European Commission

Education and Training Monitor 2013

Bulgaria

Education and Training

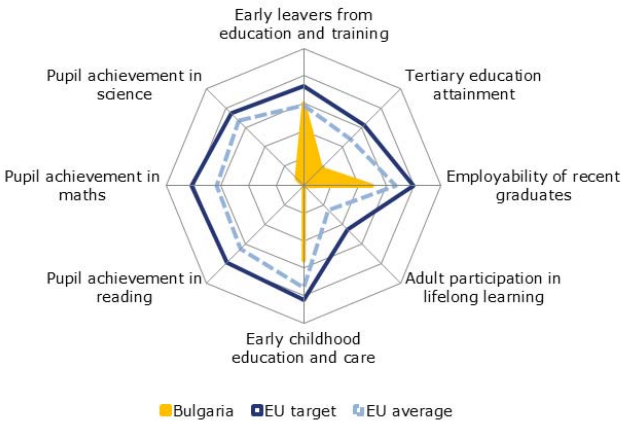
1. Key indicators and benchmarks

Europe 2020 headline targets			Bulgaria 2009	Bulgaria 2012	EU average 2009	EU average 2012	Europe 2020 target / Benchmark
1. Early leavers from education and training (age 18-24)			14.7%	12.5%	14.2% [EU28]	12.7% [EU28]	**EU target: 10%** National target: 11%
2. Tertiary educational attainment (age 30-34)			27.9%	26.9%	32.1% [EU28]	35.7% [EU28]	**EU target: 40%** National target: 36%
ET 2020 Benchmarks							
3. Early childhood education and care (4 years old - year before start of compulsory primary)			78.5%	86.6% [11]	91.7%	93.2% [11]	**95%**
4. Basic skills Low achievers (15 year-olds; Level 1 or lower in PISA study)	Reading		41.0%	:	19.6%	:	**15%**
	Mathematics		47.1%	:	22.2%	:	**15%**
	Science		38.8%	:	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		0.3% [11]		1.1% [11]	
		c. Inbound degree mobile students as % of student population in the host country		3.6% [11]		7.0% [11]	
6. Employment rate of graduates (age 20-34) having left education 1-3 years before reference year			73.6%	67.3%	78.3%	75.7%	**82%**
7. Adult participation in lifelong learning (age 25-64)			1.4%	1.5%	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]		:	35.3% [11]	:	43.5% [11]	
	b. ISCED 2 students learning two or more foreign languages		22.9%	19.4% [11]	58.6%	60.8% [10]	
Other ET 2020 Indicators							
9. Investment in education and training	**a.** General government expenditure on education (% of GDP)		4.3%	3.6% [11]	5.5%	5.3% [11]	
	b. Annual expenditure on public and private educational institutions per pupil/student in € PPS	ISCED 1-2	€ 2,335 [08]	€ 2,190 [10]	€ 5,732 [08]	€ 6,021 [10]	
		ISCED 3-4	€ 2,256 [08]	€ 2,148 [10]	€ 6,964 [08]	€ 7,123 [10]	
		ISCED 5-6	€ 4,829 [08]	€ 3,763 [10]	€ 9,309 [08]	€ 9,168 [10]	
10. Digital competences	**a.** Pupils in grade 4 (ISCED 1) using computers at school		:	:	60.7% [07]	64.7% [11]	
	b. Individuals aged 16-74 with high computer skills[2]		7.0%	12.0%	25.0%	26.0%	
11. Entrepreneurial competences	Individuals aged 18-64 who believe to have the required skills and knowledge to start a business		:	:	42.3% [a]	42.0% [a]	
12. Vocational education and training	Share of vocational students at ISCED 3		51.8%	52.2% [11]	49.6%	50.3% [11]	
13. Skills for future labour markets Projected change in employment 2010-2020 in %	High qualification		:	5.3%	:	19.1% [EU28]	
	Medium qualification		:	-1.9%	:	4.6% [EU28]	
	Low qualification		:	-27.9%	:	-20.2% [EU28]	
14. Low-skilled adults	Literacy		:	:	:	19.9% [EU17]	
	Numeracy		:	:	:	23.6% [EU17]	
	Problem solving in technology rich environments[3]		:	:	:	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

Bulgaria is facing the challenge of improving the overall quality and efficiency of its education system. The final adoption of the School Education Act before the end of 2013 would provide a framework for progress on the necessary reforms, including modernising curricula, amending Act on Vocational Education and Training and implementing improvements to teachers' education and incentives.

In higher education, reforms have made very limited progress. The existence of an important disparity between higher education outcomes and labour market demand worsens structural unemployment and hampers the development of high-value, innovative sectors. The poor performance of higher education is linked to a lack of incentives at institutional level as well as to the standard of individual researchers and teachers.

Bulgaria is addressing some of its challenges however close attention needs to be paid to adopting the reform laws and to enforcing their implementation while carefully monitoring their impacts. Implementation of the reform of higher education, accompanied by effective governance and sufficient investment will be key for promoting growth and competitiveness of the Bulgarian economy.

The country-specific recommendation (CSR) on education and training from the 2013 European Semester thus recommends the adoption of the School Education Act as well as the reform of vocational education and training and higher education, in particular through better aligning outcomes to labour-market needs and strengthening cooperation between education, research and business. Improving access to inclusive education for disadvantaged children, in particular Roma is also being proposed.

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 in Bulgaria is the lowest in the EU and well below the EU average (3.6% vs. 5.3% in 2011) and has been on the decrease from 4.3% in 2009 to 3.4% in 2012. As far as the situation at the different levels of education is concerned, the level of expenditure was the lowest in the EU in 2010 also at the tertiary level, expenditure for primary and secondary levels were significantly lower than the EU average, whereas at pre-primary level it was significantly higher than the EU average.

Skills

According to the OECD PISA tests there has been an improvement from 2006 to 2009 in pupil achievement in reading, maths and science. However Bulgaria still remains with 41% and 47.1% in reading and maths respectively the worst performer in the EU, and with 38.8% in science the second worst performer in the EU.

At 12% in 2012 Bulgaria has the second-lowest share of individuals aged 16-74 with high computer skills which is consistent with the low rate of access to ICT. Bulgaria is below the EU average as regards foreign languages skills.

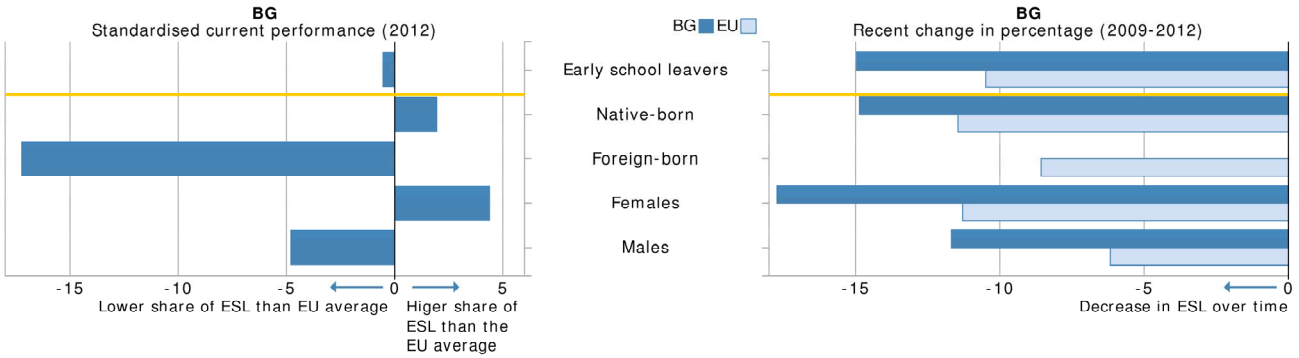
The National Qualifications Framework (NQR) elaborated in line with the European Qualifications Framework for Lifelong Learning and the Qualifications Framework for the European Higher Education Area was adopted in 2012 and presented to the EQF Advisory Group in 2013. The Bulgarian NQF is one single, comprehensive framework,

which includes qualifications from all levels and subsystems of education and training (pre-primary, primary and secondary general education, VET and HE). It will provide a reference point for validating non-formal and informal learning.

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

Bulgaria is slightly outperforming the EU average as regards the early school leaving rate (12.5% vs. 12.7% in 2012). It has shown a steady improvement since 2006 (17.3%) and is making progress towards achieving the national 2020 target of 11%, despite a moderate step back from 2011 (11.8%).

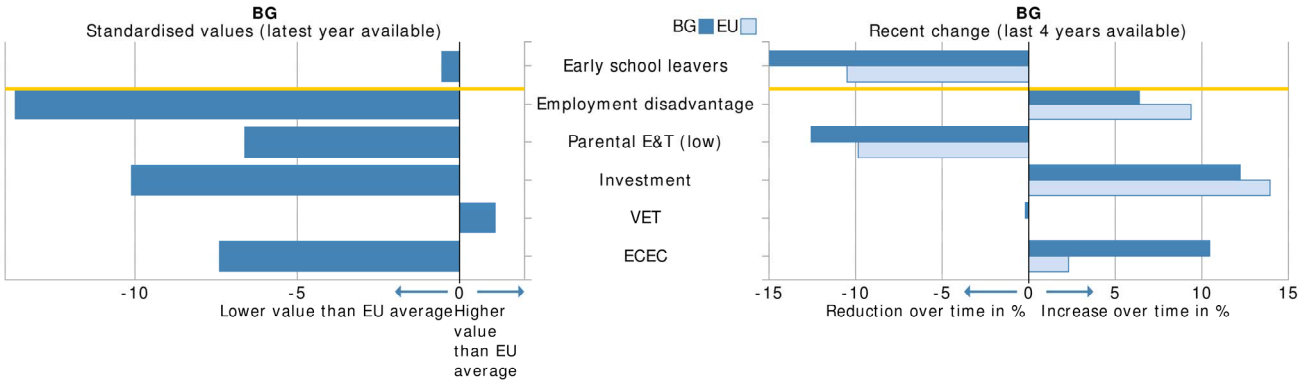
Figure 2. Early leavers from education and training: sub-groups



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

The JAF sub-indicators show that the employment disadvantage for early school leavers is low however it is on the increase. Likewise the level of investment and early childhood education and care are on the increase, for ECEC at a significantly higher rate than the EU average.

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



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

72 State Education Standards and 391 new curricula for compulsory education and specialised study courses have been developed through European Social Fund (ESF) co-funded projects and cover all subjects for general education. Pending adoption of the new School and Pre-School Education Act, which is required for the new curricula to come into force, training of teachers and of assessors for the assessment of school books is on-going.

The improvement of teacher education is being carried out through a National Programme for Qualifications and a complementary training programme co-funded by the ESF. The training is for the qualification of pedagogical experts and covers topics including foreign languages, ICT, special education needs and intercultural learning.

Supporting educational integration and ensuring effective access to disadvantaged groups, in particular Roma students, is a major priority in the area of education. A strategy on early school leaving has been drawn up and is consultation is on-going with a view to adopt the strategy by end 2013.

At present almost half of the Roma students in Bulgaria (48.3%) are enrolled in school facilities situated in urban neighbourhoods with predominantly Roma populations, which creates conditions for the increased educational segregation of Roma students. An ESF co-funded project focusing on pilot schools is being implemented with activities including assessment of needs of children and support of children with disability. The objective is to

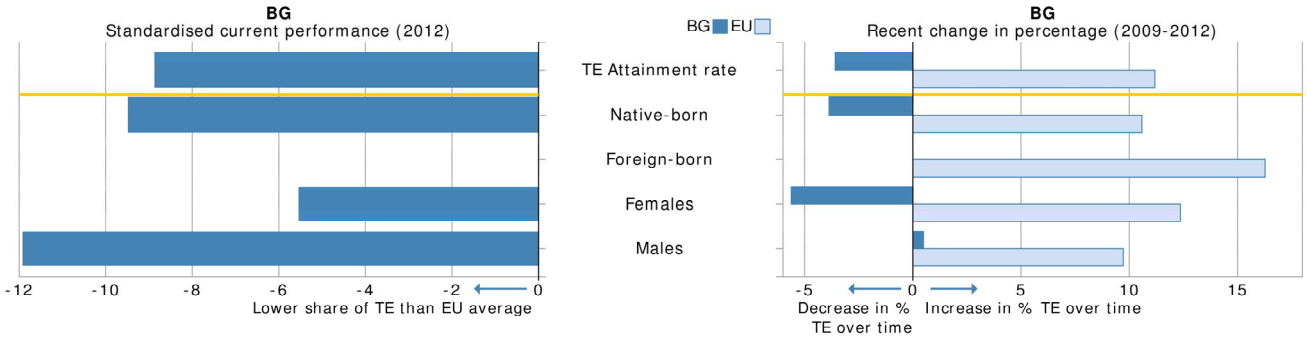
introduce an inclusive approach to education with difficulties identified at pre-school age. Participating schools are assigned speech therapists and psychologists to assist teachers in assessing children's needs.

The necessary measures for optimizing both pre-school and school infrastructure should include repair, renovation and efficient management of technical and material facilities, introduction of energy efficiency measures, and improving accessibility for children with special educational needs, including supportive built environment.

5. Encouraging participation in tertiary education and modernising higher education

Bulgaria's tertiary attainment rate is lagging behind the EU average (26.9% vs. 35.7% in 2012) with minimal progress being registered since 2006 (25.3%) towards the national 2020 target of 36%.

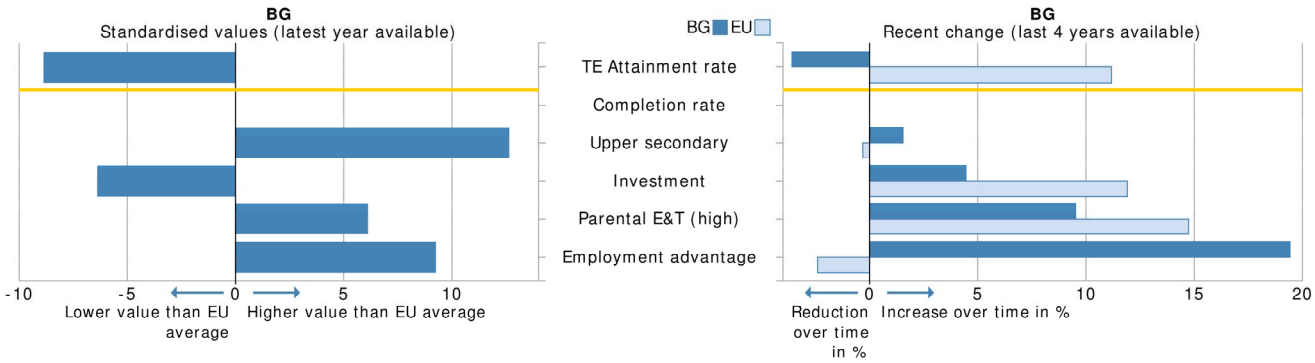
Figure 4. Tertiary education attainment: sub-groups



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

The JAF sub-indicators show that investment is low and is not increasing as much as the EU average. It is also noted that upper secondary prevalence is much more pronounced, even though the employment advantage of tertiary education is large and growing further rapidly.

Figure 5. Tertiary education attainment: sub-indicators



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

Higher education faces persisting challenges in responding better to labour market needs (employment levels of young graduates is at 67.3% in 2012) and raising innovation potential in the economy. The existing financing and structure of the higher education system, including the degree of specialisation, and suboptimal incentives at the institution level, as well as for individual teachers and researchers, contribute to the gap between educational output and demand.

Bulgaria has addressed the 2012 CSR calling for reform of higher education (upper/post-secondary and tertiary) mostly by initiating the process of modernising the curricula for higher and vocational education. Calls for proposals have been issued and 80% of all university students are expected to have modernised curricula by the end of 2014.

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

High unemployment among the low-skilled and young people (28.5% and 28.2% respectively in 2012) partly reflects persistent skill and regional mismatches as well as the low quality and low relevance to labour market needs of the education and training systems. Amid risks of locking the economy on a low-growth path, low employment rates also result in a persistent and significant share of the population becoming vulnerable to poverty and social exclusion. Under the national 'Employment for Youth' initiative, Bulgaria has committed itself

to reduce the youth (15-24 years) unemployment rate to 23% and the share of young NEETs to 19% by the end of 2013.

Draft amendments to the Labour Code on internship contracts for young graduates with secondary or tertiary education are at an advanced stage of adoption. The measures planned in this area are relevant, but more needs to be done to differentiate among the needs of young people with diverse levels of education and socio-economic backgrounds.

Draft amendments to the Vocational Education and Training Act as well as adoption of new strategic documents and tools would introduce to the system the models and principles of validation of non-formal and informal learning; modularisation of learning content and transfer of credits based on learning outcomes; applying quality assurance mechanisms thus increasing accessibility, quality and permeability of the VET sector and ensuring flexible paths to further learning or labour market.

More active cooperation is required with the business and the employers so that the knowledge obtained in the secondary vocational education could be as close to the real working environment as possible. This mismatch in the skills raises concerns with regard to the competitiveness of the economy.

A positive development is that calls for proposals for modernised curricula for vocational training have been issued and it is foreseen that the curricula will be modernised in partnership with employers. At present the ratio between theory and practice in the curricula of most of the professions still remains in favour of the theory; the employers do not participate in the development of the training materials and are not active enough in the process of final evaluation of the skills attained by the graduates from the vocational training under the different professions.

Investigations of skills mismatches are organized by employers and labour administration. The latter was active in the years of crisis and organized a scheme that will provide regular information on the mismatches. The scheme: "Establishment of a system of forecasting labour force demand" (2011 – 2013, 0.500 million Euro granted from the ESF) is aimed to improve forecasting procedures and dissemination of results.

These are first steps towards a more flexible system for vocational training and education with regard to the requirements of the business for swift and direct inclusion of the graduates in the labour market.

7. Upgrading skills through lifelong learning

Adult participation in lifelong learning (1.5% in 2012) is the second-lowest in the EU. Lifelong learning in Bulgaria is still experiencing impediments, such as limited and not well adapted opportunities to the training needs of the various target groups, lack of support systems and insufficient flexibility between the different learning solutions (e.g. between vocational education and training and higher education). The problems are even more aggravated by the fact that the bigger part of the potential trainees are with a lower socio-economic and educational status.

As only 31% of enterprises report to provide continuing vocational training (CVTS 2011), also training opportunities for employees are limited (EU: 66%). Even if about half of the employees of these enterprises participate in some training, which is around EU average, the average duration of these activities is rather short (22 hours; EU: 38%).

An integrated lifelong learning strategy for 2014-2020 is being elaborated, which would contribute to the educational spectrum entirety, as well as to the coordination of the actions among all interested parties. There has been ongoing work since 2012 on a pilot project of the National System for Validation of Non-formal and Informal Learning, which will encompass the system of vocational education and training.

Measures for improved guidance and counselling services have been undertaken – a National network of 37 offices for information and professional counselling for employers and employees has been set up.