

2 Developing youth skills in Bulgaria

Equipping young people in Bulgaria with skills for work and life is vital for the country's economic prosperity and social cohesion. The skills that young people develop are foundational to their well-being and contribution to society and the economy. This chapter explores three opportunities to develop and improve young people's skills in Bulgaria: 1) ensuring that curriculum reform and assessment practices improve students' skills; 2) developing a highly skilled teaching workforce; and 3) making vocational and higher education more responsive to labour market needs.

The importance of developing youth skills

Education is key to improving Bulgaria's future socio-economic potential. Ensuring young people develop the skills, knowledge, values and attitudes needed to thrive in an interconnected world is important for the country's general well-being. Providing an environment where the acquisition of basic knowledge and skills is accessible to everyone also helps foster a culture of lifelong learning that will help build an adaptable and resilient society.

When leaving school, young people need to feel ready and have the opportunity to continue their studies or find jobs. Achieving higher levels of skills supports individuals not only in their transition to the labour market – by finding well-paid jobs aligned with their interests and skills – but also increases their likelihood of participating in the democratic process and community life, for example, as compared with their less-skilled peers (OECD, 2019^[1]). Especially in the context of globalisation and digitalisation, and the related growth of knowledge-based economies, countries want to make sure their populations acquire the higher-order skills that drive productivity, innovation and economic growth, which can lead to higher living standards (OECD, 2016^[2]).

In Bulgaria, as much as 32% of 15-year-old students are considered low performers (scoring below Level 2 in the Programme for International Student Assessment [PISA] in all three subjects [reading, mathematics and science]), compared with an OECD average of just 13% (OECD, 2019^[3]). There are many factors which affect learning outcomes, but according to research, the most relevant ones are related to curriculum development, teaching practices, the quality of teacher training and working conditions (Darling-Hammond, 2000^[4]; OECD, 2018^[5]). Students' particularly low average performance in acquiring basic knowledge and competencies is a challenge for Bulgaria.

Employers face challenges in finding the skilled individuals they need, including in areas such as science, technology, engineering and mathematics (STEM) (Employment Agency, 2022^[6]). The importance of young people developing a broad range of relevant skills is growing. Similar to what is happening in other parts of Europe, Bulgaria has a shrinking labour force due to population ageing and high levels of emigration. Such a scenario puts extra pressure on the country's education system to ensure its youth develop the skills needed to ensure their smooth transition into employment and, at the same time, respond effectively to the skills needs of the labour market.

The coronavirus (COVID-19) pandemic and the disruption it caused in education systems across the world have highlighted the main educational challenges facing the country, deepening learning losses and increasing inequalities (Yankova, 2020^[7]). Helping students recover from the impact of the pandemic and creating a more resilient education system is now a priority for Bulgaria as it is for other OECD countries. Achieving this ambition will require improving the understanding of the full impact of school closures on young people, especially the most vulnerable ones, and making sure that all students have the support they need to complete their studies. It also involves bolstering the education system's capacity to face future disruptions.

In order to address both short-term pressures and long-term ambitions, Bulgaria's education system must respond and adapt so as to support its students in developing the knowledge and skills they need to lead successful lives. To do so requires that Bulgaria improve its curriculum, prepare the teacher workforce and ensure that young graduates acquire those competencies in highest demand and are responsive to labour market needs and students' interests.

Overview and performance

Overview of Bulgaria's governance arrangements for developing youth skills

Relevant legislation, strategies and policies for developing youth skills

Various legislation, strategies and policies underpin and guide the development of young people's skills in Bulgaria (Table 2.1). Bulgaria's Pre-school and School Education Act (PSEA) (2016, amended in 2020) is the main legal basis for developing youth skills. It regulates the structure, functions, organisation, management and financing of the pre-school and school education system. The act made schooling compulsory from age four; required all schools to implement measures to reduce early school leaving and integrate students from vulnerable demographics; and introduced a modern curriculum. In addition, the goal of improving youth skills is present in several national strategies, including broader development strategies and strategies focused specifically on education and training.

Table 2.1. Bulgaria's main legislation, strategies and policies for developing youth skills

Major strategy/policy	Description
Pre-school and School Education Act (PSEA) (2016)	The PSEA regulates the social relationships concerning safeguarding the right to pre-school and school education, as well as the structure, functions, organisation, management and financing of the pre-school and school education system.
National Development Programme (NDP) Bulgaria 2030	The NDP Bulgaria 2030 is the government's ten-year national development strategy. The Council of Ministers adopted this plan in 2020. Priority 1 (out of 13) of the NDP is concerned with education and skills. The main objective of the priority is to increase the quality of human capital by forming highly educated, innovative and active individuals. Objectives are aimed, among others, at increasing the share of high school graduates and promoting the participation of young people in formal and non-formal education and training. The NDP also highlights that to address the weaknesses in the quality of the educational service provided, education sector reforms will continue with a stronger focus on acquiring key competencies for lifelong learning (including digital, language and social) from an early age. It highlights the need for students to acquire functional literacy, relevant (inter)disciplinary and applied knowledge and skills, as well as the development of creative and critical thinking, responsibility and problem-solving skills, and civic engagement. The NDP, among others, also envisages: <ul style="list-style-type: none"> - further expansion of the geographical scope of the dual training system, which should be tailored to the needs of businesses at the regional and local levels - curriculum reform focused on the competency-based approach - measures to build on teacher capacity for the application of the competency-based approach - improved coherence between the programmes in higher education and the needs of businesses and society.
Strategic Framework for the Development of Education, Training and Learning in the Republic of Bulgaria (2021-2030)	This strategic framework sets a vision of education, training and learning in Bulgaria, according to which in 2030, all Bulgarian young people will finish their school education as functionally literate, innovative, socially responsible and active citizens who are motivated to build on their competencies through lifelong learning. To achieve this, the leading strategic document sets among its policy priorities the following: <ul style="list-style-type: none"> - Priority 2. Competencies and talents, Objective 2.1: Training focused on the formation and development of key competencies and skills for living and working in the 21st century - Priority 3. Motivated and creative teachers, Objective 3.2: Development of teachers' competencies in accordance with the changing role of the teacher - Priority 7. Fulfilment in the professions of the present and the future, Objective 7.1: Vocational education and training (VET) that is responsive to labour market dynamics; Objective 7.2: Development of skills for the professions of the present and the future; Objective 7.3: Development of VET based on the transition to a digital and green economy.
Strategy for the Development of Vocational Education and Training (VET) in the Republic of Bulgaria (2015-2020)	The VET Strategy recognises VET as key for the country's socio-economic development. It highlights that the VET system needs to be permanently improved in response to rapid economic and societal changes.

Major strategy/policy	Description
Strategy for the Development of Higher Education in the Republic of Bulgaria for the Period 2021-2030	This strategy consolidates policies with a strong focus on the competency approach and the importance of students acquiring skills relevant to the labour market. Among the main priority areas, the strategy identifies: <ul style="list-style-type: none"> - improving the quality of higher education through updating the content, methods and forms of education - modernising and digitalising education approaches, methods and practices - ensuring access to higher education and high-quality lifelong learning that supports personal development and professional fulfilment - developing basic and applied research, innovation and entrepreneurial skills of students attracting quality, motivated, young teachers for the renewal and development of academic staff.
Programme Education (PE) (2021-2027)	The PE is one of the main tools for implementing Priority 1 of the NDP, the Strategic Framework of Education (2021-2030) and the Strategy for the Development of Higher Education (2021-2030). The programme's main objectives include, among others: <ul style="list-style-type: none"> - improving the quality of education by modernising learning content, implementing the competency model and digital transformation in education - improving the attractiveness, accessibility, quality and relevance of VET to labour market needs and its link with specific territorial characteristics - modernising higher education and linking it to labour market needs - creating a skilled workforce fit for the digital and green economy (e.g. qualification of teachers in higher education institutions) - horizontal support for qualification and capacity building of pedagogical specialists, non-pedagogical staff and educational mediators.

Note: This table is not comprehensive but provides an overview of the main legislation, strategies and policies related to improving youth skills in Bulgaria.

Source: Government of Bulgaria (2022^[8]). *Responses to the OECD Questionnaire for the OECD Skills Strategy Bulgaria*; Government of Bulgaria (2020^[9]), *National Development Programme Bulgaria 2030*, www.minfin.bg/upload/46720/National%2BDevelopment%2BProgramme%2BBULGARIA%2B2030.pdf; Council of Ministers (2021^[10]), *Стратегическа рамка за развитие на образованието, обучението и ученето в Република България (2021-2030) (Strategic Framework for the Development of Education, Training and Learning in the Republic of Bulgaria [2021-2030])*, https://mon.bg/upload/25571/Strategicheska-ramka_ObrObuUchene_110321.pdf; National Assembly (2021^[11]), *Стратегия за развитие на висшето образование в Република България за периода 2021-2030 г. (Strategy for the Development of Higher Education in the Republic of Bulgaria for the Period 2021-2030)*, https://mon.bg/upload/24829/rMS_Strategia-VO_120121.pdf.

Roles and responsibilities for developing youth skills

Responsibility for developing the skills of young people in Bulgaria is shared across three levels of government – national, regional and municipal – and has been progressively decentralised in recent years (Table 2.2). Nationally, the Ministry of Education and Science (MES) is responsible for informing and implementing education strategies and legislation established by the National Assembly and the Council of Ministers. Various specialised institutions and agencies provide assistance and support to the ministry. At the subnational level, municipalities provide and fund pre-school, primary, lower and upper secondary general education, as well as teacher training, while 28 regional departments of education (REDs) support municipalities and schools in implementing national education policies. Various stakeholders, such as school heads, teachers and employers, among others, also play important roles in shaping and implementing policies for developing young people's skills.

Table 2.2. Main roles and responsibilities of ministries, agencies and social partners in developing youth skills

Actor	Roles/responsibilities
Ministers/ministries	
Council of Ministers	The Council of Ministers is in charge of setting educational policy and priorities and mobilising and distributing financial resources. The council also approves the national qualification framework; the state requirements for acquiring the professional qualification of "teacher"; and the state education standards for financing institutions. It also sets unified cost standards for funding school education and national programmes for developing education (annually).

Actor	Roles/responsibilities
Ministry of Education and Science (MES)	MES comprises (among other units) 16 specialised directorates. It co-ordinates education policy and is responsible for implementing the strategic priorities and legal acts established by the National Assembly and the Council of Ministers. According to the Law on Pre-school and School Education, MES is responsible for the quality of education and financing part of the education system. Its mandate also includes the development and approval of pre-school and school education curricula and the general content of formal education and training (descriptions of primary, lower secondary, and upper secondary education programmes, general curricula and syllabi). MES also approves the list of professions in vocational education and training (VET) and most state educational standards (except the standards for inclusive education and the standards for financing institutions).
Ministry of Labour and Social Policy (MLSP)	The MLSP develops, co-ordinates and implements the state policy in the field of employment promotion and employment security of unemployed and employed persons and adult training and ensures the protection of the national labour market. The MLSP is also involved in VET provision by, for example, defining, together with MES, the professional fields for vocational education.
Government institutions/agencies	
Centre for Evaluation of Pre-school and School Education (CAPSE)	CAPSE, a specialised agency under MES, organises, prepares and conducts external assessments of student learning and is responsible for managing Bulgaria's participation in international assessments on pre-tertiary education, such as the OECD Programme for International Student Assessment (PISA).
National Agency for Vocational Education and Training (NAVET)	Among its main activities, NAVET is responsible for licensing activities in the VET system and controlling the education quality in training institutions.
National Evaluation and Accreditation Agency (NEAA)	This agency evaluates, accredits and monitors the quality of tertiary education providers, including those offering initial teacher education programmes.
Regional departments of education (REDs)	REDs are territorial administrative structures under the authority of MES. They are responsible for supporting local authorities in implementing national education policies. According to their new mandate from 2017, they are now also expected to provide methodological support to schools and other functions related to monitoring school budgets (shared responsibility with municipal authorities) and planning.
Municipalities	Municipalities are responsible for providing pre-school, primary, lower and upper secondary general education. The provision of upper secondary vocational education is a shared responsibility between the central government and municipalities. Municipalities may establish local policy priorities within the centrally defined education policy and state education standards. They are responsible for allocating funding to implement the curriculum, maintain facilities and infrastructure, and transportation, among others. Municipalities are also responsible for providing teacher training.
Stakeholders	Various associations and unions represent education and training institutions, school heads, teachers, employers, and municipalities in equipping young people with skills for work and life.

Note: This table is not comprehensive but provides an overview of the main actors governing education in Bulgaria.

Source: Government of Bulgaria (2022^[8]). *Responses to the OECD Questionnaire for the OECD Skills Strategy Bulgaria*; OECD (2021^[12]), *Decentralisation and Regionalisation in Bulgaria: Towards Balanced Regional Development*; <https://doi.org/10.1787/b5ab8109-en>; Guthrie et al. (2022^[13]), *OECD Reviews of Evaluation and Assessment in Education: Bulgaria*; <https://doi.org/10.1787/57f2fb43-en>; European Commission (2022^[14]), *Administration and governance at central and/or regional level*, <https://eurdice.eacea.ec.europa.eu/national-education-systems/bulgaria/administration-and-governance-central-and-or-regional-level>.

The structure of Bulgaria's formal system for developing youth skills

Compulsory education in Bulgaria starts in pre-primary education at the age of 4 (since 2020) and lasts until students are 16 years old, at the first stage of upper secondary education (Table 2.3). Education is provided free of charge until the end of upper secondary education, and most students do not change schools until upper secondary education. Students are selected into different secondary programmes after they finish Grade 7, at around 13 years old. At this point, they either follow an academic programme in a general secondary school or “gymnasium”; attend a profiled high school that specialises in areas such as foreign language or mathematics; or choose to enrol in a vocational education and training (VET) programme in a secondary vocational education school. Upon completing upper secondary education, students who sit and pass the state matriculation examination receive a diploma that allows them to apply for general or professional tertiary education (Table 2.3). Students who complete upper secondary education but do not sit or pass the state matriculation examination are still awarded a certificate of completion, with which they can progress into post-secondary VET.

Table 2.3. Provision and enrolments in formal education in Bulgaria, 2021/22

	ISCED levels provided	Main orientation of the programmes provided	Total number of enrolled students
Early childhood education	0	-	214 847
Primary education	1	General	233 369
Lower secondary education	2	General	194 914
Upper secondary education	3	General and vocational	281 425
Post-secondary non-tertiary vocational education	4	Vocational	586
Tertiary education	6,7	General and vocational	220 439
Bachelor	6	General	73 306
Professional bachelor	6	Vocational	219 853

Note: ISCED: International Standard Classification of Education.

Source: National Statistical Institute (2022^[15]), *Education and Lifelong Learning*, www.nsi.bg/en/content/3374/education-and-lifelong-learning.

Bulgaria's performance in youth skills

Participation and completion of education

Ensuring children have access to education early on in life is essential for their long-term development. Bulgaria prioritises participation in early childhood education and care (ECEC). Still, participation in pre-primary, compulsory education has been decreasing since 2014 and is low compared to the European Union (EU) average (Eurostat, 2022^[16]). For example, in 2020, the net enrolment rate of young children aged 4-7 in pre-primary education was 82%, compared to the EU average of 95% (Eurostat, 2022^[16]). Low enrolment rates in early childhood can undermine the learning process of students and endanger skills formation and human capital development in Bulgaria (Hristova, Tosheva and Stoykova, 2020^[17]). Moreover, anecdotal evidence suggests that participation at this level of education is unequal, particularly for minority groups, such as Roma students. Among the barriers to entrance and completion of this education level are financial costs¹ and lack of complementary services, such as limited transportation (Guthrie et al., 2022^[13]). Limited ECEC infrastructure and shortage of places available, especially in urban areas, are also serious challenges for participation at this education level (World Bank, 2020^[18]). Ensuring participation in education for all student groups is key to the country's future development.

Participation and completion in school-aged education are relatively low in Bulgaria and have declined recently. Participation in primary education has decreased in recent years, from 90% in 2016 to 85% in 2020 (UIS, 2022^[19]). When it comes to lower secondary education, participation is also low and decreasing, declining from 93% in 2016 to 83% in 2020 (UIS, 2022^[19]). Bulgaria also has one of the highest shares of early school leavers in Europe – at 12%, compared to an EU average of 10% in 2021 (Eurostat, 2022^[20]). The percentage is expected to rise even further following the COVID-19 pandemic and the transition to online learning (Kovacheva and Hristozova, 2022^[21]). This share is higher for students in rural areas (24%) compared to cities (7%) (2021) (Eurostat, 2021^[22]). In upper secondary education, Bulgaria made progress in increasing enrolment rates from 81% of school-aged youth in 2010 to over 90% in 2017 (UIS, 2022^[19]). However, as in lower education levels, enrolment has fallen in recent years (82% of students enrolled in 2020) (UIS, 2022^[19]), partly reflecting the declining share of students completing earlier education levels.

Participation in VET has gradually improved in line with improving graduate labour market outcomes, but VET is still considered an unattractive pathway by many in Bulgarian society (Daskalova and Ivanova, 2018^[23]). More than half of students (52% in 2019) in upper secondary education in Bulgaria are enrolled in VET (UIS, 2022^[24]). Bulgaria's education system is selective and tracks students into VET and general

upper secondary programmes at the age of 13 – among OECD countries, the average age is 16 (Guthrie et al., 2022^[13]). The system is designed to identify and funnel the best-performing students into elite schools. Indeed, the country has one of the highest rates of 15-year-olds who attend an academically selective school and the highest “isolation index”² between socio-economically disadvantaged and high-achieving students, according to PISA (OECD, 2019^[25]), with a high concentration of students from lower socio-economic backgrounds in vocational programmes (Institute for Research in Education, 2019^[26]).

Furthermore, completion rates in VET declined from 83% in 2012/13 to 77% in 2018/19 (Institute for Research in Education, 2019^[26]), with higher dropout rates in small towns and villages (World Bank, 2022^[27]). Non-completion rates are higher in VET schools than in general schools. Data from 2017 show that while almost 21% of students in VET have dropped out of education before the end of the education cycle, the same was true for only 8.5% of students in general secondary education (World Bank, 2022^[27]). High non-completions in VET partly reflect the lower academic proficiency of VET students and the challenging curricula they face (i.e. VET students need to follow both the general curriculum and the VET curriculum). Other issues in VET include lower perceived teaching quality and limited co-operation with employers (Kovacheva and Hristozova, 2022^[21]).

VET in Bulgaria remains mostly school-based, which limits students’ employability (Daskalova and Ivanova, 2018^[23]; World Bank, 2022^[27]). Of all students enrolled in VET, as much as 41% are enrolled in schools in small or very small towns, and 4% are in schools located in rural areas, making the involvement of employers in the provision of education a serious challenge for the country, as the local economy in these areas is mainly composed of micro and small businesses (World Bank, 2022^[27]). Furthermore, the offer of post-secondary VET education is limited, with most vocational education providers being gymnasiums (World Bank, 2022^[27]).

Participation in higher education is relatively low and declining. The inflow of students to tertiary education is declining, and in 2021, only 34% of 25-34 year-olds held a tertiary degree in Bulgaria, compared to an EU average of 41% (Eurostat, 2022^[28]). The low level of tertiary attainment is also partly explained by the under-representation of vulnerable groups at this education level. According to the most recent data available, in 2015, less than 2% of students in higher education came from families whose parents’ level of education was below lower secondary (World Bank, 2022^[29]).

The long-term effects of COVID-19 on education are still being studied, but available evidence suggests that the consequences have included falling participation and completion. The most disadvantaged students in Bulgaria were the ones most impacted by the pandemic and who struggle the most to return to education following the school closures. For example, access to remote learning was unequal among different student groups. As much as 8% of children covered by a recent survey did not participate in distance learning (or at least not regularly) due to barriers related to accessing online classes (Yankova, 2020^[7]). High disengagement is also evident by increased absenteeism; even in schools with high participation rates, some 20% of students regularly skipped their online classes. Such a scenario has implications for students’ outcomes, including increasing the risks of academic failure and a prolonged period of dropouts.

Learning outcomes

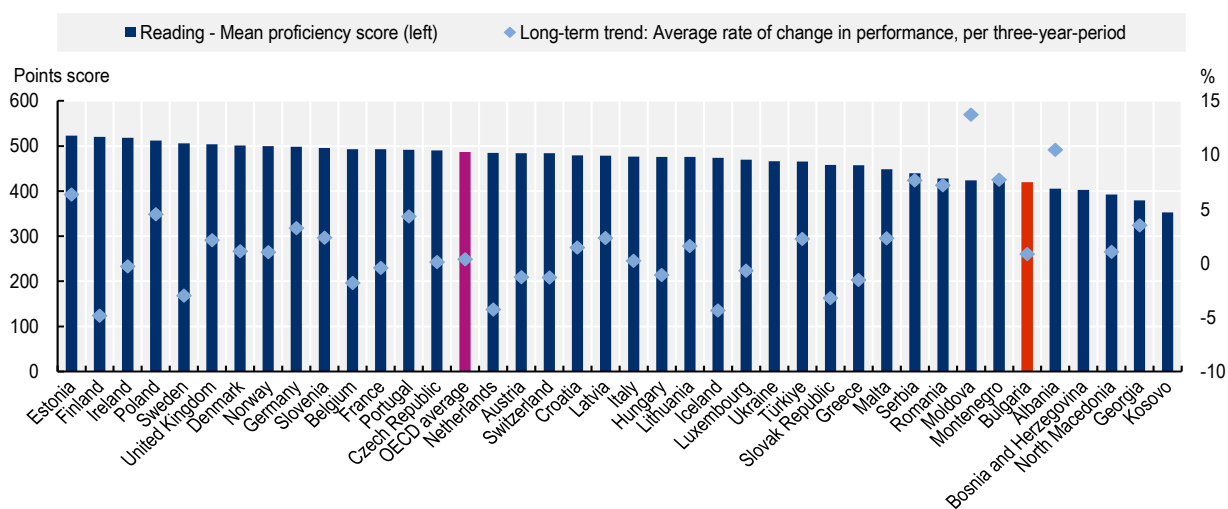
Apart from ensuring participation, education systems need to ensure all students are offered high-quality learning that will allow them to leave school with the basic knowledge and skills needed to succeed in the transition to the labour market or to further studies.

Bulgaria’s students do relatively well at acquiring the knowledge taught in school curricula during initial education, although their performance is declining in some areas. The Progress in International Reading Literacy Study (PIRLS)³ and Trends in International Mathematics and Science Study (TIMSS)⁴ assess how well Grade 4 and Grade 8 students have mastered the factual and procedural knowledge taught in school curricula. During the first years of primary education (Grade 4), students in Bulgaria perform well in reading

tasks according to the 2016 PIRLS, with the country's average point score for reading among one of the highest internationally (at 552) (IEA, 2017^[30]). When it comes to mathematics and science as assessed by the Trends in International Mathematics and Science Study (TIMSS), however, Bulgaria's performance has decreased over time – from 524 to 515 points (in mathematics) and 536 to 521 points (in science) – although they remain above the average of participating countries.

Bulgaria's students do less well at applying their knowledge in real-world settings, however. The OECD's PISA⁵ assesses how well 15-year-old students can both reproduce and extrapolate from what they have learned in science, mathematics and reading, as well as how they apply their knowledge in unfamiliar settings. PISA 2018 results for Bulgaria show that the performance of 15-year-old students in reading (also in mathematics and science) is below the OECD average and has not significantly improved over time (Figure 2.1). A high share of students still do not achieve baseline levels of proficiency, with 32% of 15-year-old pupils considered low performers (i.e. scoring below Level 2 in all three subjects) compared to an EU average of 14% and an OECD average of 13% (OECD, 2019^[31]).

Figure 2.1. Reading proficiency among 15-year-olds in Bulgaria and selected countries, 2018



Source: OECD (2019^[3]), PISA 2018 Database, <https://www.oecd.org/pisa/data/>.

StatLink  <https://stat.link/ftnza5>

Since PIRLS is a curriculum-based assessment and PISA is a skills-based assessment, the variation between the outcomes of the two assessments may be related to the prevailing instructional practices and learning culture in Bulgaria, which tends to value knowledge reproduction over the acquisition of higher-order competencies (Guthrie et al., 2022^[13]).

Within Bulgaria, gaps in learning outcomes between different student populations are a major concern. For example, according to PISA 2018, students from disadvantaged backgrounds⁶ perform below their more advantaged peers in all PISA subjects, especially in reading, where the score point difference is at 106, compared to the OECD average of 88 (OECD, 2019^[25]). Bulgaria has struggled to reduce these gaps over time. Since 2000, the share of disadvantaged Bulgarian students (proxied by parents lacking a higher education qualification) who are low performers (achieved below Level 2 proficiency in reading) has increased (OECD, 2019^[3]). Learning gaps between students from different ethnic groups are also large in Bulgaria. A score point difference of 74 in reading exists between students whose mother tongue is not Bulgarian and those who are Bulgarian native speakers (OECD, 2019^[3]). This is the highest gap between native and non-native speakers of any country within the European Union.

The COVID-19 pandemic has caused disruptions in education systems across the globe. In Bulgaria, as in other countries, students continued their learning remotely when schools closed. According to surveys undertaken by MES, around 40% of teachers reported a deterioration in students' knowledge, particularly in science. In terms of skills, the surveys identified an improvement in digital and autonomous learning competencies, while skills such as teamwork, critical thinking and time management have deteriorated (Hristova, Tosheva and Stoykova, 2020^[17]). Results also show a considerable decrease in students' engagement, motivation, interest and overall attitude towards school, as well as teachers' limited skills and resources to support students in this situation. This is a particular concern for Roma students, whose engagement with learning was relatively low before the pandemic (Hristova, Tosheva and Stoykova, 2020^[17]).

Responsiveness and graduate outcomes

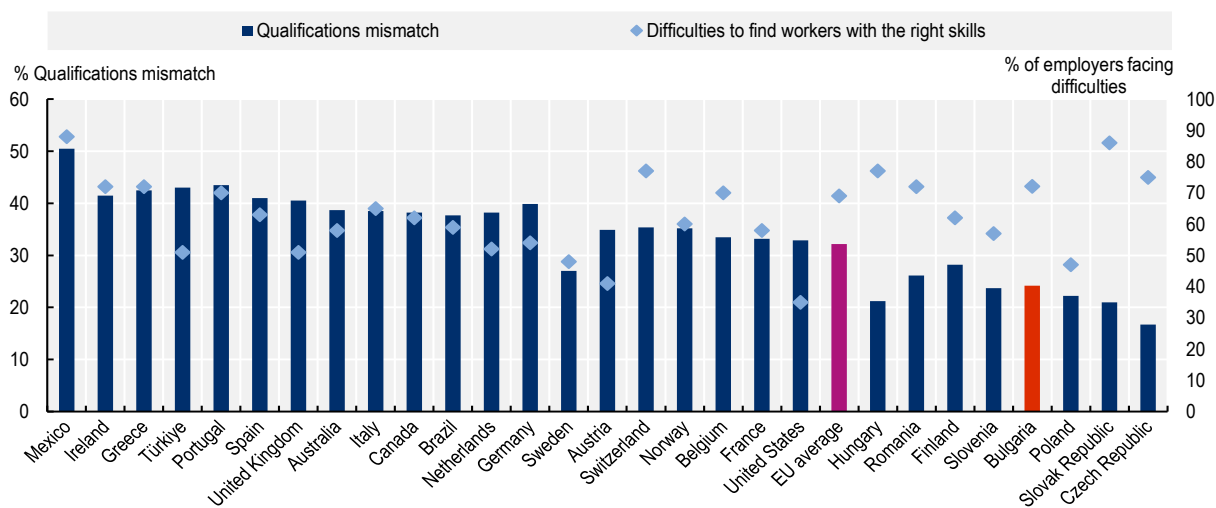
Responsive VET and higher education make it possible for youth to attain the education level, develop the skills needed in the labour market today, and develop transversal skills for the future. It also helps alleviate skills imbalances in the labour market more broadly. The need for responsive education is becoming more acute in Bulgaria, especially as VET and higher education enrolments are declining due to population ageing and emigration. The country needs to ensure that more people are developing the skills in high demand in the labour market and support education institutions in responding to the market's ever-changing needs. In Bulgaria, young people's learning and labour market outcomes suggest that education and training could be more responsive to labour market demands.

VET is not currently equipping Bulgarian youth with strong transversal cognitive skills, and employment outcomes could be further improved. Although the majority of students during upper secondary education are enrolled in VET, the gap in learning outcomes between students in this track and those in general education (which more often leads to tertiary education) is one of the highest among nearby countries: 81 score points in reading according to PISA 2018 (OECD, 2019^[25]). Moreover, in 2021, the employment rates of recent VET graduates aged 20-34 (72%) were below the EU average (76%) and that of recent Bulgarian higher education graduates on average (83%) (Eurostat, 2022^[32]).


The supply and uptake of different VET qualifications in Bulgaria are slow to adjust to changing skills needs. As a result, VET education appears to be preparing students for some jobs and skills that are becoming outdated, partially linked to the difficulties in updating the list of professions for vocational education and training (LPVET) (World Bank, 2022^[27]; CEDEFOP, 2018^[33]). The LPVET establishes VET qualifications and is structured by education field, vocational area, profession and speciality (e.g. the education field can be "management and administration", the vocational field "accountancy and taxation", while the speciality is "operative accountancy"). The list is developed by NAVET together with ministries and employers' representatives (CEDEFOP, 2018^[33]). Although Bulgaria's LPVET includes nearly 600 specialities in 47 professional areas, about 64% of all VET students were enrolled in the top 10 professions in 2019. Moreover, 20% of VET students were enrolled in VET areas associated with low-skilled jobs, such as the services and agricultural sectors, despite the gradual move of Bulgaria's economy to higher value-added industries that demand higher-level skills (World Bank, 2022^[27]).

The vast majority of higher education graduates find work, but there are some concerns about the relevance and quality of their skills. In 2021, employment rates among recent tertiary graduates – aged 20-34, not in education and training – were at 83%, higher than graduates with lower education attainment but slightly below the EU average (85%) (Eurostat, 2022^[32]). In Bulgaria, employers are concerned about increasing difficulties in finding workers with the right set of skills and knowledge (Figure 2.2). One challenge concerning the quality of higher education programmes in Bulgaria is the tendency to rely on a theoretical approach to learning, with little space given to practice and a lack of attention given to the skills needed by employers (Kovacheva and Hristozova, 2022^[21]). This is partly linked to the lack of relevant and reliable labour market information (see Chapter 5) and limited co-operation with employers.

Figure 2.2. Indicators of skills imbalances in Bulgaria and selected countries, 2019



Source: OECD calculations based on ManpowerGroup (2021^[34]), *ManpowerGroup Employment Outlook Survey Q3 2021: Bulgaria Results*, https://go.manpowergroup.com/hubfs/Talent%20Shortage%202021/MPG_2021_Outlook_Survey-Bulgaria.pdf; OECD (2022^[35]), *Mismatch by country*, <https://stats.oecd.org/#>.

StatLink  <https://stat.link/2afmt9>

Moreover, higher education enrolments by field of study in Bulgaria do not seem to be highly responsive to the needs of the labour market. In 2020, the shares of 25-34 year-old tertiary graduates in Bulgaria whose field of education did not match their occupation (30%) or who were overqualified (27%) were slightly above the EU averages (28% and 24%) (CEDEFOP, 2022^[36]; Eurostat, n.d.^[37]). There may be an over-supply of students in certain higher education courses (e.g. business and law) and an under-supply of others (e.g. STEM) (World Bank, 2022^[29]). In 2020, for example, only 3% of tertiary graduates held qualifications in natural sciences, mathematics and statistics (compared to the EU average of 6%) (Eurostat, 2022^[38]). In contrast, 5% had qualifications in information and communications technology (ICT) (compared to the EU average of 4%) (Eurostat, 2022^[38]). Bulgaria faces skills shortages in particular knowledge areas requiring high-level skills, including in medicine, training, education and science (OECD, 2022^[39]).

Another challenge for the country is its youth's low levels of digital skills. Bulgaria has one of the highest shares in the European Union of 16-24 year-olds with limited basic digital skills (7% versus 2% in the European Union, 2021) (Eurostat, 2023^[40]). In a world characterised by increasing digitalisation, and in which digital technology is an increasingly important driver of innovation and economic growth, most people need strong digital skills for success in work and life.

The economic disruption caused by COVID-19 has lowered job prospects and increased unemployment, especially for young people (Kovacheva and Hristozova, 2022^[21]). This makes increasing the responsiveness of VET and higher education to changing labour market needs even more crucial.

Opportunities to develop youth skills

Bulgaria's performance in equipping young people with skills for work and life reflects a range of individual, institutional and system-level factors, as well as broader economic and social conditions in the country. However, three critical opportunities for improving Bulgaria's performance have emerged based on a review of the literature, desk research and data analysis, and input from the officials and stakeholders consulted during this Skills Strategy project (hereafter, "project participants").

The three main opportunities for developing youth skills in Bulgaria are:

1. ensuring that curriculum reform and assessment practices improve students' skills
2. developing a highly skilled teaching workforce
3. making vocational and higher education more responsive to labour market needs.

These opportunities for improvement are now considered in turn.

Other opportunities for improving youth skills are covered in other chapters or are out of the scope of this report. For example, providing young people with high-quality information on labour market needs and financing formal education effectively are discussed in Chapter 5 of this report. While Bulgaria also faces challenges with access to and quality of ECEC, ECEC is undergoing substantive reforms (e.g. making ECEC compulsory and free from the age of four), the outcomes of which are not yet fully known. The country has also adopted national programmes such as Together for Every Child to help ensure the coverage and inclusion of children in compulsory ECEC. As such, ECEC is not covered in this review.

Opportunity 1: Ensuring that curriculum reform and assessment practices improve students' skills

Successfully designing and implementing modern school curricula are essential for equipping students with the skills needed for success in work and life. Many OECD countries seek to implement curricula that equip students with skills, knowledge, attitudes and values that allow them to navigate an increasingly interconnected, digitalised, complex and uncertain world. This has been seen in curricula reforms aimed at achieving a more competency-based approach to learning that reflects both local and global influences and allows students to cultivate key competencies (Yong-lin, 2007^[41]; Gouédard, 2020^[42]; OECD, 2018^[5]). Curriculum reforms have also emphasised student agency, well-being and ability to solve problems (OECD, 2018^[5]; Gouédard, 2020^[42]).

Beyond curricula, effectively assessing what students know and can do is also essential for equipping them with the skills needed for success in work and life. Many OECD countries seek to develop effective assessment systems that facilitate evidence-based decision making and system improvement (OECD, 2013^[43]). Aligning assessment practices with competency-based curricula is complex as it involves assessing students' diverse competencies rather than just assessing students' ability to reproduce knowledge. In an effective assessment framework, summative assessments aimed at grading students at the end of a learning unit should be accompanied by formative assessments or assessment for learning, aimed at facilitating student improvement.

Bulgaria initiated a major reform in 2016 to establish a competency-based curriculum to replace a traditional curriculum focused on knowledge reproduction. The competency framework (that sets out and defines each competency to be developed by students) underpinning the curriculum is aligned with the European Parliament and Council of Europe's Recommendation on Key Competences for Lifelong Learning (2006, updated 2018). The framework has established nine interdependent and transversal competencies to be embedded across school education for both general and VET programmes (Education 2030 Association, 2019^[44]). The competency-based curriculum was legislated in the PSEA (2016), and the 2021/22 school year marked the first time all students in Bulgarian schools should follow the new curriculum. The Directorate for the Content of Pre-school and School Education within MES has overseen the introduction of the competency-based curriculum.

The competency-based curriculum framework is complemented by educational standards, which define the knowledge, skills and attitudes required for each subject at the end of each education level. However, teachers lack guidance and support to implement competency-based curriculum in the classroom. Project participants reported that the lack of clear goals linking teaching practices to key competencies, as well as

a clear plan and capacity building for their practical inclusion at the classroom level, have resulted in the ineffective implementation of the competency-based curriculum (Education 2030 Association, 2019^[44]).

Changes have also started to be made to Bulgaria's assessment framework. Ordinance 11 (2016) introduced a new student assessment framework that seeks to align with a competency-based curriculum. For example, the assessment framework focuses more on formative assessment practices (Guthrie et al., 2022^[13]). The ordinance also defines the purposes and operationalisation of the country's national student assessment system, providing data on learning outcomes (known as the national external assessments).

For these recent changes to be translated into a new approach to teaching and learning in the classroom, project participants mentioned the need to build awareness about the curriculum reform, showing how it fits a broader vision for quality education. They also mentioned the need to support and train teachers to implement the competency-based approach (see Opportunity 2). Moreover, Bulgaria needs to redesign its external student assessment system to measure learning outcomes and monitor the implementation of the competency-based curriculum.

The OECD's Directorate for Education and Skills has recently published an *Evaluation and Assessment Review of Bulgaria's Education System* (Guthrie et al., 2022^[13]). Opportunity 1, in particular, draws and builds on some of the findings and recommendations of this review.

Building awareness and capacity for curriculum implementation

One of the major difficulties countries face when introducing curriculum reform concerns implementation (Gouédard, 2020^[42]). Curriculum implementation includes translating reforms into classroom practices and accomplishing the desired objectives of the reform. In addition, a curriculum change is highly cultural and political as it determines a society's vision by deciding the skills and knowledge that are valuable to pass on (Gouédard, 2020^[42]). As such, it is important to have a clear and shared vision for curriculum reform that articulates the purpose of the reform, why it is needed, the benefits it will have and how it can be achieved.

Although the move to a competency-based curriculum is one priority of Bulgaria's National Development Programme (Table 2.1), the country is struggling to implement curriculum reform. The competency-based approach has been translated into modifications to the normative and strategic framework of the country (Table 2.1). This included, for example, the development of an action plan for the Strategic Framework for the Development of Education, Training and Learning (2021-2030) in 2022. However, this has resulted in only limited changes to teaching and learning at the classroom level. Recent research (Education 2030 Association, 2019^[44]) and project participants suggest that there are barriers to the successful implementation of the competency-based curriculum.

Several project participants stated that Bulgaria lacks a clear and shared vision of the curriculum reform and its benefits, as well as a detailed action plan to achieve its implementation (e.g. including key steps, roles and responsibilities to support schools in the different phases of curriculum implementation). One of the main barriers to successfully implementing education policy is stakeholders' lack of engagement and preparation for translating reforms into practice (Viennet, 2017^[45]). For a curriculum reform to succeed, all key stakeholders need to grasp the vision for the reform and understand what it entails for them. Effective communication, awareness and capacity building, among others, are key for effective curriculum implementation, as they foster ownership and individual and collective sense making (Gouédard, 2020^[42]). Therefore, Bulgaria should strengthen efforts to raise awareness of and buy-in to the reform among policy makers, subnational authorities, principals and teachers, and student and parent representatives.

The regulations and guidance for the competency-based curriculum could more clearly define each competency and related learner outcomes. MES has issued some guiding documents for supporting stakeholders in curriculum implementation. These include the Transition from Knowledge to Skills, which is a guide on the process of reorientation from subject-oriented to result-oriented learning; the Competences and Reference Frameworks, which is a short, adapted presentation of the existing reference frameworks; and a summary table of the key competencies that the national education system aims to develop. However, the regulatory framework that introduced the competency-based curriculum does not establish the scope of each specific key competency, and the accompanying guidelines have not clarified the expected competency-related outcomes or how to assess them (World Bank, 2020^[46]).

Training, support and capacity building for teachers to implement the competency-based curriculum in classrooms has been insufficient. The majority of teachers in the country are used to teaching methods that focus on developing subject-specific knowledge. The set of guiding materials prepared and distributed by MES are not perceived to have helped change teaching practices as they did not provide practical examples of how to support students in acquiring key competencies (World Bank, 2020^[46]). The REDs are now responsible for providing more practical, methodological support to teachers, including on the competency-based curriculum, for example, by "organising training and sharing good practices" (Education 2030 Association, 2019^[44]). However, the intensity and quality of these activities are not consistent across regions. This may reflect that not all REDs or staff have the needed skills, knowledge, experience or time to perform their new roles (Guthrie et al., 2022^[13]; World Bank, 2020^[46]) and may also lack financial resources for these functions.

The local-level, needs-based methodological support envisaged for REDs could bring important results as experts know the local school contexts and challenges of school networks. MES, through the work of REDs, could also support building teacher capacity and agency in the reform process by stimulating opportunities for networking and collaboration. Changes also need to be made to initial teacher training and continuing professional development (CPD) programmes, ensuring that teachers are trained to introduce this competency-based approach to teaching (see Opportunity 2 for more detailed information). This would allow teachers, once aware of their roles and responsibilities stated in the vision of the curriculum reform, to implement changes at the classroom level.

Addressing the aforementioned challenges is even more important as MES began reviewing the school curriculum again in 2022. Given concerns that the current curriculum is still too focused on subject knowledge and not enough on developing competencies and interdisciplinary skills, in 2022, MES began reviewing the framework and content of all subjects taught from Grades 1 to 10. In this context, MES should closely engage education stakeholders in order to develop and impart a shared vision for the reforms, including what the reform will look like at the classroom level. This should include clear and measurable objectives to guide the implementation of the curriculum, as well as clearly defined and well-supported roles and responsibilities for key stakeholders.

Bulgaria could build on the potential of REDs (Box 2.1) and learn from the experience of Wales (United Kingdom) in reforming curriculum (Box 2.2) in order to successfully implement its competency-based curriculum reforms. With sufficient engagement, capacity building and resourcing, REDs could provide useful methodological support to teachers and share good practices on implementing the competency-based curriculum. In addition, REDs could work with and learn from existing grade-specific and/or subject-specific teacher communities within Bulgarian schools to support teachers effectively. Furthermore, Wales' efforts at reforming school curriculum provide various lessons for Bulgaria, especially regarding stakeholder engagement and buy-in to the reforms (Box 2.2).

Box 2.1. Relevant national example: Building awareness and capacity for curriculum implementation

Bulgaria: Regional education departments (REDs) and teacher communities

Since 2017, REDs in Bulgaria (previously known as regional school inspectorates) have been tasked with providing methodological support to schools at the local level. This pedagogical support includes consultations, training, sharing good practices and other forms of peer learning. REDs are expected to work with teachers and school principals to identify their needs and design initiatives to support them. Each RED needs to develop an annual plan with trainings and other initiatives aimed at providing additional support to teachers and school leaders at the local level.

Although the methodological support given by REDs is still dependent on the capacity and knowledge of each member of RED staff, the introduction of a new, formative function for them (e.g. moving from an inspection role to a supportive role) is part of Bulgaria's wave of reforms brought by the PSEA. It represents an actionable step towards ensuring that all students have access to quality schooling and gain relevant skills.

Project participants noted that for methodological support, schools usually also rely on teacher communities (*metodičeski obedinenija*). These teacher communities – or teacher methodological unions – exist in almost all schools in Bulgaria (although official data are not available) and are part of the institutional framework for providing intra-school professional development activities. The type of methodological communities in each school depends on the decision of the schools and their context, but they usually tend to be divided by education level (e.g. methodological community for primary or lower secondary education teachers).

Some examples of concrete activities included in the plans of methodological communities include:

- familiarising teachers with the normative documents and with new developments in the methodological and specialised literature on the different educational disciplines
- encouraging teachers' participation in various CPD activities
- analysing learning outcomes and preparing plans for specific work with pupils (including individual work).

The role of teacher methodological communities can vary depending on the school, as no strict regulation defines them. However, as part of the external evaluation carried out by the National Inspectorate of Education, schools are assessed by whether or not they have established such structures as a way to foster teamwork and professional dialogue between pedagogical specialists. Although no research is available that looks at the impact of these communities in supporting teachers in Bulgaria, they could be helpful sources of information and examples of how to support teachers in their schools, taking into account specific local-level contexts.

Source: Guthrie et al. (2022^[13]), *OECD Reviews of Evaluation and Assessment in Education: Bulgaria*, <https://doi.org/10.1787/57f2fb43-en>; National inspectorate of Education (2021^[47]), *analiz na kačestvoto na obrazovaniето v inspektirani detski gradini i učilišta učebna 2019/2020 g.* [analysis of the quality of education inspected kindergarten and schools academic year 2019/2020], [Анализ-на-качеството-19-20г.pdf \(government.bg\)](#).

Box 2.2. Relevant international example: Building awareness and capacity for curriculum implementation

Wales (United Kingdom): Curriculum reform and implementation

Since 2017, Wales has been in the process of reforming its education system to achieve school improvement. One of the main components of this reform has been curriculum change. Wales prepared an action plan that provided an overview of the reform journey and spelt out the 2021 ambitions and actions for learners, the teaching profession, the school system and the Welsh Government.

Wales then collaborated with stakeholders on developing a new national curriculum framework. After being made available for public consultation, the final version of the document was published in January 2020. The Welsh Government invited the OECD to assess the implementation of the new Curriculum for Wales, review the country's readiness to implement the new policy, and suggest the next steps for implementation. The OECD found that the main challenge for Wales was related to providing continuity for the reform vision while acknowledging that the next implementation steps had to place schools and their communities at the centre. To ensure the intentions of the new curriculum were translated into practice, the OECD identified several barriers, including a lack of deep understanding and awareness of what successful realisation of the curriculum might look like in practice and capacity challenges for schools to design their own curriculum. Following OECD recommendations and discussions with practitioners, the Welsh Government and the Strategic Education Delivery Group updated their implementation strategy and plan for the curriculum implementation.

Wales published the implementation plan for the realisation of their new curriculum in October 2020. The document set out the expectations for schools to design their curriculum and how the country would support stakeholders in implementing the curriculum reform. The implementation plan put forward: 1) a common, strategic vision for what curriculum realisation means in practice, as recommended by the OECD; 2) a guiding framework and ways of working that allow all parts of the education system to be aware of the curriculum changes and to move towards the same goals; 3) the roles and responsibilities for stakeholders in terms of supporting schools towards curriculum realisation; 4) the specific steps all actors involved in curriculum implementation would take to support schools and settings as they moved towards implementation of the Curriculum for Wales; and 5) the challenges facing the education system in Wales in implementation, and signposted how they planned to address these in the spirit of collaboration and co-construction with stakeholders across the country.

The new curriculum was introduced in ECEC and primary schools in September 2022. It will be introduced in secondary schools in September 2023 (with schools having the choice to introduce it in 2022/23 for Year 7).

Source: Welsh Government (2018^[48]), Education in Wales: Our national mission, <https://gov.wales/sites/default/files/publications/2018-03/education-in-wales-our-national-mission.pdf>; OECD (2020^[49]), Achieving the New Curriculum for Wales, <https://doi.org/10.1787/37ba25ee-en>.

Recommendations on building awareness and capacity for curriculum implementation

Recommendations

- 1.1 **Increase education stakeholders buy-in to the vision for curriculum reform and develop a detailed action plan with these stakeholders to facilitate implementation.** MES should increase efforts to clearly communicate the rationale, expected benefits and desired outcomes related to the implementation of curriculum reform to education stakeholders (e.g. government officials, experts, teachers, school leaders and local authorities). These communication efforts should be accompanied by a detailed action plan that articulates how the vision will be translated to changes at the classroom level. The action plan should identify the key activities, timelines, resources, indicators and responsible actors to implement the curriculum reform. This includes setting out what resources and tools will be available to schools and teachers (e.g. teacher training on the competency-based curricula), and defining relevant indicators and targets to monitor reform implementation.
- 1.2 **Reinforce the capacity of regional education departments to provide methodological support to teachers in implementing the competency-based curriculum.** MES should reinforce the capacity of REDs to provide methodological support to teachers and school communities in developing practices focused on students' acquisition of key competencies. To do so, MES should review REDs' capacity and resources. It should subsequently build capacity within REDs through staff training to support and mentor teachers on the competency-based curriculum (e.g. how to develop and apply competency-based curricula). MES should also increase REDs' resources as needed while improving monitoring of REDs' activities to ensure effective support for implementing the competency-based curriculum.

Aligning external assessments with the competency-based curriculum

Modernising assessment practices to align with the competency-based curriculum is also a necessary condition for ensuring that Bulgaria's education reforms improve students' skills. Assessing students' learning outcomes and using results to enhance learning practices and guide system improvement is key for any education system. In the context of Bulgaria's transition to a competency-based curriculum, external assessment tools need to monitor students' acquisition of diverse and higher-order competencies. The results of assessments should also be used to monitor students' progress against national learning standards and guide system improvement over time.

In addition to school-based assessments developed by teachers to monitor student progress, Bulgaria externally assesses students with two main tools developed by the Centre for Assessment of Pre-school and School Education (CAPSE):

1. **National external assessments:** All students take these assessments in Grades 4, 7 and 10. CAPSE is the agency responsible for their design and administration. Students are assessed in mathematics and Bulgarian language and literature, and some choose to take the assessment in foreign languages. The national external assessment system uses a single test instrument to serve multiple purposes, including system monitoring and selection (i.e. allocating students to different secondary education programmes and schools after Grade 7).
2. **The State Matura examination:** This examination is administered to students after Grade 12 (at the end of upper secondary education). This is used for education certification and entrance to higher education. It is also developed and administered by CAPSE. Students are assessed in the Bulgarian language, literature and a subject of their choice. Students also have the option to take the examination in two other additional subjects (e.g. a foreign language).

The regulatory framework and policy documentation related to the introduction of the competency-based curriculum support the update of school-based assessment practices to monitor student progress and improve learning. However, they do not provide specific guidance on how external assessments should be aligned with the competency-based curriculum. The introduction of Ordinance 11 (see above), for example, and the new assessment framework help educators understand the main types of assessments and how to organise them in the context of the new curriculum. The regulatory framework for the new curriculum establishes that assessments should monitor the implementation of the new education process. However, the regulatory framework does not specify how the national external assessments should be redesigned or how assessment results should be used.

Bulgaria has not yet aligned external student assessments with the competency-based curriculum. Currently, the national external assessments consist of multiple-choice, open-ended and essay writing tasks that can, in theory, help measure a wider range of skills, including higher-order thinking skills reflected in Bulgaria's new curriculum. However, the content of questions and the criteria used to assess students' responses are still predominantly focused on knowledge reproduction and memorisation rather than applying critical thinking skills aligned with the competency-based approach to teaching and learning. The results of these assessments also cannot be compared over time because the scoring system is not criterion-referenced – that is, designed to measure student performance against a fixed set of predetermined criteria or learning standards.

The national external assessments also lack most of the basic features that allow assessments to measure learning outcomes against national standards. For example, Bulgaria lacks basic psychometric resources for the assessments, such as proficiency scales linked to learning standards and calibrated test items (i.e. a technique to estimate characteristics of questions for achievement tests making sure items are on the same scale). Furthermore, assessments are not designed to inform progress on students' acquisition of key competencies (Guthrie et al., 2022^[13]; World Bank, 2020^[46]; Education 2030 Association, 2019^[44]). As a result, teachers may not place sufficient emphasis on developing students' competencies when teaching and preparing students for external assessments.

Furthermore, the results of external assessments are not systematically provided to or used by schools to enable continuous improvement. While school results are presented on line, there is no reporting with a more in-depth analysis of results to inform policy making and pedagogical intervention. Moreover, since the national external assessments are not aligned to the competency-based curriculum, results cannot be used to inform and/or evaluate the implementation of the competency-based curriculum at the national or subnational level, nor generate information to help improve teaching and learning of the new curriculum. The recently published *OECD Reviews of Evaluation and Assessment in Education: Bulgaria* suggested, among other things, that Bulgaria create a “state of education report” that would include analysis from the national external assessments to inform policy making (Guthrie et al., 2022^[13]).

Overcoming the longstanding summative assessment culture in Bulgaria's education system, where tests are used to sort students into different schools, will be key to successfully reforming student assessments. Currently, the national external assessments have a strong selective function, especially after Grade 7, and educational stakeholders have little incentive to change this. A comprehensive, structural reform to the schooling system in Bulgaria would need to take place to address this challenge. The recent OECD review (Guthrie et al., 2022^[13]) recommends, for example, decoupling the selective role of the national external assessments and introducing a new, optional and more suitable selection examination for matching students with different school types. This could be an alternative, and help overcome any resistance, to aligning national external assessments with the competency-based curriculum.

To support the alignment of the national external assessments with the competency-based curriculum, Bulgaria could build on the recent changes made to the State Matura examination after Grade 12, which included new subject specifications that allowed for some competencies to be assessed more in line with the competency-based curriculum (Box 2.3). The country could also consider insights from Australia, which introduced new assessment frameworks in 2016 to adjust its national assessment system to major curriculum reforms (Box 2.4).

Box 2.3. Relevant national example: Aligning external assessments with the competency-based curriculum

Bulgaria: Changes made to the State Matura examination

Following the introduction of the new competency-based curriculum and its implementation for Grade 12 students in the 2021/22 academic year, each subject's specifications for the State Matura examination were updated. The main reason for this change was to introduce the assessment of competencies under the new subject specifications (which includes changes to define the number and the types of questions used), requiring students to demonstrate specific skills (e.g. "Evaluates texts according to the success of the communicative goal" and "Analyses and creates written texts, adequate to the communicative situation").

Incorporating more diverse question types can help improve an assessment's validity by measuring a wider range of higher-order thinking skills and other competencies set out in a new curriculum. While some competencies requirements are still expressed in terms of what students should know, this is an important step towards designing an examination more aligned with the country's goal of moving to a competency-based approach to learning.

Source: Guthrie et al. (2022^[13]), *OECD Reviews of Evaluation and Assessment in Education: Bulgaria*, <https://doi.org/10.1787/57f2fb43-en>.

Box 2.4. Relevant international example: Aligning external assessments with the competency-based curriculum

Australia: Aligning national assessment with curriculum reform

Following the introduction of a new national curriculum in 2015, the Australian Curriculum, Assessment and Reporting Authority took steps to align its longstanding National Assessment Program (NAP) – Australia's main national measure of student learning outcomes. NAP has two arms:

- **The National Assessment Program – Literacy and Numeracy (NAPLAN):** Established in 2008, this annual assessment is taken by all students in Years 3, 5, 7 and 9 to determine whether or not young people have the sufficient literacy and numeracy skills needed for further learning and their participation in the community. NAPLAN is only one of the tools used to assess students and does not replace the extensive, ongoing assessments made by teachers about each student's individual performance.
- **The National Assessment Program – Sample Assessments:** First established in 2003, this assessment programme measures a sample of students in Years 6 and 10 on science literacy, civics and citizenship, and ICT literacy on a rolling three-year basis.

To align test constructs and question items with the national curriculum reform, Australia formulated new assessment frameworks that include detailed descriptions of how NAP tests reflect the learning domains, scope and sequence of the relevant curricula subjects. For example, the new framework explains how the structure of the NAPLAN English tests cover the national curriculum strands of language, literature and literacy; how the reading tasks set in the tests will include the three text types set out in the national curriculum; and how the grammar constructs included in the tests will be those required by the national curriculum. A similarly rigorous approach to curriculum alignment is set out for the numeracy elements of the NAPLAN and the subjects covered by the Sample Assessment Program. Importantly, these frameworks were developed in close collaboration with assessment and subject area experts, which increased the credibility links between the curriculum and assessment.

Australia's collaborative efforts to align the national curriculum and the NAP have greatly improved the student assessment system. The alignment has given policy makers, teachers and other stakeholders a better understanding of how students across the country are progressing against the set of national learning standards.

Source: NAP (2016^[50]), FAQs, <http://www.nap.edu.au/naplan/faqs>; Lambert (2016^[51]), *Educational Standards and Australia: A changed landscape*, <https://dx.doi.org/10.1590/s2176-6681/291437381>; OECD (2021^[52]), "National assessment reform: Core considerations for Brazil", <https://doi.org/10.1787/333a6e20-en>.

Recommendations on aligning external assessments with the competency-based curriculum

Recommendation

- 1.3 Strengthen the national external assessment system by accelerating efforts to align it with the competency-based curriculum.** CAPSE should introduce test items that are able to assess students' competencies in relevant, practical contexts and focus less on student memorisation of knowledge. This could include introducing constructed-response items that measure a student's ability to formulate an argument and defend a point of view. CAPSE should develop an item bank with calibrated test items to increase the validity of the test. The agency should also prioritise investments in other essential psychometric resources to strengthen the national assessment system, such as installing a criterion-referenced scoring process to compare results over time. This would involve introducing performance levels and aligning these with Bulgaria's national learning standards. MES should work closely with and support CAPSE to ensure the agency has sufficient financial and technical resources to implement these reforms to the national external assessments.

Opportunity 2: Developing a highly skilled teaching workforce

What teachers know and can do is one of the strongest direct school-based influences for improving the skills of young people (Darling-Hammond, 2000^[4]). A high-quality and effective learning environment can also play a major role in decreasing socio-economic gaps between students. Teachers play an important role in providing students with the tools they need to develop the knowledge and transversal skills to continue in post-secondary education and enter the job market. Investing in the quality of teachers and ensuring they have the opportunities to update their knowledge will be essential for improving the skills of young people and successfully implementing Bulgaria's curriculum reforms. This requires high-quality and accessible initial teacher education (ITE) and CPD programmes, among other things.

Bulgaria faces an ageing teacher population, which creates risks in ensuring a sufficient quantity and quality of teachers (European Commission, 2021^[53]). As a response, in recent years, the country has implemented several policies to ensure that it can replace retiring teachers. For example, it has: significantly increased teachers' salaries; covered the tuition fees of ITE; tried to make ITE more accessible through supporting universities to open more programme places and expanding distance learning; and has also been trying to attract more high-achieving performing graduates through the provision of scholarships (World Bank, 2020^[46]). These actions have contributed to a growing number of students enrolling in ITE programmes in recent years. However, they have not fully resolved shortages of ITE students in specific subject areas (such as STEM) and regions (especially regions with higher levels of socio-economic disadvantage).

Bulgaria has also introduced a range of policies to build the capacity of teachers. For example, Bulgaria's National Strategy for the Development of Pedagogical Staff (2014-2020) and the PSEA (2016) led to several changes. These included creating core content for ITE programmes, introducing teacher standards (defining the pedagogical, managerial, social, and civic competencies that teachers are expected to possess) and creating a teacher career structure that makes teachers' CPD mandatory. With these reforms, Bulgaria's policies to strengthen the teaching profession have converged with what is in place in many other European countries. However, some of these policies have not yet been fully implemented or achieved their desired outcomes. For example, not all ITE programmes have yet adopted the core content foreseen by Bulgaria's strategies and legislation.

Despite these reforms, there remain challenges to equipping the teaching workforce to improve youth skills in Bulgaria. For example, there are concerns about recent teaching graduates' quality and readiness for the profession. Evidence shows that teacher candidates' grades are below the average of students in other higher education tracks (World Bank, 2020^[46]). Despite recent increases in the number of applicants, relatively few high-achieving upper secondary students are attracted to the teaching profession. Moreover, compared to OECD and EU countries, the amount of time dedicated to teacher practicums in Bulgaria is low, and school-based practice for teachers is not a priority for ITE programmes.

Furthermore, the country also struggles with a fragmented CPD system, with many different providers and a lack of quality control for the programmes offered. Project participants have mentioned the need for a needs-based CPD system, as currently, much of the training that does occur is not closely aligned with teachers' individual and evolving learning needs, especially those of VET teachers. It will be important that Bulgaria complements its policies to attract more teacher candidates with policies to ensure the quality of the teaching workforce. This can help ensure that Bulgaria's increasing public investments in the teaching workforce attain their desired effect on helping develop youth skills.

Selecting and preparing high-quality teaching candidates

Selecting and preparing high-quality teaching candidates is essential for Bulgaria's efforts to develop a highly skilled teaching workforce that can improve youth skills. As noted above, Bulgaria has put in place several policies in recent years to improve the performance of its teaching workforce. Much of these efforts have focused on updating ITE core content and attracting more teachers to the profession. However, project participants voiced that teacher candidates' quality and readiness to enter the profession have been persistent concerns for the country's education system.

Like other European countries, Bulgaria has both concurrent and consecutive (one year) models⁷ of initial teacher preparation that lead to either a bachelor's or master's degree. Around 13 (12 public and 1 private) of Bulgaria's 54 universities offer ITE programmes. In 2019, public universities offered 5 616 places to ITE, of which 94% were filled (World Bank, 2020^[46]). According to the latest OECD Teaching and Learning International Survey (TALIS), 29% of teachers in Bulgaria have received a comprehensive ITE, lower than the OECD average of 39%. A comprehensive ITE includes subject content, pedagogy, classroom practices, cross-curricular skills, teaching in a mixed-ability setting and classroom management (OECD,

2019^[54]). Indeed, many ITE applicants do not go on to become teachers and are relatively low-skilled. Project participants raised concerns about the limited share of students graduating from ITE. The percentage of graduates of ITE that actually enter the profession has been low, with between 40% and 65% of graduates of pedagogical programmes not entering the teaching profession (OECD, 2019^[54]). The low transition rate between ITE and teaching is particularly concerning considering the amount of financial resources and incentives put into attracting new teachers (e.g. elimination of tuition fees and provision of scholarships) in recent years. The lack of specific entrance tests and interviews to evaluate teacher candidates' motivation and strengths could explain the low transition rates from ITE to teaching. In addition, candidates applying for ITE programmes perform below the average (based on students' grade point average) of the overall population entering higher education (World Bank, 2020^[46]).

ITE admission processes in Bulgaria do not set minimum academic requirements (apart from students' successfully passing the Matura examination) or necessarily assess students' broader competencies and motivations. An important feature of the world's best-performing education systems is that ITE places are offered to the most able and suitable candidates (Barber, 2007^[55]). Implementing varied mechanisms to assess teacher candidates' suitability beyond their academic grades (e.g. assessing soft skills, such as motivation, commitment, interpersonal skills, etc.) can help get the best students into the teaching profession. Evidence shows that teachers' socio-emotional skills are particularly important for supporting low-skilled students, while teachers' cognitive skills mainly benefit high-skilled students (Grönqvist and Vlachos, 2016^[56]). Students in Bulgaria enter ITE based on their academic performance (e.g. passing the Matura examination and, depending on the university, on further entrance examinations and previous grades from school education). However, currently, there are no minimum requirements for admission into ITE. Also, it is not common for all ITE providers in Bulgaria to assess applicants' broader competencies, such as motivation, commitment, interpersonal skills, etc., via interviews or other means as part of admission processes. This is also a missed opportunity to improve equity, for example, by allowing suitable candidates who have not completed the Matura from disadvantaged backgrounds to enter ITE studies.

Bulgaria could benefit from an admission process for ITE that is more selective and more comprehensively assesses applicants' competencies. It is unlikely that more selective admission requirements for ITE in Bulgaria would lead to a shortage of entrants or teachers. The number of students entering ITE has increased very recently. For example, the proportion of new pedagogical studies entrants increased from 2019 to 2020 by around 7.6% (European Commission, 2021^[53]). This at least partly reflects policies to increase teacher salaries and attract more students to the profession. More selective admission requirements in isolation may deter some applicants and reduce the number of ITE entrants. However, this would be at least partially offset by more comprehensive admission requirements that allow students without high academic grades, but with strong motivation and socio-emotional skills, for example, to enter ITE. Any changes to ITE admission requirements should be accompanied by systematic forecasting of teacher demand (see Chapter 5) and continued incentives to fill shortages in specific subjects and geographic areas.

As highlighted by project participants, Bulgaria could also boost the quality and readiness of teachers by increasing practical learning and exposure to different teaching practices during ITE. The core content framework for ITE was updated in 2021 to increase the amount of study time in areas like pedagogy, competency-based teaching approaches and inclusive education. However, the minimum practicum time (i.e. in-school placement) remains low and has not changed. ITE students in Bulgaria have a minimum of 10 European Credits Transfer System (ECTS) credits⁸ for practicum time, compared to 60 in Iceland, 50 in Hungary, 39 in Latvia and 30 in Lithuania – all countries with the same length of ITE programmes as Bulgaria (European Commission/EACEA/Eurydice, 2021^[57]).

School-based practicum is not highly prioritised in Bulgarian ITE programmes. For example, the pool of schools that offer teacher practicum is limited, as universities tend to rely on establishing partnerships with schools close to their campus, which are usually the best-performing urban schools (World Bank, 2020^[46]).

Theoretical knowledge is still also prioritised over practical knowledge in Bulgarian ITE. Teaching practices in Bulgarian ITE programmes could be more closely connected to what is required in schools. Furthermore, most ITE programmes in Bulgarian universities still rely on traditional teaching methodologies, such as seminars and lectures (World Bank, 2020^[46]). As ITE graduates tend to replicate the teaching practices of their university professors (World Bank, 2020^[46]), ITE programmes should allow students to experience a variety of modern teaching methods, especially those effective for competency-based curricula.

Bulgaria could better prepare teachers through ITE by involving current teachers in ITE and strengthening teacher mentoring. For example, MES could support the participation of current teachers in delivering course content during ITE. Furthermore, while mentoring exists for novice teachers during practicum, teacher mentors do not always receive enough training and support for this role. There also seems to be a lack of incentive for teachers to become mentors, who currently receive a minimum remuneration of BGN 60 (Bulgarian lev) per month for a duration of up to one year (World Bank, 2020^[46]).

Bulgaria could build on the experience it acquired through its national programme – Motivated Teachers and Qualification – to recruit and prepare motivated professionals or graduates to become successful teachers (Box 2.5). This experience could also serve as an example of how ITE providers might make their admission processes more comprehensive. Bulgaria can also look to the examples of Albania and Finland, which have stricter admission requirements for students interested in ITE programmes (Box 2.6).

Box 2.5. Relevant national example: Selecting and preparing high-quality teaching candidates

Bulgaria: Motivated Teachers and Qualification programme

The national programmes, Motivated Teachers, and Qualification (merged as "Motivated Teachers and Qualification" in 2022) recruit, train and support highly motivated professionals and graduates from different fields to become inspiring teachers.

Candidates wanting to participate in the programme undergo a rigorous selection process. Among the criteria used to recruit candidates are analytical skills, motivation, communication skills and working in a challenging environment, among others. In addition, the programme looks for people with strong motivation who desire to develop and work with students that struggle the most. Over the course of two years, candidates receive teacher training in partnership with universities. Candidates use what they have learned to continue their development as successful teachers.

In 2019, the Motivated Teachers programme attracted approximately 300 teachers to schools experiencing shortages of teachers in mathematics, physics and astronomy, informatics and information technology (IT). It also provided introductory training and was included in basic training for the acquisition of teacher qualifications in mathematics; physics and astronomy; informatics and IT; and foreign languages to about 50 specialists.

In 2019 and 2021, the Qualification programme provided professional training to over 5 000 teachers. The two programmes were merged in 2022 and outsourced to a consortium of two organisations – Teach For Bulgaria and the Bulgarian Union of Teachers.

Source: Teach for Bulgaria (2022^[58]), *Our Programs*, <https://zaednovchas.bg/en/about-us/>; World Bank (2020^[46]), *Bulgaria: Teaching Workforce Developments and Recommendations*, <https://openknowledge.worldbank.org/handle/10986/36796>; MES (2023^[59]), *Ministry of Education and Science*, <https://web.mon.bg/en/>.

Recommendations on selecting and preparing high-quality teaching candidates

Recommendations

- 1.4 Introduce a more selective and comprehensive admission system for initial teacher education to ensure the suitability and quality of teaching candidates.** MES should create a working group gathering university representatives to encourage initial teacher education (ITE) providers to establish a common minimum threshold score for ITE admission. The threshold score should be based on State Matura scores and ensure that candidates have achieved a basic level of competency in key subject areas assessed by the State Matura. The working group should also be responsible for developing additional, more comprehensive selection criteria for assessing ITE applicants. This could include structured interviews and aptitude tests to assess both academic ability and candidates' non-cognitive skills (such as motivation, commitment, interpersonal skills, etc.). The working group should also discuss the weight to be given to the different criteria in the new ITE admission system.
- 1.5 Improve the quality and relevance of initial teacher education by aligning it more closely with classroom practice, including by expanding and supporting teaching practicum.** The Bulgarian government should raise the minimum requirements for practical training during initial teacher education (ITE) to increase teachers' time in classrooms. In parallel, Bulgaria should better prepare teacher mentors for their roles, including through mandatory training. MES should also work with university representatives to expand the pool of schools available to teacher trainees. The pool of schools available for teacher practicum should be diversified and include schools from disadvantaged areas. MES should also work with university representatives to diversify the profile of teachers delivering course content during ITE, including inviting more current teachers to ITE classrooms. In particular, teachers working in rural and disadvantaged schools should be included in such an initiative to expose teacher candidates to a diverse range of classroom experiences and teaching methods.

Monitoring and improving teachers' continuing professional development

Ensuring relevant and high-quality CPD opportunities for teachers is also critical for Bulgaria's efforts to develop a highly skilled teaching workforce that can improve youth skills. A crucial component of professionalism among teachers and school leaders is their participation in CPD. Achieving professional-level mastery of complex skills and knowledge is a prolonged and continuous process. Professionals must continually update their skills as technology, skills and knowledge advance (OECD, 2019^[54]).

Like most OECD and European countries, Bulgaria has made CPD mandatory for teachers. In 2016, Ordinance 12 established that teachers are required to update their competencies and knowledge continuously, and the country's teacher standards are expected to guide and serve as a reference point for professional development programmes. Teachers and school principals are expected to take two types of formal, regulated CPD: 1) compulsory training for continuing qualification credits;⁹ and 2) programmes that lead to one of five successive professional qualification degrees.

External CPD is provided by specialised units, universities and scientific organisations and training organisations. These training providers are the only ones offering CPD programmes approved by the Minister of Education. Planning, co-ordination, governance and monitoring of CPD activities are shared between MES, regional education management units, municipalities and school principals. The government subsidises CPD programmes leading to qualification credits, and school principals are expected to use part of the school budget to cover CPD.

Every 4 years (the official period for appraisals), teachers must undertake at least 48 hours of external CPD programmes that issue credit points. Teachers are also required to participate in job-embedded team learning in the form of 16 hours of participation in an “internal institutional qualification”.

Mandating CPD for teachers in 2016 led to almost universal participation by 2017. According to the TALIS 2018, 96% of lower secondary teachers in Bulgaria attended at least one professional development activity in the year prior to the survey (OECD, 2019^[54]). This had increased from around 85% in the 2013 TALIS.

However, the quality and relevance of teachers’ CPD in Bulgaria do not appear to be strong. A high share of Bulgarian teachers report that their CPD does not teach skills considered crucial for 21st-century teaching (e.g. identifying and addressing student disengagement, dealing with absenteeism and low motivation, etc.) (OECD, 2019^[54]). A survey by Sofia University in 2019 found that while a large share of teachers was formally engaged in CPD in 2014-19, one in four had never participated in qualifications aimed at enhancing core competencies defined in the teacher standards (Gospodinov and Peicheva-Forsyght, 2019^[60]). These results could reflect several factors, including the process for selecting priority areas of CPD by government and schools, as well as quality assurance arrangements for CPD.

Despite high participation, the CPD system in Bulgaria is not based on a robust assessment of teachers’ training needs (Institute for Research in Education, 2019^[26]). At the national level, MES determines priority topics for CPD provision by developing an annual list, the National Programme for Qualifications. At the school level, principals must spend at least half of their CPD training funds on internal or inter-institutional qualifications (e.g. discussion forums, open lessons, etc.) but otherwise have the autonomy to decide on their schools’ annual CPD plan. However, decisions on the content of CPD are largely top-down, based on expert judgement rather than evaluations of teaching and learning gaps (World Bank, 2020^[46]).

In particular, the results of teacher appraisals are not systematically feeding into CPD planning at the school or system levels. Every four years, teachers and school principals are assessed by a commission made up of school principals, RED experts and pedagogical council representatives. However, the current appraisal process is mainly used for career progression and does not provide clear or regular feedback on teachers’ development needs. In contrast, formative, regular appraisals commonly involve appraisers within a school directly observing and assessing teaching practices in the classroom (Guthrie et al., 2022^[13]).

Ex ante (pre-training) quality assurance of CPD programmes and providers could be strengthened. MES has made important progress in setting a framework with accreditation criteria for assessing the quality of training organisations and programmes. Training institutions providing professional development credits to teachers must be approved by MES, and their programmes must be registered in the Information Register of the Approved Qualification Programmes (IRAQP). Registration requires providers to demonstrate that their programmes are practical and theoretical and that their objectives and methods align with the knowledge, skills and attitudes defined in teacher standards. However, some providers of teachers’ CPD are not required to have their programmes approved and registered in this system, namely specialised service units (i.e. the National Centre for Raising the Qualification of Pedagogues, operating under MES) and universities. Some universities providing CPD do not even have accredited pedagogy programmes. Having a diverse set of CPD providers without rigorous quality assurance and monitoring procedures makes it difficult to ensure that programmes align with the professional needs of teachers.

Bulgaria also lacks a systematic approach for *ex post* (post-training) quality assurance of CPD to ensure the desired outcomes of CPD are achieved. Bulgaria has taken steps to collect feedback on training programmes by allowing teachers to provide feedback on a purpose-built website (Box 2.6). Beyond this, however, Bulgaria does not assess whether mandatory and/or publicly subsidised and registered CPD is achieving key outcomes, such as improving teachers’ skills, pedagogy and assessment, or whether it is improving students’ performance.

Bulgaria could build upon its recent mechanism to collect feedback from teachers on CPD training (Box 2.6). This is an important initiative taken by the government and could be included as part of a more formal, outcomes-based framework of CPD quality assurance. The country can also learn from Norway and its experience in creating a quality assurance system that emphasises the local analysis of teachers' training needs, collective forms of professional learning and ongoing monitoring of the outcomes of CPD (Box 2.7).

Box 2.6. Relevant national example: Monitoring and improving teachers' continuing professional development

Bulgaria: A feedback mechanism in the Information Register of the Approved Qualification Programmes (IRAQP)

In 2021, Bulgaria passed a regulatory amendment that allows CPD participants to provide feedback about their training via MES's IRAQP. This is the first feedback mechanism introduced by the government to assess the quality and relevance of CPD programmes according to teachers' opinions and own experiences. The amendment specifies that:

- In a separate module of the IRAQP, so as to offer transparency and information about the qualification activities, pedagogical specialists shall provide feedback by filling in structured questionnaires to assess and express opinions about the conducted trainings on the approved CPD programmes.
- The feedback shall be provided electronically in order to provide an opportunity for automated processing of the data received from the trained persons and to summarise the user assessments and opinions.

As the feedback mechanism in the IRAQP is a recent development, there is limited information available about its use. However, systematically measuring teacher satisfaction with training is an important first step in assessing the quality and outcomes of CPD in Bulgaria.

Source: Government of Bulgaria (2019^[61]), Ordinance № 15 of 22 July 2019 on the status and professional development of teachers, directors and other pedagogical specialists, <https://lex.bg/bg/laws/ldoc/2137195301>.

Box 2.7. Relevant international example: Monitoring and improving teachers' continuing professional development

Norway: Quality assurance under a decentralised in-service competence development model

In 2017, Norway introduced a new model for teachers' in-service competency development, emphasising the local analysis of training needs and collective forms of professional learning. National authorities provide financial support to teachers engaging in credit-giving further education on priority topics, as well as to local authorities organising collective in-service professional development. Under the new model, local "school owners" are responsible for identifying their teachers' professional development needs and drawing up professional learning plans in co-operation with local universities. These plans are then discussed at "collaboration forums" of stakeholder representatives (local universities, municipality associations, teacher representatives and local businesses) convened by governors at the county level. Once training priorities are agreed upon, county governors allocate the funding to local authorities. This decentralised scheme is complemented by a follow-up scheme, which provides state support and guidance to municipalities and county authorities that report weak results in key education and training areas. A third pillar of the model is an innovation scheme that brings together municipalities and research communities to develop and test learning interventions in line with evaluation and quality requirements defined by the state.

To evaluate and improve the effectiveness of the decentralised professional learning initiatives, the Norwegian Directorate for Education and Training has developed a set of five quality criteria to guide its discussions with providers and stakeholders: sustained duration; opportunities for active learning; coherence with teachers' knowledge; beliefs and education policies; opportunities for collaborative learning; and a focus on subject content and pedagogical content knowledge. In addition, county governors provide annual reports, and the directorate conducts surveys for school owners, school leaders and teachers to elicit information on their involvement in continuing professional learning. This information is complemented with data on students' learning outcomes and surveys on their learning experience, all of which schools can draw on to evaluate their teachers' professional learning needs. In addition, the directorate commissioned an external evaluation to assess the impact of the New Competence Development Model.

Source: OECD (2019^[62]), *Improving School Quality in Norway: The New Competence Development Model*, <https://doi.org/10.1787/179d4ded-en>.

Recommendations for monitoring and improving teachers' continuing professional development

Recommendations

- 1.6 Align continuing professional development programmes more closely to teachers' training needs by improving the collection and use of appraisal, assessment and evaluation data in CPD planning.** MES should ensure that the priority areas for CPD in the National Programme for Qualifications are based on comprehensive and timely information about the learning needs of teachers. For this purpose, MES should systematically collect, synthesise and use aggregated findings on training needs from teacher appraisals, students' results from national external assessments and school results from external evaluations and information from classroom observations. CPD providers should then be required to develop their programmes around those priorities. Teachers and principals should also be supported to identify and communicate their training needs. To complement the current appraisal system, MES should consider introducing an annual, school-based formative appraisal to generate evidence on teachers' and principals' training needs. Results from these school-based assessments should then be used to link schools' annual professional development plans to teachers' and principals' learning needs.
- 1.7 Strengthen the quality assurance of teachers' continuing professional development by expanding *ex ante* evaluation and introducing systematic *ex post* evaluation of the outcomes of CPD.** MES should ensure that all CPD programmes leading to teacher qualification credits are approved and registered in the IRAQP. The ministry should also introduce a data-driven, systematic approach to monitoring the quality of all registered CPD programmes over time. As a starting point, MES should make sure that CPD providers offering programmes that receive poor feedback in MES's new teacher feedback mechanism be inspected. MES should also introduce indicators to evaluate programmes' effectiveness. These could include outcome indicators (e.g. new knowledge and skills for teachers; improved quality of student-teacher interaction based on teachers' surveys and teacher appraisals) and process indicators (e.g. material, equipment, and facilities; number of training hours delivered). In the long term, the ministry should invest in capacity building to ensure all registered CPD providers are re-assessed on an ongoing basis based on the measured quality of their CPD offerings.

Opportunity 3: Making vocational and higher education more responsive to labour market needs

The need for responsive education is becoming more acute in Bulgaria, especially as the country faces a large population decline related to population ageing and high emigration rates. Moreover, megatrends such as globalisation, technological change and digitalisation are transforming workplaces and the skill requirements of jobs in the process, with the result that many jobs require different and/or higher levels of skills than in the past. Such developments highlight the need to ensure that vocational and higher education in Bulgaria is responsive to evolving labour market needs.

Bulgarian employers are concerned about increasing difficulties in finding workers with the right set of skills. Young people's learning and labour market outcomes suggest that education and training could be more responsive to labour market needs (see the section above on Bulgaria's performance in youth skills). Key Bulgarian education strategies prioritise responsive VET and higher education. They focus on, among other things, making initial vocational education a more attractive learning opportunity; providing flexible access to training and acquisition of qualification; and strengthening the co-operation between VET, higher education, social partners and government officials on curricula and programmes, practical training and career guidance to students.

Multiple factors may contribute to the limited responsiveness of Bulgaria's education system. Institutionalised co-operation between educational institutions and employers in VET exists at the national level but is not systematic at the local level. VET institutions have some mechanisms for engaging employers (e.g. the National Council for Tripartite Cooperation), but their role is mainly advisory, and they do not generate information on regional and local skills needs. Project participants highlighted that in both VET and higher education, social partners lack incentives and labour market information to be effectively involved in curriculum design and other types of co-operation with institutions. Work-based learning opportunities also remain insufficient for students in VET, especially outside big cities. As for higher education, the government has introduced financial and other measures to incentivise students to pursue qualifications in high demand in the labour market. However, there is evidence of mismatches between the supply and demand for graduates in certain fields, and some groups of youth remain under-represented in higher education. Addressing these challenges will require a comprehensive response, including strengthening the role of local stakeholders in VET and strengthening the capacity and incentives of higher education institutions to respond to labour market needs.

Strengthening the role of employers and local actors in vocational education and training

Many aspects of Bulgaria's VET system are highly centralised. In recent years, the Government of Bulgaria has sought to make VET more responsive to local labour market needs by increasing the autonomy of municipalities and regions in delivering VET and by increasing the participation of social partners. Municipalities have a growing role in setting staff salaries and maintaining VET institutions (e.g. equipment), for example. Each year, schools determine which VET programmes they will provide and how many applicants they will enrol. However, the majority of VET schools are state-controlled, and considerable decision making relevant to their day-to-day running is still being made at the national level. For example, MES and NAVET retain responsibility for updating VET curricula, while MES and the Ministry of Finance determine the amount of public funding available per student in VET.

The process for updating VET curricula is particularly centralised and bureaucratic. VET is offered only in professions and specialities included in the national LPVET. The list is developed and updated by NAVET and is approved by MES in consultation with the Minister of Labour and Social Policy, relevant sectoral ministers and representatives of employers and employees (OECD, 2019^[63]). Each profession and specialty on the LPVET then needs to be translated into occupational standards that provide clear information on the necessary professional knowledge, skills and competencies for each profession. NAVET then uses occupational standards to develop state educational standards (setting national learning

goals for each subject at the end of each stage of schooling). Only then can VET curricula be designed or updated. MES develops the compulsory part of curricula at the national level in consultation with VET teachers and employers. Schools have the autonomy to decide on subjects of “extended training” in VET, but MES sets the hours for such training.

Centralised and bureaucratic decision making in VET limits the sector’s ability to respond to labour market needs, especially at the local level. There are often delays in updating the LPVET because it is so resource-intensive. In addition, it can be hard for authorities to find social partners with the time and competencies to participate in the process of reviewing the list (OECD, 2019_[63]; World Bank, 2022_[27]). The standards associated with professions on the list are also developed without robust labour market information and skills anticipation tools (OECD, 2019_[63]) (see Chapter 5).

While there are potential benefits to decentralising and simplifying decision making in VET, especially for updating curricula, this would need to come with capacity building at the subnational level. The monitoring and controlling tasks of MES and NAVET in the VET system likely limit their capacity to undertake other key tasks, such as updating curricula (OECD, 2019_[63]). As such, there could be benefits in giving subnational authorities greater flexibility to develop curricula and/or adapt VET to local needs. However, schools already have the autonomy to design the elective part of the curriculum to reflect local labour market needs and student interests. Yet, project participants highlighted that some VET schools and municipalities currently lack the capacity and labour market information to adequately adapt VET to local needs. Schools’ decisions regarding VET provision are often based on existing capacity, the availability of teachers and school infrastructure, rather than employers and labour market needs (OECD, 2019_[63]). Building capacity at the local level would be a necessary part of efforts to increase the flexibility and responsiveness of VET.

Stakeholder engagement in the VET system is also highly centralised and formal. Bulgaria has a National Council for Tripartite Co-operation, a consultative body for labour, social insurance and living standard issues. It comprises senior government, trade union and employer representatives and discusses and gives advice on draft legislation related to vocational qualifications. It has become more involved in VET and can propose changes to the list of VET qualifications. Bulgaria also has a VET Consultative Council in place to advise on VET policy and implementation, bringing together representatives from trade unions, employers, universities, non-governmental organisations (NGOs), national and local government representatives and schools. NAVET is primarily responsible for co-ordinating formal and regulated co-operation between social partners and the government (Table 2.2).

However, stakeholder engagement in VET is not systematic or effective at the subnational level. Project participants stated that co-operation between local authorities, VET schools and employers at the subnational level is generally weak. Although skills needs vary significantly across regions in Bulgaria (OECD, 2019_[63]), the VET system is not meeting these needs effectively. Social partners play a consulting role at the regional and local level, such as in the 28 District Development Councils. However, these formal subnational fora are not VET-specific (OECD, 2019_[63]). Some municipalities lack resources and require additional support to engage in durable co-operation with social partners and VET schools (CEDEFOP, 2020_[64]). Local actors often also lack adequate data and tools to help forecast the skills needed for local and regional economies (see Chapter 5). Bulgaria is introducing sectoral skills councils to improve stakeholder engagement in VET. Sectoral skills councils will analyse and forecast labour market needs at sectoral and regional levels, help update the LPVET and state educational standards and support partnerships between vocational schools and employers, among other things (see Chapter 5). Sectoral skills councils will strengthen stakeholder engagement in VET if implemented and resourced effectively. However, it is uncertain what the role of subnational actors will be in the councils and how the councils will help address local skills needs.

Bulgaria has also sought to involve employers in VET by prescribing work-based learning (WBL) and supporting apprenticeships in initial VET. WBL, including apprenticeships, complements the learning in the

classroom by enabling students to develop work-relevant technical and professional skills using up-to-date equipment and work practices, as well as transversal skills, such as teamwork, communication and negotiation (OECD, 2012^[65]). High-quality WBL also allows VET graduates to find relevant employment more easily. In Bulgaria, practical learning is compulsory in every initial VET programme. Dual VET (apprenticeships), in particular, has been a focus of recent reforms by the Bulgarian government to increase WBL in initial VET. The PSEA introduced the dual training model, alternating between practical training in a real working environment and school-based learning. Apprentices start their in-company apprenticeship during Grade 11 and continue in Grade 12 (two days per week in-company placement in Grade 11 and three days per week in-company placement in Grade 12) (Hristova, 2020^[66]). The Bulgaria 2030 strategy and recent national programmes include expanding dual training in VET as a priority.

However, relatively few VET students and employers in Bulgaria engage in WBL and apprenticeships. As such, Bulgaria is not realising the potential benefits of involving employers in VET, especially for making VET more responsive to skills needs. Currently, VET in Bulgaria is still mainly school-based. Although practical learning is compulsory, it often occurs in simulated rather than real workplaces. In Bulgaria, 56% of VET respondents¹⁰ to an EU opinion survey on VET said their education took place entirely at school, compared to just over 40% of respondents across the European Union on average (Daskalova and Ivanova, 2018^[23]). In the 2021/22 school year, around 10 000 students were enrolled in dual VET, representing just under 7% of all initial VET students (MES, 2022^[67]). WBL opportunities are particularly limited for students in rural areas facing distance and transport limitations. Transportation for secondary VET students in these areas is subsidised at a maximum of 60%. Furthermore, fewer than 10% of Bulgarian enterprises are involved in providing WBL in VET (World Bank, 2022^[27]). This is lower than in most EU countries (European Commission, 2019^[68]; Hristova, 2020^[66]).

The financial and non-financial costs of offering WBL and apprenticeships appear to be a barrier for many employers. Financial incentives to firms engaging apprentices, such as tax breaks or subsidies, can reduce cost barriers. However, they are most effective in conjunction with non-financial support (e.g. information and guidance) (OECD, 2022^[69]). Non-financial measures can include capacity building for employers to make better use of apprentices and regulatory measures that legally require employers to hire apprentices (Kuczera, 2017^[70]). Although the dual learning apprenticeship model involves a cost-sharing arrangement, the state budget only covers apprentices' health insurance contributions. Employers are obliged to pay apprentices' salaries and related social security contributions. They must also pay for training apprentice mentors in full or in part with schools, as the law requires one mentor for every five apprentices. Students' wage levels are fixed below workers' wages, but employers are also free to establish higher remuneration. Some VET schools struggle to find employers willing to hire apprentices, with a key reason being the lack of financial support for employers (European Commission, 2019^[68]; Hristova, 2020^[66]). Small- and medium-sized enterprises (SMEs), in particular, which account for around three-quarters of total employment in Bulgaria, likely lack the capacity to engage in WBL, including apprenticeships. A project initiated in 2020 and funded by the European Union – Support of Dual Learning System – aims to, among other things, offer support to train apprentice mentors in enterprises (e.g. assisting them to obtain relevant pedagogical and methodological skills) (MES, 2020^[71]). In general, however, the expansion of dual VET is hindered by high implementation costs, among other factors (World Bank, 2022^[27]), and will likely require greater financial and non-financial support for employers.

Bulgaria could potentially strengthen the role of employers and local actors in VET in a variety of ways. First, the country could strengthen the involvement of local employers and stakeholders in the development of VET by expanding their role and representation within the soon-to-be-established sectoral skills councils. This could build on Bulgaria's experiences with the Northwest Regional Board (Box 2.8) and Poland's Partnership for Lifelong Learning (Box 2.9). Second, Bulgaria could utilise its District Development Councils to support the link between local employers, authorities and schools, similar to what has been done in Denmark (Box 2.9). Third, the country could seek to help SMEs share the responsibility

and spread the costs of hiring apprentices, as is done by Switzerland's vocational training associations (Box 2.9). Finally, MES and the MLSP should consider directly subsidising the costs of apprenticeships for employers, following the example of Norway (Box 2.9).

Box 2.8. Relevant national example: Strengthening the role of employers and local actors in vocational education and training

Bulgaria: Improving the involvement and co-operation of local actors and social partners in initial VET provision, Northwest Regional Board "Education-Business"

The Northwest Regional Board "Education-Business" was established in 2020 as a public-private partnership between the Regional District Administrations of Montana, Vratsa and Lovech and an NGO (Forum Foundation). It aims to be an innovative mechanism for co-ordination and co-operation between local authorities, social partners and businesses in the three neighbouring regions (districts) for formulating, implementing and monitoring regional VET policies. The board co-ordinators are the Regional Governor of Vratsa and the Institute for Research in Education.

The main goals of the board are:

- improving the effectiveness of cross-sectoral interaction in the field of VET in the involved districts
- improving the quality and labour market relevance of vocational education in the three districts.

The board priorities for 2020-25 include:

- initiating and supporting the update of municipal vocational education strategies, taking into account specific local needs and regional development plans
- identifying effective solutions for the optimisation of the network of vocational schools in the regions of Vratsa, Lovech and Montana, including the analysis of the school network and the need for its optimisation
- initiating and supporting the development of a model for co-operation between employers for joint participation in the system of dual training of students from local vocational schools
- creating a database of current research and analytical materials that can be of practical use to board members and the development of VET curricula and VET admission planning based on labour market information
- supporting the development and implementation of an effective career guidance system for students
- supporting the modernisation of the learning environment as an open space for learning
- creating shared learning spaces between schools, businesses and universities in the three regions/districts
- strengthening links between business and local vocational schools.

The board has been working on initiatives to strengthen the co-operation between employers and schools, especially when it comes to dual VET. This includes, for example, co-ordinating with SMEs to share funding for training staff to oversee apprentices. The national government could use the example of this local partnership and their activities and apply them across the country.

Source: BTA (2019^[72]), *Northwestern regional board "Education - Business" will be created between the regions of Lovech, Vratsa and Montana*, www.bta.bg/bg/news/bulgaria/88413-Severozapaden-regionalen-bord-Obrazovanie-Biznes-shte-bade-sazdaden-mezhdu-o.

Box 2.9. Relevant international examples: Strengthening the role of employers and local actors in vocational education and training

Denmark: VET training committees

In Denmark, local training committees ensure that national-level bodies have a good overview of local circumstances and that local policy is aligned with national objectives. These committees gather information on local skills needs and the corresponding training opportunities provided and share it with national bodies, which in turn use these data to set the overall direction of vocational education in Denmark. Each vocational college (providing school-based education and training) works with at least one local training committee. The local committees include representatives from the vocational college (students, staff and management), local employers and employees. These bodies also play an important role in co-ordinating VET policy at the local level. Representation from local businesses enables the committees to co-ordinate workplace training: finding and approving relevant internships and assisting in resolving disputes between students and work placement providers. The committees also help determine what subjects should be taught and play a key role in shaping the course curriculum.

Poland: Regional sectoral councils

In Poland, in the Małopolska region, the Partnership for Lifelong Learning provides a platform for co-operation between education institutions and associations of employers so that they can exchange information to ensure that the school offering in terms of subject mix and curriculum is consistent with labour market needs in the region. However, the scope of the partnership is much broader as it covers the whole of the lifelong learning spectrum (from schools to training providers). The region has also established regional sectoral councils in seven sectors in collaboration with the Department of Education in the voivodeship (regional) marshal's office. The councils are composed of representatives of VET schools and centres for adult learning, as well as local employers and business associations. The councils allow local employers to communicate information on skills needs in specific sectors, enabling VET teachers in related subjects to provide good quality vocational qualifications linked to labour market needs.

Switzerland: Financial and non-financial support for work-based learning

In Switzerland, the government established vocational training associations (*Lehrbetriebsverbände*) through the 2004 Act on VET. These are associations of two or more training firms that share apprentices, whose training is organised across several firms on a rotating basis. The aim is to enable the engagement of firms that lack the capacity and resources to provide the full training of an apprentice and to lower the financial and administrative burden on individual firms. Switzerland subsidises the associations with initial funding during the first three years for marketing, administrative and other costs necessary to set up the joint training programme. After this initial support, the training associations are supposed to be financially independent. An evaluation (Resultate Evaluation Lehrbetriebsverbände, OPET, Bern) found that the majority of firms participating in training associations would not have engaged in training otherwise.

Norway: Financial and non-financial support for work-based learning

Like several other OECD countries, Norway offers a range of financial incentives and non-financial support for employers to offer WBL in the form of apprenticeships. Some of this support is tailored to SMEs. For example, the country offers a direct subsidy per apprentice (around EUR 14 8006 for two years of work placement with the company) depending on apprentice characteristics (such as age, disability, school performance, migration status, gender, previous education) and sector characteristics.

Moreover, training companies can also brand themselves with a label for “approved learning enterprise” to encourage consumers to buy goods and services from them and so that more enterprises join the apprenticeship scheme. The Norwegian government has also introduced rules for apprenticeship requirements in public procurement. For contracts worth a minimum of NOK 1.5 million (Norwegian krone), the government must buy goods and services from companies that are approved apprenticeship providers. These regulations mainly apply to the building, construction and ICT sectors and seek to ensure that every VET student in search of an apprenticeship finds one.

Source: OECD (2019^[73]), *OECD Skills Strategy Poland: Assessment and Recommendations*, <https://doi.org/10.1787/b377fbcc-en>; European Commission (2013^[74]), *Work-based Learning in Europe: Practices and Policy Pointers*, http://ec.europa.eu/dgs/education_culture/repository/education/policy/vocational-policy/doc/alliance/work-based-learning-in-europe_en.pdf; Kuczera, Kis and Wurzburg (2009^[75]), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of Korea 2009*, <https://doi.org/10.1787/9789264113879-en>; Kuczera (2017^[76]), “Striking the right balance: Costs and benefits of apprenticeship”, <https://doi.org/10.1787/995fff01-en>; Kuczera and Jeon (2019^[77]), *Vocational Education and Training in Sweden*, <https://doi.org/10.1787/g2g9fac5-en>.

Recommendations on strengthening the role of employers and local actors in vocational education and training

Recommendations

- 1.8 Involve subnational vocational education and training stakeholders in the new sectoral skills councils and create fora for subnational stakeholders to discuss and improve the responsiveness of VET.** The Bulgarian government should ensure that its sectoral skills councils, which will be established in 2023, include representatives from the subnational level. This could be in the form of dedicated members or committees representing particular geographical regions. In parallel, Bulgaria should utilise District Development Councils to strengthen districts’ input to initial VET provision, including on designing and updating the initial VET curriculum. The government should consider creating skills or VET committees under District Development Councils and including VET stakeholders in these bodies. These committees should provide VET-relevant insights to the central government, sectoral skills councils and local VET schools, including about local skills needs. Finally, each of these bodies should seek to support schools and employers to expand WBL and apprenticeships in initial VET (see Recommendation 1.9).
- 1.9 The MES and the Ministry of Labour and Social Policy should co-operate to improve financial and non-financial support to enterprises and students to engage in work-based learning.** Bulgaria should encourage and support businesses, especially SMEs, to provide work-based learning opportunities to VET students. This could be done by providing apprentice wage subsidies and subsidising student mentors’ training. The government should also offer incentives to set up training associations to share the costs of organising apprenticeships among groups of SMEs. In addition, the sectoral skills councils and any new subnational VET fora (see Recommendation 1.8) should have responsibility for supporting employers and schools to expand WBL in VET. They could do this, for example, by helping to establish partnerships between schools and employers and informing enterprises about government incentives for apprenticeships. Finally, government and municipalities should increase subsidised transportation for secondary VET students to attend school and WBL.

Increasing the relevance of higher education to labour market needs

Project participants expressed concerns about the relevance of higher education to labour market needs in Bulgaria. For example, the latest draft of the higher education assessment carried out by MES in 2021 shows imbalances between the demand and supply of education. Only 53% of all university places at the national level are filled, and in 29 professional fields, student enrolment is less than half of the places available (European Commission, 2021^[53]). The least attractive programmes – based on the number of enrolments – include several areas considered priorities at the national level, such as those in STEM (World Bank, 2022^[29]). The Strategy for the Development of Higher Education (2021-2030) also identifies a mismatch between the knowledge and skills required by the labour market and those provided in higher education as a challenge. The country faces difficulties in steering youth into higher education fields that develop skills in high demand in the labour market (e.g. engineering, technical education or middle management). On the other hand, programmes associated with occupations for which demand is low (including lawyers, psychologists, social and political scientists and others) tend to attract an overabundance of applicants.

Bulgaria's system for determining the number of state-funded places in higher education takes into account the fields facing skills shortages or that are of strategic importance for the country, among other factors. Each year, the Council of Ministers determines the number of available places in higher education institutions and approves the update of the National Map of Higher Education in the Republic of Bulgaria, as recommended by MES. The map provides decision-makers with a range of information to help them determine the number of higher education places by region, institution, professional field and speciality to meet socio-economic development goals and the needs of the labour market. For example, for a given region, the map provides information about the current number of universities, professional areas offered, the number of professors and students by professional area and specialty, how many state-funded places are unfilled, etc. In addition, MES proposes to the Council of Ministers a list of priority professional fields and protected specialities based on labour market information collected by MES and the MLSP. The current list adopted in 2021 defines 8 professional fields (religion and theology; mathematics; physical sciences; chemical sciences; chemical technologies; energy; materials and materials science) and 18 protected specialities with the highest expected future shortage in the labour market. In these fields and specialities, institutions are authorised to accept a higher number of students; the state provides additional funding per student; tuition fees can be lowered or removed; and students can receive scholarships (Eurydice, 2022^[78]; World Bank, 2022^[29]). However, Bulgaria's capacity to define labour market demand for skills and professions in the map is limited by the quality of existing skills assessment and anticipation activities (see Chapter 5).

The subsidy rate for individual higher education programmes also takes into account the fields facing skills shortages or are of strategic importance for the country, but to a limited extent. In addition to a basic rate per student, the state subsidy for higher education is based on differentiated rates for each professional field, as well as an assessment of the quality and labour market relevance of programmes. MES undertakes a “complex assessment” of the quality of education and labour market relevance based on the Bulgarian University Ranking System (BURS), which publishes information about the characteristics and quality of higher education institutions and labour market information associated with different courses (Box 2.10). The complex assessment utilises a formula containing: indicators on the educational process (institutional and programme accreditation, the exclusiveness of academic staff); research (citations in Scopus and Web of Science, PhD programmes); and labour market relevance (insurable earnings, unemployment rate, contribution to the social insurance system, etc.). The higher an institution and programme score in this complex assessment, the higher the state subsidy for a programme. However, because labour market relevance is only one of many factors used in funding determination, it has a relatively limited impact on institutions' overall funding.

Box 2.10. Relevant national example: Increasing the relevance of higher education to labour market needs

Bulgaria: The Bulgarian University Ranking System (BURS)

BURS is one of the main tools the Bulgarian government uses to decide on policies regarding the admission and financing of higher education institutions. Its creation, however, focused on developing a system to guide and support student candidates in choosing among the diverse range of programmes and higher education institutions available to them within the country.

BURS and its web portal were created in 2010 under the project, Development of a Ranking System for the Higher Education Institutions in the Republic of Bulgaria, co-financed by the European Union through the European Structural and Investment Funds. The web portal has been recently updated with information for 2021 by the OSI-S Consortium – the Open Society Institute Sofia and Sirma Solutions – under a public procurement contract.

The web portal is a publicly open source of information that allows users to compare and rank universities by professional field (e.g. biological sciences, administration and management, etc.) based on pre-defined indicators. These indicators are divided into six different categories that measure the quality of the: teaching and learning process; science and research; teaching and learning environment; welfare and administrative services; prestige and regional importance of the universities; as well as graduates' career realisation in the labour market. Under this last category, the *applicability of degree acquired and realisation by vocation* measures the share of higher education institution graduates appointed to positions requiring university degrees. Although it is relevant information, the indicator is limited and does not measure whether the skills and competencies developed by students in their chosen field of study are used in their jobs.

The sources of statistical information used by BURS include, for example, information from the National Evaluation and Accreditation Agency, the National Social Security Institute, as well as the international bibliographical databases, Scopus and Web of Science. The system also builds its indicators based on their own surveys conducted with students and employers, for example.

Student surveys focus on the student experience regarding their university programmes (i.e. based on students' subjective assessment of the quality of theoretical knowledge and practical training offered). These surveys are usually carried out every four years.

Employer surveys aim to assess employer satisfaction with employees who graduated within five years before the interviews. Although employer surveys are more frequently run than student surveys, they constitute the only source of information regarding programmes' relevance to the labour market.

BURS compares the performance of 52 higher education institutions within 52 professional fields. The purpose of BURS is to assist prospective students in making informed choices and navigating the different programmes offered by higher education institutions in Bulgaria. However, according to a survey among university rectors, one-third of respondents mentioned they believed that students are still not familiar enough with BURS and do not use it to plan their careers.

Source: MES (2022^[79]), *Bulgarian University Ranking System*, <https://rsvu.mon.bg/rsvu4/#/methodology>; World Bank (2022^[29]), *Bulgaria Higher Education: Situation Analysis and Policy Direction Recommendations*, <http://sf.mon.bg/?h=downloadFile&fileId=2768>; Open Society Institute Sofia (n.d.^[80]), *University Ranking*, <https://osis.bg/?p=2482&lang=en>.

Bulgaria has made efforts to improve information on the responsiveness of higher education providers and programmes to labour market needs so as to direct places, funding and student choices. BURS seeks to guide prospective students in their academic choices. MES also uses it to allocate public funding to universities to incentivise research and, to a lesser extent, improve graduates' employment outcomes, as described above. Furthermore, MES has recently announced an agreement with the European Commission on the Eurograduate project, which aims to create a European-wide graduate survey (MES, 2022^[81]). Bulgaria was approved for participation in the project's second phase and, based on the results, is expected to establish a national tracking system for higher education graduates in the country.

However, tracking student outcomes remains limited, and the success of planned programmes will depend on their precise design and successful implementation. Currently, no component of BURS tracks students' outcomes regarding, for example, the time between graduation and first employment or the relevance of acquired skills to the workplace (European Commission, 2020^[82]). There is also no longitudinal data provided on graduates (e.g. to better understand and compare short-term and mid-term transitions from higher education to the labour market). Furthermore, it is still unclear if and how Bulgaria's participation in the Eurograduate project will lead to lasting improvements with BURS. In order to support higher education institutions in responding to labour market needs, MES could compile information already available under the BURS system with the results from the upcoming national graduates' tracking survey and make this available to higher education institutions.

Career guidance for higher education students could be expanded further and enriched with better labour market information. Currently, 49 out of 52 higher education institutions in Bulgaria have career guidance centres, and students can utilise regional career guidance centres. Among other roles, the guidance centres provide students with job information, assist in developing CVs, support interview preparation, etc. They also support students and employers in developing internship agreements, for example. However, project participants mentioned the need to improve guidance to students to access and navigate information on labour market needs and available professions. Indeed, there is insufficient labour market information to guide students (Fair Guidance Project, 2015^[83]), including via career guides.

In addition, youth from disadvantaged backgrounds have relatively limited access to and success in higher education in Bulgaria. This inhibits the capacity of higher education institutions to meet labour market demand for tertiary-educated workers, including in areas of skills shortages. Students from poor socio-economic backgrounds are very under-represented in higher education (World Bank, 2022^[29]). This is especially concerning given the overall decrease in students entering higher education due to Bulgaria's declining population trends (see the section on Responsiveness and graduate outcomes). In Bulgaria, passing the State Matura examination is required to access higher education. Students from disadvantaged backgrounds are more likely to have poor grades and are less likely to enter their chosen and/or more competitive programmes (World Bank, 2022^[29]). Improving the access of socio-economically disadvantaged populations to higher education can help address shortages for graduates generally and lead to a more highly skilled workforce, contributing to the relevance of higher education to the labour market and increasing the competitiveness of the Bulgarian economy. On the positive side, one of the most recent measures implemented to support vulnerable individuals' access to higher education has been the provision of scholarships to students in public higher education institutions at BGN 150 per month in 2020 (World Bank, 2022^[29]).

Even when admitted to higher education, students from disadvantaged backgrounds are often less equipped to succeed than their more advantaged peers. MES should ensure students are offered guidance and academic support to address possible disadvantages derived from low quality in pre-university education that may affect students from vulnerable backgrounds the most. Bulgaria could strengthen the incentives to support disadvantaged students to enter and remain in higher education by providing support beyond financial aid. For example, the country could introduce state-funded programmes for targeted

remedial classes for students during their higher education courses and consider stepping up study guidance for prospective students.

Other challenges limit the responsiveness of higher education to labour market needs, such as capacity constraints within universities. According to the National Evaluation and Accreditation Agency (NEAA), higher education institutions struggle with collecting information regarding graduate outcomes (NEAA, 2016^[84]), which would allow them to better assess the quality and relevance of their programmes and update curriculum content, for example. Limited labour market information, the lack of incentives and limited higher education institutions' capacity to analyse the available information make it hard for programmes to respond to changing needs in the labour market. Challenged by a lack of resources and a common methodology, higher education institutions seem to rely on alumni associations and faculty-specific links with employers to gather information on graduates' outcomes (NEAA, 2016^[84]). The data collected remain largely unused to align programmes with labour market needs.

Bulgaria could improve and better utilise information and financing to make higher education more responsive to labour market needs. It should utilise the data under its BURS system and its future national graduate tracer survey results to further assess higher education responsiveness to labour market needs. This improved information could be used to strengthen performance-based funding in higher education, whereby a share of institutions' funding is dependent on the labour market outcomes of their graduates.

Bulgaria should also work to improve access to labour market information and higher education institutions' capacity to use this information to update and review their programmes. Austria's ATRACK graduate tracking project can serve as a helpful model (Box 2.11) in this regard. The relevance of higher education institutions to students and labour market needs can also be strengthened if Bulgaria improves the types of guidance and support for its students, especially for groups with limited access to higher education, with measures taken to increase their chances of accessing and completing education. Australia's Higher Education Participation and Partnerships Program may inspire Bulgaria (Box 2.11).

Box 2.11. Relevant international example: Increasing the relevance of higher education to labour market needs

Austria: ATRACK graduate tracking project

The Absolvent:innen-Tracking (ATRACK) project was a register-based survey of the labour market integration of Austrian university graduates, drawing on student data, social insurance data, educational attainment registers and the central civil register. It was developed by Austria's public universities and published by Statistics Austria and the University of Vienna. The project ran initially from 2017 to 2021 and has highlighted the importance of Austria's participation in EU-wide graduate tracking initiatives.

The ATRACK project gave universities access to comparative information on the careers of their graduates, such as the duration between graduating and starting their first occupation, employment status, labour market integration, income and the economic sector in which they work. The results of this graduate tracking initiative are used, among other reasons, to inform steering decisions by university bodies, for the evaluation and further development of study programmes, to guide the study choices of prospective students and to provide career guidance for students and graduates. One of the main innovations of this project is that each university receives a factsheet divided by university degree programme, academic degree (ISCED Levels 6-8) and a broader field of study (ISCED F 2013 fields of education). In addition, the factsheet presents diagrams for selected results in the following areas: 1) labour market status; 2) time period until first employment; 3) top-five sectors; and 4) gross monthly income for full-time employees.

Australia: Higher Education Participation and Partnerships Program (HEPPP)

Australia's HEPPP was established in 2010 (and is still running) and funds universities to “undertake activities and implement strategies that improve access to undergraduate courses for people from low socio-economic status backgrounds and improve their retention and completion rates”. In this way, it directly assists universities in increasing the enrolment and completion number of students from low socio-economic backgrounds in higher education. HEPPP's key objective is to promote equality of opportunity in higher education by improving the following:

- outreach to widen aspiration and promote higher education to persons from low socio-economic backgrounds, persons from regional areas and remote areas, and Indigenous persons
- the extent to which persons from a low socio-economic background, persons from regional and remote areas, and Indigenous persons access, participate, remain and succeed in higher education and obtain higher education awards.

In terms of the distribution of HEPPP funds, from 2021, grants started to be made to eligible higher education providers each calendar year based on the provider's respective share of domestic undergraduate students from a low socio-economic background, students from regional areas and remote areas and Indigenous students. Before, only the share of students coming from low socio-economic backgrounds were considered in the funding scheme.

According to the most recent evaluation of the HEPPP (from 2016), around 2 679 projects were implemented at the 37 HEPPP universities between 2010 and 2015, with the participation of over 310 000 students. More than 40% of projects and expenditures have been targeted at directly assisting students from low socio-economic status to engage with and progress through university. In addition, around 40% of projects have worked with external partners, usually schools, to increase students' applications to offers from and commencements at university. The remaining 60% of HEPPP activities were developed around pathways to university, the admissions process and transitioning out of university. The most common activities undertaken through the HEPPP have been academic preparation and support, mentoring, peer support and first-year transition support.

Source: Austria Statistics (2022^[85]), HRSM-Project "Graduate tracking": project report, www.statistik.at/fileadmin/pages/326/ATRACK_Projektbericht_2022-05-02_DE.pdf; Australian Government, Department of Education (2022^[86]), Higher Education Participation and Partnerships Program (HEPPP), www.education.gov.au/hePPP; ACIL Allen Consulting (2017^[87]), Evaluation of the Higher Education Participation and Partnerships Program, www.education.gov.au/hePPP/resources/hePPP-evaluation-final-report.

Recommendations on increasing the relevance of higher education to labour market needs

Recommendations

1.10 Strengthen higher education institutions' institutional capacity and incentives to use labour market information and align their educational offers to labour market needs.

The data collected under the planned national graduate survey should be combined with relevant information from BURS and made available to higher education institutions in an accessible and user-friendly way. The most important indicators should be presented annually to higher education institutions, for example, in the form of automatically generated factsheets. Authorities and higher education institutions should discuss and agree on the most useful data to include in such factsheets. At a minimum, they should include graduate labour market

outcomes (employment status, field of study (mis-)match, under-/over-qualification, etc.) by degree programme and level of study. MES should also adjust public higher education funding settings to increase completions in fields facing shortages and/or being of strategic importance. When determining the number of state-subsidised places by field and region, MES should utilise information from the planned national graduate survey and the improved skills assessment and anticipation activities proposed in Chapter 5. MES should also make greater use of performance-based funding in higher education by increasing the share of institutions' funding based on the employment outcomes of their graduates.

- 1.11 Continue to provide financial aid and expand non-financial measures to support students from disadvantaged backgrounds in higher education, especially in programmes meeting priority skills needs.** In the context of declining higher education enrolments, persistent skills imbalances, and unequal access to higher education, MES should continue to provide financial incentives to disadvantaged students (e.g. scholarships) to access higher education. In addition, MES should incentivise higher education institutions to implement non-financial support for disadvantaged students to succeed in university programmes. This should include earmarked and/or performance-based funding to public higher education institutions to identify and support students at risk of attrition, for example, through mentoring and counselling, bridging courses (e.g. in mathematics or literacy) and other tailored interventions. The ministry should prioritise such financial support for institutions offering programmes that meet critical skills needs in the labour market.

Summary of policy recommendations

Policy directions	High-level policy recommendations
Opportunity 1: Ensuring that curriculum reform and assessment practices improve students' skills	
Building awareness and capacity for curriculum implementation	1.1 Increase education stakeholders buy-in to the vision for curriculum reform, and develop a detailed action plan with these stakeholders to facilitate implementation. 1.2 Reinforce the capacity of regional education departments to provide methodological support to teachers in implementing the competency-based curriculum.
Aligning external assessments with the competency-based curriculum	1.3 Strengthen the national external assessment system by accelerating efforts to align it with the competency-based curriculum.
Opportunity 2: Developing a highly skilled teaching workforce	
Selecting and preparing high-quality teaching candidates	1.4 Introduce a more selective and comprehensive admission system for initial teacher education to ensure the suitability and quality of teaching candidates. 1.5 Improve the quality and relevance of initial teacher education by aligning it more closely with classroom practice, including by expanding and supporting teaching practicum.
Monitoring and improving teachers' continuing professional development	1.6 Align continuing professional development programmes more closely to teachers' training needs by improving the collection and use of appraisal, assessment and evaluation data in CPD planning. 1.7 Strengthen the quality assurance of teachers' continuing professional development by expanding <i>ex ante</i> evaluation and introducing systematic <i>ex post</i> evaluation of the outcomes of CPD.
Opportunity 3: Making vocational and higher education more responsive to labour market needs	
Strengthening the role of employers and local actors in vocational education and training	1.8 Involve subnational vocational education and training stakeholders in the new sectoral skills councils and create fora for subnational stakeholders to discuss and improve the responsiveness of VET. 1.9 MES and the Ministry of Labour and Social Policy should co-operate to improve financial and non-financial support to enterprises and students to engage in work-based learning.
Increasing the relevance of higher education to labour market needs	1.10 Strengthen higher education institutions' institutional capacity and incentives to use labour market information and align their educational offers to labour market needs. 1.11 Continue to provide financial aid and expand non-financial measures to support students from disadvantaged backgrounds in higher education, especially in programmes meeting priority skills needs.

References

- ACIL Allen Consulting (2017), *Evaluation of the Higher Education Participation and Partnerships Program*, ACIL Allen Consulting, Melbourne, <https://www.education.gov.au/heppp/resources/heppp-evaluation-final-report> (accessed on 12 January 2023). [87]
- Australian Government, Department of Education (2022), *Higher Education Participation and Partnerships Program (HEPPP)*, <https://www.education.gov.au/heppp> (accessed on 12 January 2023). [86]
- Austria Statistics (2022), *HRSM-Project "Graduate tracking": project report*, Austria Statistics, Vienna, https://www.statistik.at/fileadmin/pages/326/ATRACK_Projektbericht_2022-05-02_DE.pdf (accessed on 13 February 2023). [85]
- Barber, M. (2007), *How the world's best-performing school systems come out on top*, McKinsey and Company, <https://www.mckinsey.com/~media/mckinsey/industries/public%20and%20social%20sector/o> (accessed on 22 September 2022). [55]
- BTA (2019), *Northwestern regional board "Education - Business" will be created between the regions of Lovech, Vratsa and Montana*, <https://www.bta.bg/bg/news/bulgaria/88413-Severozapaden-regionalen-bord-Obrazovanie-Biznes-shte-bade-sazdaden-mezhdu-o> (accessed on 12 January 2023). [72]
- CEDEFOP (2022), *Over-qualification rate (of tertiary graduates)*, <https://www.cedefop.europa.eu/en/tools/skills-intelligence/over-qualification-rate-tertiary-graduates?year=2020&country=EU#2> (accessed on 16 August 2022). [36]
- CEDEFOP (2020), *Strengthening skills anticipation and matching in Bulgaria: Bridging education and the world of work through better coordination and skills intelligence*, Publications Office of the European Union, Luxembourg, <http://data.europa.eu/doi/10.2801/24697> (accessed on 2 October 2022). [64]
- CEDEFOP (2018), *Vocational education and training in Bulgaria: Short description*, <https://www.cedefop.europa.eu/en/publications/4161#group-details> (accessed on 16 August 2022). [33]
- Council of Ministers (2021), *Стратегическа рамка за развитие на образованието, обучението и ученето в Република България (2021-2030) (Strategic Framework for the Development of Education, Training and Learning in the Republic of Bulgaria [2021-2030])*, https://mon.bg/upload/25571/Strategicheska-ramka_ObrObuUchene_110321.pdf?_cf_chl_tk=0Qnfg6wEILjNmUHheG9edm1jK02qRJeu9KpYZ2mGGaQ-1676301704-0-gaNycGzNCXs (accessed on 13 February 2023). [10]
- Darling-Hammond, L. (2000), "Teacher Quality and Student Achievement", *Education Policy Analysis Archives*, Vol. 8/1, <https://doi.org/10.14507/epaa.v8n1.2000>. [4]
- Daskalova, N. and V. Ivanova (2018), *Cedefop public opinion survey on vocational education and training in Europe: Bulgaria*, http://libserver.cedefop.europa.eu/vetelib/2018/opinion_survey_VET_Bulgaria_Cedefop_ReferenceNet.pdf (accessed on 17 July 2022). [23]

- Education 2030 Association (2019), *Research among target groups and create recommendations/opinions for effective teaching of key competences/skills in the classroom and to improve the quality of continuing education for teaching professionals*, http://edu2030.bg/wp-content/uploads/2019/12/Report_Key-Competences_OPDU_final.pdf (accessed on 2 August 2022). [44]
- Employment Agency (2022), *The Labor Force Needs Survey 2022 - 1*, <https://www.az.government.bg/pages/prouchvane-potrebnosti-2022-1/> (accessed on 19 September 2022). [6]
- European Commission (2022), *Administration and governance at central and/or regional level*, <https://eurydice.eacea.ec.europa.eu/national-education-systems/bulgaria/administration-and-governance-central-andor-regional-level> (accessed on 6 August 2022). [14]
- European Commission (2021), *Education and Training Monitor 2021*, <https://op.europa.eu/webpub/eac/education-and-training-monitor-2021/en/bulgaria.html#seven> (accessed on 26 September 2022). [53]
- European Commission (2020), *Mapping the state of graduate tracking policies and practices in the EU Member States and EEA countries*, https://pmb.cereq.fr/doc_num.php?explnum_id=7200 (accessed on 9 August 2022). [82]
- European Commission (2019), *2019 SBA Fact Sheet: Bulgaria*, https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi_kMXn6pH7AhWG_4UKHXtNAYgQFnoECAgQAQ&url=https%3A%2F%2Fec.europa.eu%2Fdocsroom%2Fdocuments%2F38662%2Fattachments%2F4%2Ftranslations%2Fen%2Frenditions%2Fnative&usg=AOv (accessed on 3 November 2022). [68]
- European Commission (2013), *Work-based Learning in Europe: Practices and Policy Pointers*, http://ec.europa.eu/dgs/education_culture/repository/education/policy/vocational-policy/doc/alliance/work-based-learning-in-europe_en.pdf (accessed on 26 September 2022). [74]
- European Commission/EACEA/Eurydice (2021), *Teachers in Europe: Careers, development and well-being*, Luxembourg: Publications Office of the European Union, <https://op.europa.eu/en/publication-detail/-/publication/78fbf243-974f-11eb-b85c-01aa75ed71a1/language-en/format-PDF/source-198443603>. [57]
- Eurostat (2023), *Individuals' level of digital skills (from 2021 onwards)*, https://ec.europa.eu/eurostat/databrowser/view/ISOC_SK_DSKL_I21_custom_4935871/default/table?lang=en (accessed on 13 February 2023). [40]
- Eurostat (2022), *Distribution of graduates at education level and programme orientation by sex and field of education*, https://ec.europa.eu/eurostat/databrowser/view/EDUC_UOE_GRAD03_custom_4935669/default/table?lang=en (accessed on 13 February 2023). [38]
- Eurostat (2022), *Early leavers from education and training by sex and labour status*, https://ec.europa.eu/eurostat/databrowser/view/edat_lfse_14/default/table?lang=en (accessed on 2022 July 12). [20]

- Eurostat (2022), *Employment rates of young people not in education and training by sex, educational attainment level and years since completion of highest level of education*, https://ec.europa.eu/eurostat/databrowser/view/EDAT_LFSE_24_custom_4935413/default/table?lang=en (accessed on 13 February 2023). [32]
- Eurostat (2022), *Participation in early childhood education by sex (children aged 4 and over)*, https://ec.europa.eu/eurostat/databrowser/view/sdg_04_30/default/table?lang=en (accessed on 15 August 2022). [16]
- Eurostat (2022), *Tertiary educational attainment by sex*, https://ec.europa.eu/eurostat/databrowser/view/sdg_04_20/default/table?lang=en (accessed on 13 February 2023). [28]
- Eurostat (2021), *Early leavers from education and training by sex and degree of urbanisation (online data code: EDAT_LFSE_30)*, https://ec.europa.eu/eurostat/databrowser/view/edat_lfse_30/default/table?lang=en (accessed on 18 November 2022). [22]
- Eurostat (n.d.), *Skills*, <https://ec.europa.eu/eurostat/web/experimental-statistics/skills> (accessed on 13 February 2023). [37]
- Eurydice (2022), *Bulgaria: First-cycle programmes*, <https://eurydice.eacea.ec.europa.eu/national-education-systems/bulgaria/bachelor> (accessed on 31 January 2023). [78]
- Fair Guidance Project (2015), *Country Report Bulgaria*, http://www.fairguidance-project.eu/country_report_bulgaria_en.pdf (accessed on 4 November 2022). [83]
- Gospodinov, B. and R. Peicheva-Forsyght (2019), *Continuing training of teachers and the quality of teaching – the perspective of teachers and students*, Sofia University. [60]
- Gouédard, P. (2020), “Curriculum reform: A literature review to support effective implementation”, *OECD Education Working Papers* 239, <https://doi.org/10.1787/efe8a48c-en>. [42]
- Government of Bulgaria (2022), *Responses to the OECD Questionnaire for the OECD Skills Strategy Bulgaria*. [8]
- Government of Bulgaria (2020), *National Development Programme Bulgaria 2030*, <https://www.minfin.bg/upload/46720/National%2BDevelopment%2BProgramme%2BBULGARIA%2B2030.pdf> (accessed on 13 February 2023). [9]
- Government of Bulgaria (2019), *Ordinance № 15 of July 22, 2019 on the status and professional development of teachers, directors and other pedagogical specialists*, <https://lex.bg/bg/laws/ldoc/2137195301> (accessed on 9 September 2022). [61]
- Grönqvist, E. and J. Vlachos (2016), “One size fits all? The effects of teacher cognitive and non-cognitive abilities on student achievement”, *Labour Economics*, Vol. 42, pp. 138-150, <https://doi.org/10.1016/j.labeco.2016.08.005>. [56]
- Guthrie, C. et al. (2022), *OECD Reviews of Evaluation and Assessment in Education: Bulgaria*, OECD Publishing, Paris, <https://doi.org/10.1787/57f2fb43-en>. [13]

- Hristova, A. (2020), *International mobility in apprenticeships: focus on long-term mobility: Bulgaria*, Cedefop ReferNet thematic perspectives series, http://libserver.cedefop.europa.eu/vetelib/2019/international_mobility_apprenticeship_Bulgaria_Cedefop_ReferNet.pdf (accessed on 2 October 2022). [66]
- Hristova, A., E. Tosheva and E. Stoykova (2020), *Обратно в училище: качеството на училищния живот като предпоставка за ангажиране и превенция на отпадането (Back to school: the quality of school life as a prerequisite for engagement and dropout prevention)*, Institute for Research of Education, https://figshare.com/articles/thesis/Quality_of_school_life_in_Bulgaria/13489779 (accessed on 8 August 2022). [17]
- IEA (2017), *Reading, PIRLS 2016: International Results in Reading*, TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College and International Association for the Evaluation of Educational Achievement, <http://pirls2016.org/wp-content/uploads/structure/CompletePDF/P16-PIRLS-International-Results-in-Reading.pdf> (accessed on 6 September 2022). [30]
- Institute for Research in Education (2019), *Challenges for Bulgaria's pre-school and school education and possible solutions for limiting their negative impact*, http://ire-bg.org/wpsite/wp-content/uploads/2019/11/Problems_of_pre-school_and_school_education.pdf (accessed on 15 August 2022). [26]
- Kovacheva, S. and D. Hristozova (2022), "Striding on a Winding Road: Young People's Transitions from Education to Work in Bulgaria", *Societies*, Vol. 22/4, <https://doi.org/10.3390/soc12040097>. [21]
- Kuczera, M. (2017), "Striking the right balance: Costs and benefits of apprenticeship", OECD Publishing, Paris, <https://doi.org/10.1787/995fff01-en>. [76]
- Kuczera, M. (2017), "Incentives for apprenticeship", *OECD Education Working Papers* 152, <https://doi.org/10.1787/55bb556d-en>. [70]
- Kuczera, M. and S. Jeon (2019), *Vocational Education and Training in Sweden*, OECD Publishing, Paris, <https://doi.org/10.1787/g2g9fac5-en>. [77]
- Kuczera, M., V. Kis and G. Wurzburg (2009), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of Korea 2009*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264113879-en>. [75]
- Lambert (2016), *Educational Standards and Australia: a changed landscape*, <https://doi.org/10.1590/s2176-6681/291437381>. [51]
- ManpowerGroup (2021), *ManpowerGroup Employment Outlook Survey Q3 2021: Bulgaria Results*, https://go.manpowergroup.com/hubfs/Talent%20Shortage%202021/MPG_2021_Outlook_Survey-Bulgaria.pdf (accessed on 21 November 2022). [34]
- MES (2023), *Ministry of Education and Science*, <https://web.mon.bg/en/> (accessed on 12 January 2023). [59]
- MES (2022), *Bulgarian University Ranking System*, <https://rsvu.mon.bg/rsvu4/#/methodology> (accessed on 25 September 2022). [79]

- MES (2022), *MES will monitor achievement of graduates*, <https://mon.bg/bg/news/5083> (accessed on 22 November 2022). [81]
- MES (2022), *Students in dual education increased 30-fold in six years*, <https://mon.bg/bg/news/5061> (accessed on 22 November 2022). [67]
- MES (2020), *Project BG05M2OP001-2.014-0001 Support of Dual Learning System*, <http://sf.mon.bg/?go=projects&p=detail&projectsId=64&lang=en> (accessed on 22 November 2022). [71]
- NAP (2016), *FAQs*, <https://www.nap.edu.au/naplan/faqs> (accessed on 21 November 2022). [50]
- National Assembly (2021), *Стратегия за развитие на висшето образование в Република България за периода 2021-2030 г. (Strategy for the Development of Higher Education in the Republic of Bulgaria for the Period 2021 2030)*, https://mon.bg/upload/24829/rMS_Strategia-VO_120121.pdf (accessed on 13 February 2023). [11]
- National inspectorate of Education (2021), *analiz na kačestvoto na obrazovaniето v inspektirani detски gradini i učilišta učebna 2019/2020 g. [analysis of the quality of education inspected kindergarten and schools academic year 2019/2020]*, <https://nio.government.bg/wp-content/uploads/2021/03/%D0%90%D0%BD%D0%B0%D0%BB%D0%B8%D0%B7-%D0%BD%D0%B0-%D0%BA%D0%B0%D1%87%D0%B5%D1%81%D1%82%D0%B2%D0%BE%D1%82%D0%BE-19-20%D0%B3.pdf> (accessed on 13 September 2022). [47]
- National Statistical Institute (2022), *Education and Lifelong Learning*, <https://www.nsi.bg/en/content/3374/education-and-lifelong-learning> (accessed on 7 September 2022). [15]
- NEAA (2016), *Executive summary of the Report on the state and trends in the development of higher education institutions in Bulgaria*, https://www.neaa.government.bg/images/Publications-en/summerizing_reports/NAOA_annn_summ_reports.pdf (accessed on 26 September 2022). [84]
- OECD (2022), *Engaging Employers in Vocational Education and Training in Brazil: Learning from International Practices*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <https://doi.org/10.1787/d76a2fe6-en>. [69]
- OECD (2022), *Mismatch by country*, <https://stats.oecd.org/#> (accessed on 21 November 2022). [35]
- OECD (2022), *OECD Skills for Jobs*, <https://www.oecdskillsforjobsdatabase.org/> (accessed on 10 January 2022). [39]
- OECD (2021), *Decentralisation and Regionalisation in Bulgaria: Towards Balanced Regional Development*, OECD Publishing, Paris, <https://doi.org/10.1787/b5ab8109-en>. [12]
- OECD (2021), “National assessment reform: Core considerations for Brazil”, *OECD Education Policy Perspectives* 34, <https://doi.org/10.1787/333a6e20-en>. [52]
- OECD (2020), “Achieving the new curriculum for Wales”, *OECD Education Policy Perspectives* No. 7, <https://doi.org/10.1787/37ba25ee-en>. [49]

- OECD (2019), *Improving School Quality in Norway: The New Competence Development Model*, OECD Publishing, Paris, <https://doi.org/10.1787/179d4ded-en>. [62]
- OECD (2019), *OECD Skills Strategy 2019: Skills to Shape a Better Future*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264313835-en>. [1]
- OECD (2019), *OECD Skills Strategy Poland: Assessment and Recommendations*, OECD Publishing, Paris, <https://doi.org/10.1787/b377fbcc-en>. [73]
- OECD (2019), *PISA 2018 Database*, <https://www.oecd.org/pisa/data/> (accessed on 26 August 2022). [3]
- OECD (2019), *PISA 2018 Results (Volume I): What Students Know and Can Do*, OECD Publishing, Paris, <https://doi.org/10.1787/5f07c754-en>. [31]
- OECD (2019), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, OECD Publishing, Paris, <https://doi.org/10.1787/b5fd1b8f-en>. [25]
- OECD (2019), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, OECD Publishing, Paris, <https://doi.org/10.1787/1d0bc92a-en>. [54]
- OECD (2019), *Vocational Education and Training in Bulgaria: Governance and Funding*, OECD Publishing, Paris, <https://doi.org/10.1787/25bad018-en>. [63]
- OECD (2018), *The Future of Education and Skills: Education 2030*, [https://www.oecd.org/education/2030-project/about/documents/E2030%20Position%20Paper%20\(05.04.2018\).pdf](https://www.oecd.org/education/2030-project/about/documents/E2030%20Position%20Paper%20(05.04.2018).pdf) (accessed on 26 August 2022). [5]
- OECD (2016), *Skills Matter: Further Results from the Survey of Adult Skills*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264258051-en>. [2]
- OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264190658-en>. [43]
- OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264177338-en>. [65]
- Open Society Institute Sofia (n.d.), *University Ranking*, <https://osis.bg/?p=2482&lang=en> (accessed on 25 September 2022). [80]
- Teach for Bulgaria (2022), *Our Programs*, <https://zaednovchas.bg/en/about-us/> (accessed on 7 September 2022). [58]
- UIS (2022), *Distribution of enrolment by programme orientation*, <http://data.uis.unesco.org/?lang=en&SubSessionId=5033ce84-a9d5-4afc-b14f-e3cb483344b6&themetreeid=-200> (accessed on 12 July 2022). [24]
- UIS (2022), *Total net enrolment rate by level of education*, <http://data.uis.unesco.org/> (accessed on 2022 July 12). [19]
- Viennet, R. (2017), "Education policy implementation: A literature review and proposed framework", *OECD Education Working Papers* 162, <https://doi.org/10.1787/fc467a64-en>. [45]

- Welsh Government (2018), *Education in Wales: Our national mission*, [48]
<https://gov.wales/sites/default/files/publications/2018-03/education-in-wales-our-national-mission.pdf> (accessed on 22 September 2022).
- World Bank (2022), *Bulgaria Higher Education: Situation Analysis and Policy Direction Recommendations*, <http://sf.mon.bg/?h=downloadFile&fileId=2768> (accessed on 15 August 2022). [29]
- World Bank (2022), *Bulgaria Vocational Education and Lifelong Learning: Situation Analysis and Policy Direction Recommendations*, [27]
https://www.eufunds.bg/sites/default/files/uploads/opseig/docs/2021-08/EN_VET_LLL_June_22.pdf (accessed on 15 August 2022).
- World Bank (2020), *Bulgaria : Teaching Workforce Developments and Recommendations*, [46]
<https://openknowledge.worldbank.org/handle/10986/36796> (accessed on 18 August 2022).
- World Bank (2020), *Bulgaria Early Childhood Education and Care, General Education, and Inclusion: Situation Analysis and Policy Direction Recommendations*, [18]
https://www.google.com/url?sa=t&source=web&cd=&ved=2ahUKEwiHwfvO_t39AhUXUqQEHSEuDEkQFnoECAkQAQ&url=https%3A%2F%2Fsf.mon.bg%2F%3Fh%3DdownloadFile%26fileId%3D2764&usg=AOvVaw0pS66JQM9ReuYrwDEhwMAe.
- Yankova, M. (2020), “Rapid Assessment of COVID-19 impact on education in Bulgaria: Deepening learning loss and increasing inequalities”, *UNICEF*, [7]
<https://www.unicef.org/eca/rapid-assessment-covid-19-impact-education-bulgaria> (accessed on 26 August 2022).
- Yong-lin, M. (2007), “Education Reform and Competency-Based Education”, *Asia Pacific Education Review*, Vol. 8/2, pp. 337-341. [41]

Notes

1. Since April 2022, tuition fees for public nurseries and kindergartens have been abolished for all children.
2. The isolation index provides an indication of whether school systems create “clusters” of students based on their academic performance. Higher values in the indices mean that low achievers are more often isolated in certain schools with students of similar ability; lower values in the indices correspond to a more varied distribution of student abilities within schools (OECD, 2019^[25]).
3. There were 61 participants in the PIRLS 2016 assessments, including 50 countries and 11 benchmarking entities.
4. TIMSS 2019 was conducted at Grades 4 and 8 in 64 countries and 8 benchmarking systems.

5. Some 600 000 students completed the PISA assessment in 2018, representing about 32 million 15-year-olds in the schools of the 79 participating countries and economies.
6. Socio-economically advantaged (disadvantaged) students are students in the top (bottom) quarter of PISA's index of economic, social and cultural status (ESCS) in their own country/economy.
7. Concurrent ITE programmes are dedicated to teaching profession from their start, with general academic subjects provided alongside professional subjects. As for consecutive models, they cover programmes where students, who have undertaken higher education in particular fields, move on to professional teacher training in a separate successive phase (European Commission/EACEA/Eurydice, 2021^[57]).
8. Through the framework of the Bologna process and European co-operation programmes, such as Erasmus+, European education systems have developed ECTS as a key instrument for transparent curriculum design as well as to facilitate credit transfer between programmes and institutions. It enables the learning outcomes and workload of ITE programmes to be expressed in study credits (European Commission/EACEA/Eurydice, 2021^[57]).
9. One credit is awarded for 16 academic hours of CPD, 8 of which are in the classroom. This credit system guarantees opportunities for the accumulation, recognition and transfer of credits in formal CPD.
10. The survey covers the 28 member states of the European Union, with 35 646 respondents from different social and demographic groups, aged 15 and over. The survey was carried out on behalf of CEDEFOP by Kantar Public on 1-29 June 2016.



From:
OECD Skills Strategy Bulgaria
Assessment and Recommendations

Access the complete publication at:
<https://doi.org/10.1787/c2eb2f34-en>

Please cite this chapter as:

OECD (2023), “Developing youth skills in Bulgaria”, in *OECD Skills Strategy Bulgaria: Assessment and Recommendations*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/4cfe8a83-en>

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.