European Commission

Education and Training Monitor 2013

Poland

Education and Training

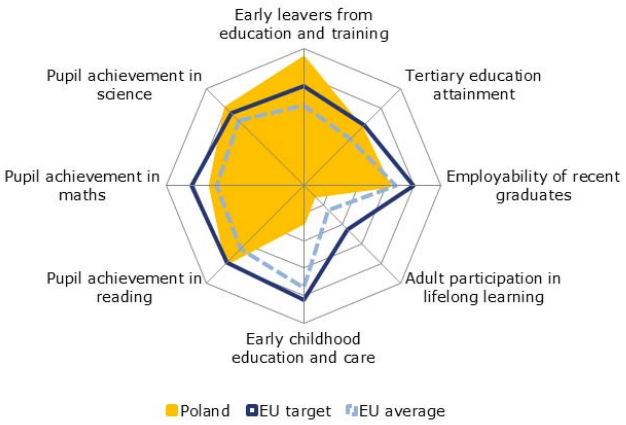
1. Key indicators and benchmarks

Europe 2020 headline targets			Poland 2009	Poland 2012	EU average 2009	EU average 2012	Europe 2020 target / Benchmark
1. Early leavers from education and training (age 18-24)			5.3%	5.7%	14.2% EU28	12.7% EU28	**EU target: 10%** National target: 4.5%
2. Tertiary educational attainment (age 30-34)			32.8%	39.1%	32.1% EU28	35.7% EU28	**EU target: 40%** National target: 45%
ET 2020 Benchmarks							
3. Early childhood education and care (4 years old - year before start of compulsory primary)			70.9%	78.4% 11	91.7%	93.2% 11	**95%**
4. Basic skills Low achievers (15 year-olds; Level 1 or lower in PISA study)	Reading		15.0%	:	19.6%	:	**15%**
	Mathematics		20.5%	:	22.2%	:	**15%**
	Science		13.1%	:	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	0.5%	0.7% 11	0.6%	0.7% 11	
	Higher Education	**b.** Erasmus inbound students as % of student population in host country		0.4% 11		1.1% 11	
		c. Inbound degree mobile students as % of student population in the host country		1.0% 11		7.0% 11	
6. Employment rate of graduates (age 20-34) having left education 1-3 years before reference year			78.4%	73.3%	78.3%	75.7%	**82%**
7. Adult participation in lifelong learning (age 25-64)			4.7%	4.5%	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]		:	25.0% 11	:	43.5% 11	
	b. ISCED 2 students learning two or more foreign languages		48.7%	79.0% 11	58.6%	60.8% 10	
Other ET 2020 Indicators							
9. Investment in education and training	**a.** General government expenditure on education (% of GDP)		5.6%	5.5% 11	5.5%	5.3% 11	
	b. Annual expenditure on public and private educational institutions per pupil/student in € PPS	ISCED 1-2	€ 3,558 08	€ 4,279 10	€ 5,732 08	€ 6,021 10	
		ISCED 3-4	€ 3,223 08	€ 3,735 10	€ 6,964 08	€ 7,123 10	
		ISCED 5-6	€ 4,630 08	€ 5,951 10	€ 9,309 08	€ 9,168 10	
10. Digital competences	**a.** Pupils in grade 4 (ISCED 1) using computers at school		:	56.9% 11	60.7% 07	64.7% 11	
	b. Individuals aged 16-74 with high computer skills[2]		14.0%	18.0%	25.0%	26.0%	
11. Entrepreneurial competences	Individuals aged 18-64 who believe to have the required skills and knowledge to start a business		:	54.0%	42.3% a	42.0% a	
12. Vocational education and training	Share of vocational students at ISCED 3		47.2%	48.3% 11	49.6%	50.3% 11	
13. Skills for future labour markets Projected change in employment 2010-2020 in %	High qualification		:	27.0%	:	19.1% EU28	
	Medium qualification		:	-11.2%	:	4.6% EU28	
	Low qualification		:	-1.0%	:	-20.2% EU28	
14. Low-skilled adults	Literacy		:	18.8%	:	19.9% EU17	
	Numeracy		:	23.5%	:	23.6% EU17	
	Problem solving in technology rich environments[3]		:	38.0%	:	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

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

One of the major challenges for Poland remains skills mismatch, which contributes to the currently high youth unemployment.[1] More young people must be attracted into vocational education and training (VET) by raising the quality and attractiveness of initial VET and by stimulating quality work-based learning and apprenticeships. There is also a challenge regarding the quality of teaching in certain Higher Education Institutions, teaching the skills needed on the labour market and cooperation with employers. Participation of adults in lifelong learning has decreased in recent years and remains very low in EU comparison. At the same time low-skilled workers constitute the largest share of the unemployed. Poland also scores below the EU average regarding pre-school education.

Therefore the 2013 European Semester country-specific recommendation (CSR) on education focused on the following topics: increasing the availability of apprenticeships and work-based learning, strengthening cooperation between schools and employers, improving the quality of teaching and adopting the proposed life-long learning strategy, investing in affordable quality childcare and pre-school education, ensuring stable financing and qualified staff.

3. Investing in skills and qualifications

Investing in education and training in a context of economic crisis

General government expenditure on education as a share of GDP has remained stable since 2000 and is close to the EU average (5.5% vs. 5.3% EU average in 2011). The expenditure on education was not significantly reduced due to financial crisis and there was 13% growth between 2001 and 2008. Teachers' salaries increased in 2012 following the reform of the salary structure. Nevertheless, the economic crisis contributed to the merger and closure of some education institutions e.g. primary schools in 2010-2012 as well as reductions in the employment of teachers[2], which the Polish government argues to be also due to the low birth rate Poland also reduced central and local expenditure on construction, maintenance and renovation of educational buildings. The spending on ICT equipment in schools was also reduced.

Regarding investment in higher education, Poland introduced several competition based financing schemes financed under the EU Structural Funds; and example the best higher education institutions will receive additional funding for quality enhancing activities from the national budget. In the period 2012-2015 there will be a 30% increase in the minimum salary for the employees of public higher education institutions (HEIs).

Skills

In terms of basic skills, 15-year olds' performance on 2009 PISA tests continues to outperform the EU average in maths (20.5%) and reading (15%), while improving in particular in science (13.1% in 2009 compared to 17.0% in 2006)[3]. However, there is scope for improving performance on non-standard calculations and on analysing and using different types of written texts. Problem solving, critical thinking and teamwork, could be developed already at this very early stage of education. As more boys than girls choose engineering and technical studies there is a challenge to change stereotypes regarding gender based career paths in primary and secondary school books and to provide adequate career guidance.

[1] Employment rates of graduates (ISCED 5-6) aged 20-34 who have graduated no more than three years ago was 82,6% in 2011, down from 87% in 2008 and now just below the EU average for higher education graduates.
[2] Source: Eurydice report : 'Funding of Education in Europe. The impact of the economic crisis', 2013
[3] Source: OECD (PISA 2006 & PISA 2009)

The results are a bit different when it comes to TIMSS and PIRLS tests; Poland scores above the average of the countries who participated in the tests in reading as in PISA, scores around average in science and performs significantly worse in mathematics[4].

In order to attract more young people to choose technical studies and overcome the current negative trend in mathematics education, organisational and curricular changes have been introduced, e.g. in 2010 Poland introduced a compulsory mathematics exam in the matura (exit national examination for upper secondary education).

Teacher training/continuous training to introduce modern teaching methods and new class organisation stimulating teamwork, solving complex problems without ready-to use patterns, creativity to address new ways of work and cooperation and the needs of employers remain a challenge. One of the measures to improve the quality of teaching was the recent introduction of competence frameworks as professional standards for teachers[5].

ICT skills of the population are low in comparison with the EU average. In most schools ICT infrastructure levels are significantly below the EU average. Close to 40% of primary students attend schools with low ICT equipment levels and no internet facilities. At EU level the average is 15%. At secondary level there are still close to 30% of Polish students in such schools comparing to an EU average of around 6%.[6] The issue of ICT skills is currently being addressed by the "Digital School" programme financed under the EU Structural Funds and launched in 2012. It focuses on the computerisation of Polish schools and raising ICT competences. The programme includes actions on ICT infrastructures in schools, teacher training and the creation of open digital textbooks. In 2012, 3,500 Polish primary schools (27% of all potential applicant schools) applied for inclusion in the project. To promote, disseminate and implement a distance learning system in educational institutions, Poland also started to implement the "Distance Learning Project" (2009-14) with financial support from the EU Structural Funds, whose beneficiaries are employees, teaching staff and educational institutions.

As regards entrepreneurship, the share of the population believing to have the required skills and knowledge to start a business is higher (54% in 2012) than the EU average 50%[7]. The average number of foreign languages per pupil at ISCED 2 was in line with the EU average (1.5 in 2011)[8].
In order to help adults validate their skills quicker, the proposal of the amendment of law on higher education stipulates that adults over the age of 25 will be able to get an academic degree and get some subjects passed without participating in the regular lectures.

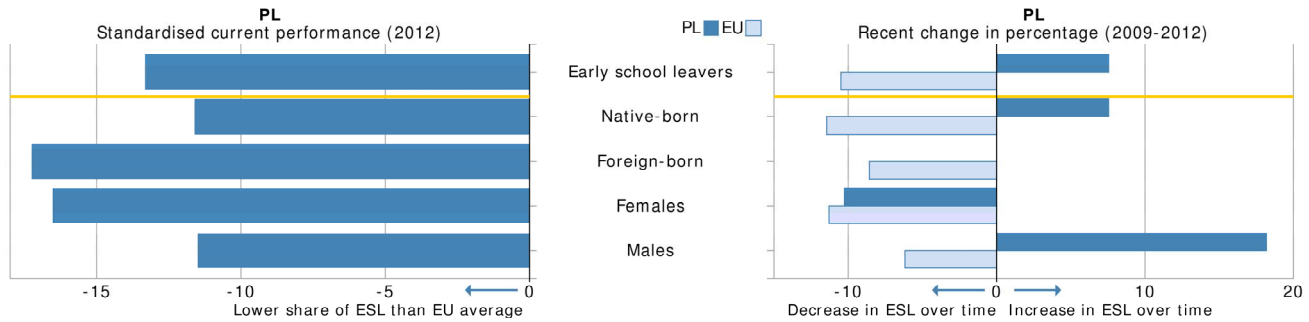
The employment pattern in Poland up to 2020 is forecast to be fairly different from the EU average, with a stronger decrease in medium qualification jobs (-11.2%) than in low qualification ones (-1.0%) and high demand for high qualifications (27%)[9], whereas in EU there will be a decrease in the demand for low qualification jobs (-20.2%) and an increase in the demand for medium (4.7%) and high (19.2%) qualification jobs.

Poland has a national qualification framework in force and presented their national referencing report to the EQF Advisory Group.

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

Concerning the Europe 2020 targets, Poland is one of the best performers in the EU regarding early school leaving, with a rate of 5.7% vs. the EU average of 12.7% in 2012. However the ESL has been going slowly up in the recent years. The national target for 2020 is 4.5%. More boys (7.8%) than girls (3.5%) leave school early.[10]

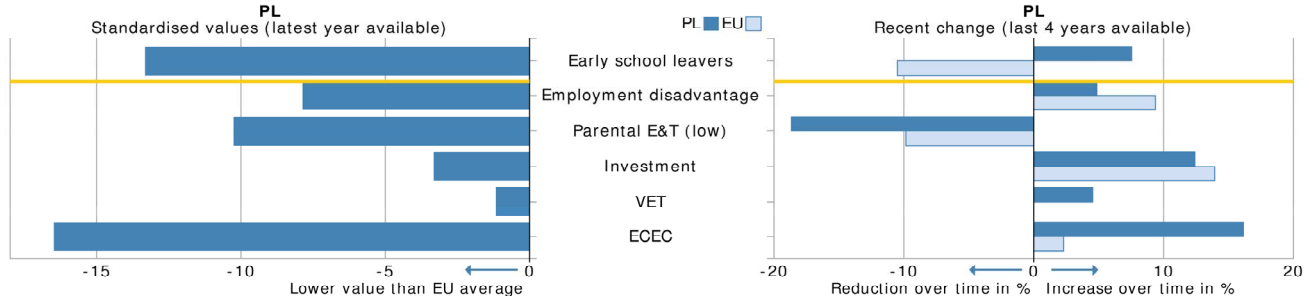
Figure 2. Early leavers from education and training: sub-groups



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

4 Source: TIMMS, PIRLS 2011
5 Source: Eurydice report:'Key data on Teachers and School Leaders in Europe', 2013
6 European Schoolnet & University of Liege (2013): Survey of Schools: ICT in Education, Benchmarking access, use and attitudes to technology in Europe's schools. EUN, Brussels.
7 Source: Global Entrepreneurship Monitor, http://www.gemconsortium.org/key-indicators
8 Source: Eurostat
9 Source: Cedefop, 2012 Forecast
10 Source: Eurostat (EFS)

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



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

While the early school leaving (ESL) rate remained very low in recent years, the share of people aged 18-24 not in employment, education or training in 2011 was 15.5%, compared to 12.3% in 2008.

Teacher training/continuous training supporting the introduction of modern teaching methods stimulating teamwork, solving problems remain a challenge. 52% of teachers worked in schools where the school principal reported that the instruction was hindered to some extent by a shortage or an inadequacy of instructional material.[11] More than 50% of teachers are below 40 years of age vs. TALIS average of 43%. 94% of teachers completed a Masters' degree. Poland is among the countries where contractual employment of teachers for less than one year is more common.

Participation in early childhood education is one of the lowest among the EU Member States (78.4% against the EU 2020 target 95%), despite a steady increase since 2000. Government efforts concentrated on the implementation of the 'Toddler programme'. As a result, the number of nurseries almost doubled over the last two years, but the total number still remains extremely low and does not satisfy needs (36000 places compared to 400000 children born annually in Poland). Furthermore, most investment (more than 90% of the total) is concentrated in metropolitan areas and selected municipalities. In 2013, expenditure on childcare is expected to double, reaching EUR 25 million. Concerning pre-school education, the government foresees a significant increase in the spending for 2014. According to a new regulation (adopted in July 2013) starting from the September 2015, every four – year - old will have a right to participate in pre-school education. And from September 2017 every three-year-old will have ensured place in pre-school education. Since September 2011 pre-school education is obligatory for all five-year- olds.

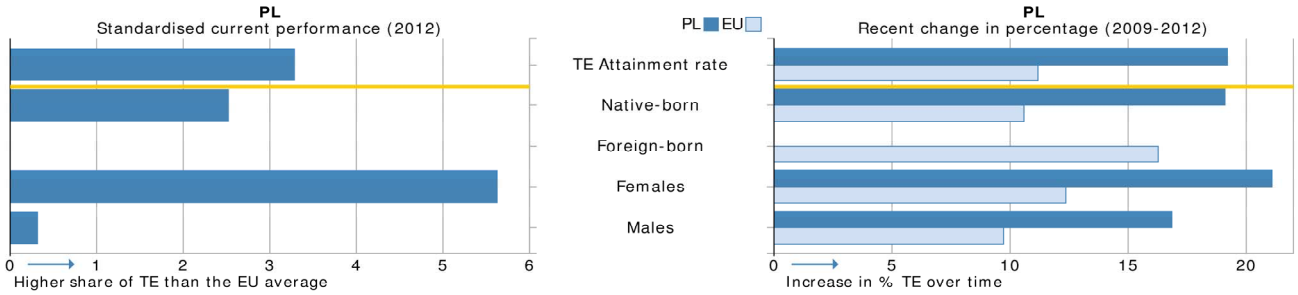
5. Encouraging participation in tertiary education and modernising higher education

As regards the Europe 2020 target on tertiary education, the Polish tertiary attainment rate strongly increased over the last decade and was at 39.1 % in 2012 (compared to an EU average of 35.7%). Poland has the ambition to achieve 45% rate by 2020. More women (46.5%) than men (31.9%) have tertiary education[12].

Compared to the EU average, Poland shows a low share of graduates in science, mathematics and technology (15.8%) and in health and welfare (8.9%) compared to a high rate in law, business and social studies (42.8% in 2011)[13]. The European Social Fund (ESF) and the European Regional Development Fund (ERDF) are used to raise student numbers in mathematics, science and technology.

Even though tertiary level education still provides an employment advantage (see sub-indicators below), the unemployment rate among higher education graduates is high. Employment rates of graduates (ISCED 5-6) aged 20-34 who have graduated no more than three years ago was 82.1% in 2012, down from 87% in 2008 and now just above the EU average[14].

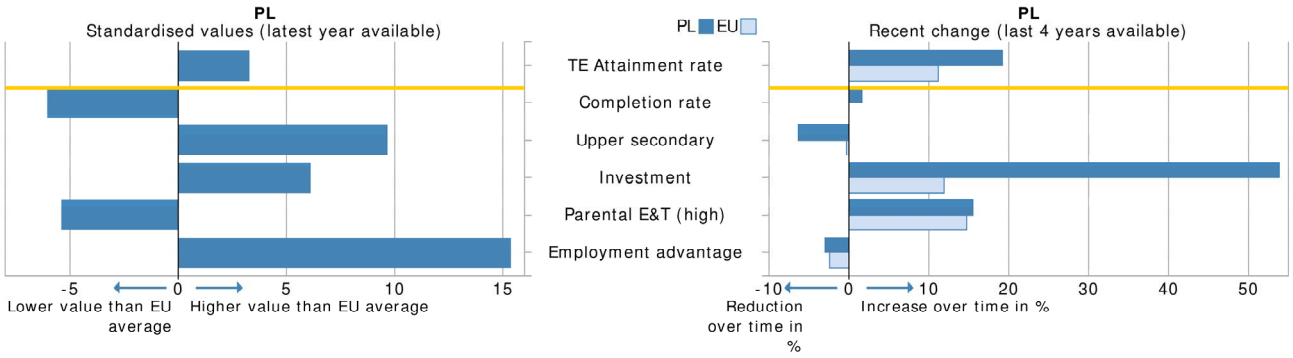
Figure 4. Tertiary education attainment: sub-groups



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

11 Source: 'Creating Effective Teaching and Learning Environments. First results from TALIS', OECD 2009
12 Source: Eurostat (LFS)
13 Source: Eurostat (UOE)
14 Source: Eurostat

Figure 5. Tertiary education attainment: sub-indicators



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

There is also a challenge regarding the quality of teaching in Higher Education Institutions, especially private ones, to equip graduates with the skills needed at the labour market such as problem solving, critical thinking, teamwork, etc.

The reform of the education and science system introduced in 2010-2011 was a first step in strengthening university-business links and making the courses more flexible and based on learning outcomes. Further legislative amendments presented in 2012 differentiate between academic and vocational higher education institutions and introduced dual studies linking academic studies with practical training in companies. A list of faculties that received a negative opinion from accreditors will be published so that potential students are better informed before making their choice. More cooperation between the world of work and education will be encouraged. Academic Career Offices (Akademickie Biura Karier) will actively join the programme "Youth on the labour market".

Poland focuses also on improving the excellence of research and innovation by introducing a system of competitions for funding the best research centres and research topics and best study programmes. Grants are also given to the best PhD students and most talented students.

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

Due to the crisis, transition from education into work has become problematic. Youth unemployment of 15-24 year olds is rising and is now above the EU average (26.5% in 2012 vs. 17.2% in 2008)[15] mainly due to insufficient match between education and labour market needs. The employment rate of graduates (20-34 years old, upper secondary and tertiary) has decreased by 6 percentage points since 2006 and remains slightly below the EU average (73.3% vs. EU average 75.7% in 2012)[16]. The challenge is to attract more young people into vocational education and training (VET) by raising the quality and attractiveness of Initial VET and stimulating quality work-based learning opportunities and apprenticeships.

In 2011, 48.3% of all students in upper secondary education were enrolled in vocational upper secondary education (vs. 50.3% EU average and with an increase by 1.1 percentage points since 2009).[17] The system is mostly school-based.

To improve the quality of vocational training, a VET reform has been implemented as from the 2012/2013 school year. Schools can now create curricula which are based on learning outcomes, and qualifications can be obtained on special courses which are certified separately during external exams, already in the course of the studies. Also soft skills such as communication, team work, problem solving are taken into account in the programmes. VET schools are encouraged to involve companies in the education process, by creating curricula, participating in the exam boards and providing practical training opportunities. Different projects financed through the ESF produce useful tools for modernising VET, e.g. model for cooperation of vocational schools/ institutions with employers.

There is still a challenge to stimulate cooperation between different actors: companies must be more involved in curriculum creation and offer quality work-based learning opportunities (apprenticeships, on-the job training periods). The provision of high quality career guidance in VET to pupils and their parents remains a challenge in all regions.

15 Source: Eurostat
16 Source: CRELL calculations based on Eurostat LFS data
17 Source: CEDEFOP, 2010

To increase the attractiveness of vocational schools among lower secondary school Poland has decided to undertake a programme called "Vocational School – a School of a Positive Choice"(2010-12) which included a set of promotion and awareness raising activities, e.g. on Polish TV.

To promote cooperation between enterprises, universities and vocational schools, Poland started to implement the "Business for education" project to strengthen cooperation between education and companies and increase knowledge, skills and competences of students.

7. Upgrading skills through lifelong learning

Adults (aged 16-65) in Poland score below the EU average in all the three domains tested by the Survey of Adult Skills (PIAAC[18]): literacy, numeracy and problem solving in technology rich (ICT) environments. About 20% of adults have no computer experience: this is significantly worse than the EU average (14%); however young people (aged 16-24) perform closer to the EU average. They also score better than the overall population in literacy (by 14 points, i.e. equivalent to skills usually acquired with 2 years of education).

The performance of young people (aged 16-29) with upper secondary education is only slightly better than that of people with at most lower secondary education. The survey also shows that upper secondary education graduates (both from general education and VET) aged 16-29 perform close to the EU average in literacy and slightly below in numeracy.

Poland has one of the largest differences on the adult literacy scale related to socio-economic background (education level of parents) and is one of the countries with the strongest association between socio-economic background and literacy proficiency among young people.

Poland has also a large proportion of inactive people among the high skilled population (about 24%). Finally, the survey shows that almost 19% of adults have a low skill level (at most level 1) in literacy and 23% in numeracy, close to the EU average. However, low skilled people are 7 times less likely to participate in job-related learning compared to high skilled people[19].

Participation of adults in lifelong learning has slightly decreased in recent years and remains very low in comparison to the EU average (4.5% vs. 9.0% in 2012). At the same time low-skilled workers, whose participation in lifelong learning is even lower, constitute the largest share of the unemployed.

Only 22% of all enterprises (compared to 66% in EU 27) provided continuing vocational education and training in 2010 with 22 hours of training per participant[20].

55 % of employees, employed in companies providing continuing education and training (CVT) participated in CVT courses against 48% of EU average[21]. 29.1% employees participated in non-formal and informal education in 2010 against 47.4% EU average[22].

The strategy document "Lifelong Learning Perspective (2012-20)" and its accompanying Action Plan was drafted and contains a comprehensive approach to lifelong learning, including the provision of skills in the future. This initiative needs still to be adopted in the course of 2013 and could play a key role in fostering human capital development. Following the recent VET reform, there is more flexibility in the continuing education system – adults will have the possibility to acquire or complete their vocational qualifications during special courses and take the exams to have their qualifications confirmed without the necessity to attend the vocational education and training school.

[18] 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).

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

[20] Source: Eurostat, CVTS 2010

[21] Source: Eurostat, ibid

[22] Source: Eurostat, AES 2011