.4%)

34 Source: Eurostat news release 89/2013

Only 11.7% foreign-born participated in 2012 in LLL compared to 14.7% native-born. This means a distance of 3 percentage points whereas on EU average more foreign–born than native-born participate in lifelong learning.[35] The distance for female participation is less distinct in 2012 compared to the EU level.[36]

A comprehensive Lifelong Learning Strategy 2020 covering all levels of education and training was presented in July 2012. So far, a dedicated budget and a comprehensive evaluation mechanism are missing.

[35] Eurostat 2012: AT native-born 14.7%, foreign-born 11.7%, EU native-born 8.9%, foreign born 10.7%

[36] Eurostat 2012: AT female 15.2%, male 13%, EU female 9.7%, male 8.3%