



Education and Training Monitor 2021

Country analysis

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The manuscript was completed on 19 October 2021.

More background data at: ec.europa.eu/education/monitor

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Introduction

Volume 2 of the Education and Training Monitor 2021 includes 27 individual country reports. It builds on the most up-to-date quantitative and qualitative evidence to present and assess the main recent and ongoing policy measures in each EU Member State. It therefore complements other sources of information which offer descriptions of national education and training systems.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 briefly identifies the main strengths and challenges of the country's education and training system. Section 3 focuses on well-being in education and training. Section 4 looks at investment in education and training. Section 5 deals with policies to modernise early childhood and school education. Section 6 covers vocational education and training and adult learning. Finally, Section 7 discusses measures to modernise higher education.

AUSTRIA

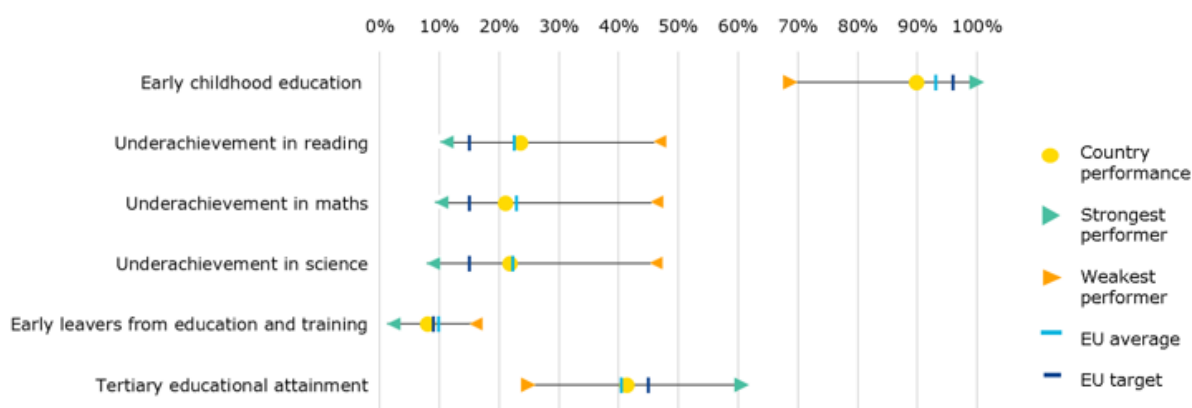
1. Key indicators

Figure 1 – Key indicators overview

			Austria		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	86.5% ¹³	89.9% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	19.5% ¹²	23.6% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	18.7% ¹²	21.1% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	15.8% ¹²	21.9% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	8.3%	8.1%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	20.7%	41.4%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.1%	4.8% ¹⁹	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€8 990 ¹²	€10 268 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€10 405 ¹²	€11 184 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€12 448 ¹²	€13 854 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		5.9%	5.7%	12.4%	8.7%
	EU-born		12.2% ^u	16.2%	26.9%	19.8%
	Non EU-born		25.8%	24.0%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			85.5%	86.1%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		20.9%	42.1%	33.4%	41.3%
	EU-born		28.7%	49.2%	29.3%	40.4%
	Non EU-born		14.5%	31.6%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, p = provisional, u = low reliability, : = not available, 09 = 2009, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Austria is stepping up investment in education concentrating on digitalisation, early childhood education and care (ECEC) and reducing post-COVID-19 educational disadvantages.
- A reform in higher education seeks to clarify the framework conditions and harmonise terminology, both for regular studies and further higher education.
- Austria's current policy measures partially address the shortcomings in digital education.
- Making teaching careers more attractive in pre-primary and in compulsory education remains a vital challenge for Austria to replace retiring staff and meet the needs of an increasing student population.

3. A focus on well-being in education and training

Well-being in education and training lacks a fully defined concept and political focus.

National Austrian Education Reports¹ and the research community provide different approaches to and definitions of well-being. A more formal definition in 2018 brought in well-being as an aspect of societal outcomes of the education system. It is based on life satisfaction, subjective health conditions and social trust. With this broad understanding of the concept, Austria approaches 'well-being' indirectly through other policies.

In practice, well-being is closely linked to school psychology and education counselling.

The Ministry of Education, Science and Research coordinates offices that focus predominantly on providing school psychology services in the nine regions as well as a network of organisations providing psychological support. The tasks and functioning of psycho-social support in schools is defined in a ministry circular from 2018. One of Austria's teacher training colleges (Tyrol) covers well-being in its initial and continued teacher training. The concept *Wohlfühlzone Schule* (or well-being at school) follows a low-threshold approach combining school and in-class dynamics with violence prevention and reducing the drop-out rate.

Student distress during the COVID-19 pandemic triggered a number of new initiatives. The project *Gönn' Dir*, which ran from March to mid-May 2021, created a web portal that aimed to reduce angst and isolation during lockdown, provide entertainment and boost student well-being. Austria also stepped up the provision of online support during the pandemic (*Rat auf Draht*) and home visits to reach most isolated and disengaged students.

Well-being is generally higher at lower education levels. At an earlier age, well-being policies are better established institutionally, in particular for ECEC. However, the approach to well-being also actively addresses fighting absenteeism and drop out from compulsory education. The few available surveys indicate a generally positive picture of pupil well-being at school. In the latest survey on national education standards of English in 8th grade in 2019, pupils said that they like to go to school (59%), were happy in their class (76%) and felt socially well integrated in school (56%). There is practically no difference in these findings between pupils in academic and non-academic schools. But students in academic schools had a much stronger self-awareness (+12 pps). Although only 8% of pupils in 4th grade primary school attend school unwillingly, the share nearly doubles in 8th grade (14%), similarly to the share of pupils feeling unhappy in class (4%, rising to 9%). Social integration is high at 4th grade (67%), but drops by 20 pps in 8th grade².

National surveys during the second lockdown indicated that pupils' stress levels increased.

The number of school closure days puts Austria in the mid-range of EU countries, but schools were among the least prepared for online learning (Blasko 2021). A survey (Universität Wien 2021) of over 13 000 pupils found that stress levels increased by age; older pupils also experienced a longer period

¹ The 2009 edition of the Austrian Education Report devoted more specific attention to well-being.

² Verification of education standards in Mathematics for 4th (2018) and 8th grade (2019).

of strict lockdown. About half of the pupils polled (44%) felt well or rather well during the second lockdown, against a quarter who did not (23.1%). About half of the students worked eight hours or more per day and a third worked 5-7 hours, with the workload increasing by age. Older students indicated that they had less fun in their learning twice as often at 41.1%, up from 23.3% in the first lockdown. They also felt distinctly less well in the second lockdown (28.2%/13.5%) and contacts with the people they cared about worsened (20.8%/13%). Although 98.7% of polled students had access to a computer or tablet, 26.1% did not find learning support in the family when they needed it. 80% who got support received it from their mother.

Distance learning provided a great challenge for teachers, especially in terms of supporting students from disadvantaged backgrounds. The demands on teachers and students intensified during the second phase of home schooling. 80% of teachers indicated that their workload further increased and about two thirds complained of a decline in their well-being. It was more difficult to reach out to disadvantaged pupils. During the first lockdown, teachers could not reach or hardly reach 11% of all pupils and 35.4% of disadvantaged students. This compares to 8.5% and 22.1% in the second lockdown. Overall, up to 79% of students and 87% of parents considered themselves overstrained. This had a negative impact on student performance and was particularly acute for disadvantaged students. Only a fifth managed to plan their learning well and only a third delivered completed work on time, against 61.8% and 85.6% of all students (Steiner, 2021).

The lack of well-being in Austria had a distinctly negative impact on education outcomes. According to the 2018 PISA report, Austrian pupils generally have a higher sense of belonging than the EU average, but still feel slightly lonelier. In line with the EU average, socially disadvantaged students and students with a migrant background (-0.19/-0.13) have a lower sense of belonging to school than their advantaged and Austrian-born peers (-0.2/-0.1). A strong sense of belonging is associated with a higher impact on reading performance (+31 scores) than the EU average (+18 scores), and the difference remains significant, even after accounting for socio-economic background (+18 vs EU: +11 PISA scores). Compared to the EU average, the specific situation in Austrian schools had nearly twice as strong an impact on reading performance (42, EU 28.1); the situation in the school therefore appears to be more important than the situation of the individual student (3/2.1). The difference between socio-economically strong and weak schools is one of the most pronounced in the EU.

4. Investing in education and training

General government expenditure on education in 2019 remained stable. Spending on education is close to the EU average both as a proportion of GDP (4.8% vs EU average 4.7%) and as a share of total public expenditure (9.9% vs EU average 10%). However, it rose on the previous year only by 0.8% in real terms, which was below the EU average growth rate (1.9%). Austria spends a bit more on secondary education (43%) and a bit less on pre-primary and primary education (30%) than other EU countries, but the share of higher education (15%) corresponds broadly to the EU average. Over the last 10 years, Austria's total government expenditure on education increased by 13% in real terms, three times the EU average. Compensation for gross capital formation increased by 23%, employee wages and contributions by 18% and intermediate consumption by 9%.

Austria is beginning to invest more in early childhood education (ECEC), all day schooling, digitalisation and post-COVID education. Austria is investing EUR 235 million in the digitalisation of education under the '8-point plan for digital learning', which runs from 2021 and 2024 and is partly funded by the country's Recovery and Resilience Plan (RRP). In addition, it will invest EUR 16.4 million in upgrading basic IT infrastructure. In higher education, the country will invest EUR 30 million in the research infrastructure of universities focusing on digitalisation. To compensate for the negative effect of COVID-19 on education outcomes, Austria will invest another EUR 117 million to fund 1.49 million additional learning support hours (equivalent to 1 905 additional teacher positions, also funded under the RRP). It will spend EUR 750 million to expand or improve all day schools, reserved in 2017, between 2019/2020 and 2032/2033. A pilot project for a social index in school financing will benefit 100 schools (*100 Schools – 1 000 Opportunities*) from 2021 to end 2023 with

EUR 15 million. An agreement between the federal and regional level has earmarked EUR 142.5 million to improve early childhood education from 2019/2020 to 2021/2022.

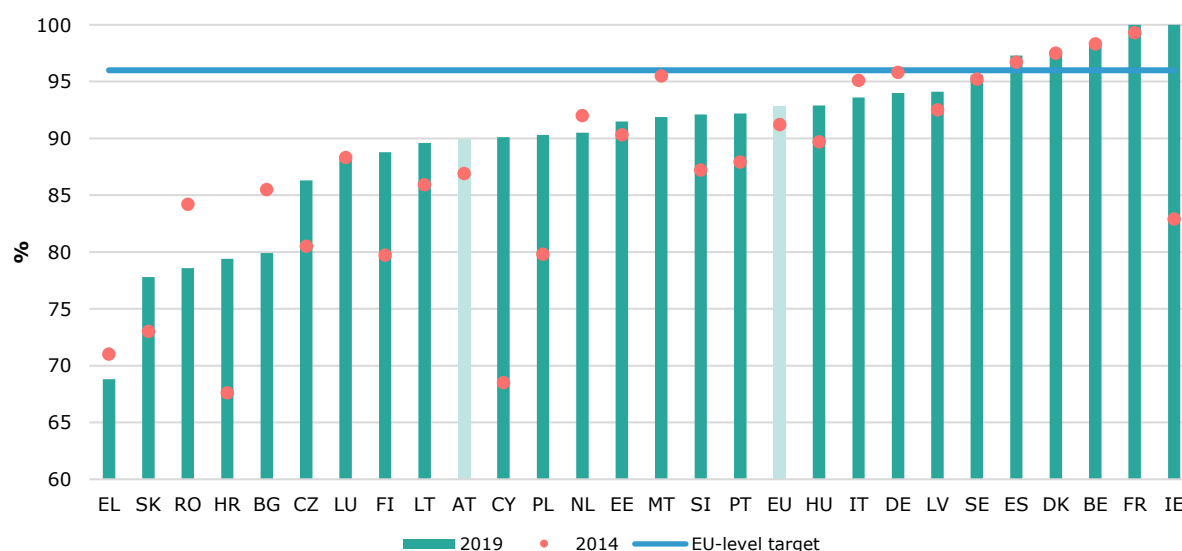
Box 1: Austria's National Recovery and Resilience Plan (RRP)

The volume of Austria's RRP amounts to EUR 3.5 billion in grants. The country will invest more than 15% of the grants in measures related to education and skills. The subcomponent on the digitalisation of education aims to ease access to digital education providing both school pupils and schools with computers. The subcomponent on education contains a reform on improving access to education and two investments: a 'Remedial education package' and plan for the 'Development of elementary education'. Approximately 59% of the total funding will support climate objectives and 53% will focus on digital objectives, with some overlap.

5. Modernising early childhood and school education

Although participation in early childhood education and care (ECEC) is increasing, participation is still comparatively low for children under the age of three. With an 89.9% participation rate of children between three years and compulsory schooling age in early childhood education in 2019, Austria was 6.1 pps below the 2030 EU-level target of 96%. The gap between the regions with the highest and the lowest participation rates narrowed from 10.6 pps in 2013 to 8.4 pps in 2019. Given that the overall rate during the last six years improved only by 3 pps and that there was practically no progress between 2018 and 2019 (+0.2), reaching the target will require continued action. While Austria's participation rate for four year-olds is at the EU average, and above average for five year-olds, it is considerably lower for three year-olds (-11.3 pps). The share of children under the age of three attending formal childcare has risen considerably over the past 10 years (from 9% in 2009 to 22.7% in 2019.) About two thirds of children under three who attend formal childcare do so for less than 29 hours a week.

Figure 3 - Participation in early childhood education of pupils from age three to the start of compulsory primary education, 2014 and 2019 (%)



Source: UOE, [educ_uoe_enra21]

The federal government and the regions aim to boost early childhood education levels. The federal government provides³ EUR 142.5 million in earmarked grants to the regions to expand early childhood education and care capacities, the free-of-charge compulsory pre-school year and early linguistic support in 2019/20 to 2021/22. At least EUR 18 million of this funding is earmarked for

³ Regions and the federal level agree on funding and applicable conditions (Article 15a Federal Constitutional Law).

linguistic support, a key objective of education policy in Austria to enable children from disadvantaged and migrant backgrounds to acquire a sound basis in German language for education. However, to achieve a good quality ECEC system, its quality and scope in Austria needs to be improved, for instance through: (1) a formal and compulsory quality framework for ECEC and (2) improved staff competences and working conditions. Most ECEC staff has qualifications below Bachelor level. The government does not intend to change this, but prefers instead to improve training opportunities for ECEC managers and opening up opportunities for people without specialised prior education in ECEC. To this end, it has developed a specific higher education programme with 60 ECTS⁴. To attract more young people to choose ECEC as a profession, it will be necessary to both invest in better working conditions and pay and to improve the image of the profession. A recent study calculates that overall, the country would need an additional 860 managers, 2450 qualified staff and 2000 less qualified staff by 2025 to increase the quantity and quality of provision (Neuwirth 2021).

The COVID-19 pandemic has made weaknesses in ECEC more apparent. The image of and working conditions for teachers need to be improved. ECEC facilities were available only to parents with system relevant jobs during three nation-wide lockdowns (spring 2020, autumn/winter 2020/21 and spring 2021). During the pandemic, 90% of ECEC staff suffered from the following stress factors⁵: (1) constantly increasing needs (90%), (2) time pressure (79%), (3) acute time pressure, inability to disconnect from work when at home and lack of recognition (64%). 80% of ECEC staff considers their pay to be too low. Unfavourable conditions in ECEC existed before COVID-19, but the pandemic shed a light on the problems and exacerbated them. Staff struggled with oversized groups, with the lack of coordination with colleagues, administrative challenges and with maintaining a reasonable work-life balance. Despite this, positive effects of the pandemic were the increased digital, coordination and communication skills as well as greater team work and flexibility. The situation made staff also more independent and self-assured. Thanks to their flexibility, they could limit children's sense of social isolation during the pandemic. Maintaining social contact during distance learning was very important for 80% of ECEC staff, however six out of ten polled teachers stopped using digital channels when schools reopened.

Austria has reached the early school leaving target, but young people with migrant backgrounds are much more at risk of dropping out. The early school leaving rate (ELET) was 8.1% in 2020, 1.8 pps below the EU average and also below the 9% EU level target. However, the gap between native and foreign-born pupils is significant (5.7% vs 20.4%), and even larger compared with those pupils born outside the EU (24%). Although the rate of native-born people remained relative stable (+0.2) compared to 1995, the rate for foreign-born people increased significantly (+5.7). Coming from disadvantaged socio-economic and migrant backgrounds, in particular the two combined, continues to have a negative impact on education outcomes (European Commission 2020). Lack of staff and limited targeted support impacting negatively on education outcomes are often concentrated in schools with high percentages of disadvantaged students, predominantly in urban areas (OECD 2016; Oberwimmer 2019). The '100 schools' project is a promising pilot project that aims to secure better resources for these schools. A wider reform of the financing mechanism would need to reach at least 519 schools (Radinger 2018) and ensure that the staff allocation and challenges are better aligned (OECD 2016).

Austria's school age population is growing, which compounds the unmet demand for teachers. Migration contributes massively to population growth leading to a share of 24.4% inhabitants with a migrant background in 2021⁶. According the Austrian Education Report the 10-14 year-old age group is expected to grow the most (by an estimated 32 000 by 2050). Population growth is geographically uneven, affecting mainly urban regions such as Vienna (+20%)., about a third of all Austrian teachers will retire within the next 10 years⁷ and the teaching force in non-academic lower secondary school (*Mittelschule*) is ageing the most with 53% of teachers being over

⁴ European Credit Transfer and Accumulation System

⁵ Study by the University of Vienna ECEC under COVID-19 conditions – first results of two studies.

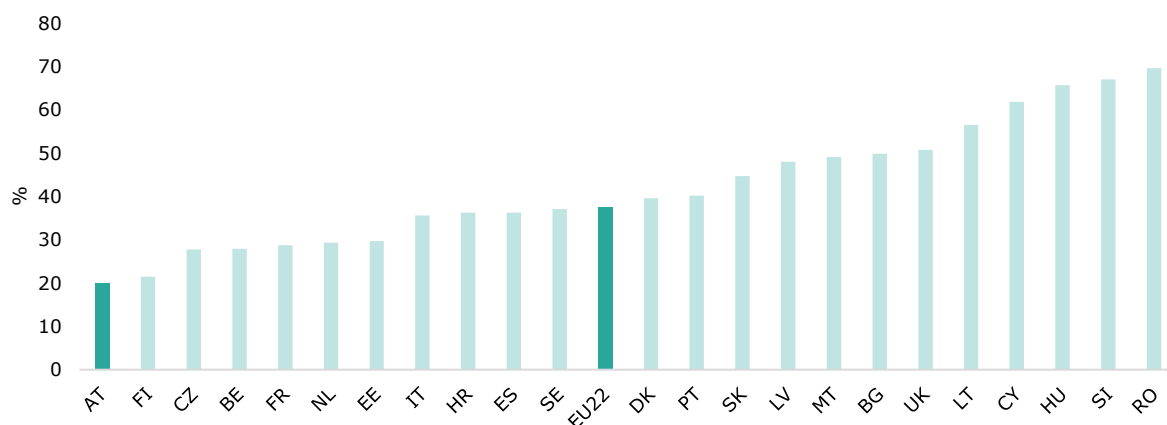
⁶ Integrationsbericht 2021.

⁷ NBB 2018, I, 82.

50. This is also the school type with highest share of pupils from disadvantaged and migrant backgrounds.

Austrian teachers felt particularly uneasy using ICT for teaching before the pandemic. A study concluded that both teachers and pupils lacked sufficient experience in digital communications to handle distance learning effectively. School leaders were key enablers for digital communication and teaching, taking action for instance to promote digital communication and learning even before the start of distance learning (Steiner 2021). In the 2018 TALIS study, 18% of school leaders still identified shortages or insufficient digital equipment or internet access as being a barrier to quality education. Older teachers in particular lacked training in ICT for teaching: only 40.5% of teachers were taught during their initial teacher training how best to use ICT for teaching (-8.6 pps compared to EU), increasing to 68.3% for those trained over the last five years). Only 32.9% of teachers used ICT frequently for projects or class work (EU 46.9%). Overall, teachers' self-perception is confident, with only 15.5% feeling they lack training. But Austrian teachers are the most insecure on ICT in the EU, with only 19.9% feeling well prepared to use ICT in teaching, the lowest share in the EU. Although Austria stepped up teacher training during the pandemic, there remains a clear need for more action.

Figure 4 - Teachers who felt 'well prepared' or 'very well prepared' to use ICT for teaching, TALIS 2018



Source: OECD, TALIS 2018

Austria has a series of policy initiatives that aim to address the weaknesses identified. Its 8-point plan on digitalisation aims to improve digital hardware and connectivity in schools, the digital skills of teachers, and quality digital learning content with improved access to it. A key initiative, also financed through the RRF, is to equip all pupils in fifth grade (and the sixth grade too in the first round of the initiative only) with a digital device (laptop or tablet, at the school's choice) to create equal conditions for digital learning in school.

6. Modernising vocational education and training and adult learning

Participation in vocational education and training (VET) has remained relatively stable in recent years. The proportion of VET students out of all upper secondary education students remained stable in 2019 at 68.8% against the EU average of 48%, up slightly from 68.4% in 2018. Although 85.4% of recent graduates⁸ from VET programmes were employed in 2020, the employment rate fell by 2.6 pps compared to 2019. Thus VET graduates are employed at a higher rate than their peers from general education (69.6%).

⁸ 20-34-year-olds and 1 to 3 years after graduation.

To prevent a sharp decline in apprenticeship training places, Austria took several measures to support training companies⁹. For training contracts concluded between March 2020 and March 2021, training companies received an apprenticeship bonus of EUR 2 000 requiring as of January 2021 an investment of EUR 40 million¹⁰. Training companies were also allowed to outsource training to a newly created innovative training association. Austria amended the Vocational Training Act in March 2020, bringing in provisions for short-time work for apprentices¹¹.

Existing digital learning platforms adapted their offer to the increased demand for distance training. The 'digital learning platform'¹² for the construction sector opened up its courses to multiple educational institutions. On '#Weiterlernen'¹³ students, teachers, trainers and parents receive support in adjusting to distance learning.

Box 2: 'resp@ct' – Raum für Jugendliche (resp@ct – space for young people)

resp@ct is a 2017-2019 project run in Linz for young people aged 15-24 who are not in employment, education or training. The easy access set of services help young people expand their educational and professional prospects by offering counselling, employment opportunities, joint activities, advice, mentoring and mediation, including follow-up meetings.

The project encourages young people to explore their practical and cognitive skills, train and identify their individual strengths. They can come to resp@ct during opening hours, receive individual support in line with their concerns and discover job opportunities. Participants can access this service free of charge.

The COVID-19 pandemic had a negative impact on adult learning in Austria. According to the Conference of Adult Education Austria, 21% of courses had to be cancelled¹⁴. In 2020, only 11.7% of adults aged 25-64 indicated they had participated in adult learning over the past four weeks (14.7% in 2019), representing a detrimental reduction in participation. Among low-qualified adults, the participation rate fell from 5.7% in 2019 to 3.9% in 2020. Among unemployed adults, the participation rate was at a three-year low at 15.9% (2018: 16.3%, 2019: 19.3%)¹⁵. Overall, the adult education system is able to cope with crisis situations such as the pandemic¹⁶. However, to ensure continued participation in adult education, in particular for the low qualified, Austria should focus attention on the training offer, the relevance of it to meet the specific target as well as context factors.

7. Modernising higher education

Austria needs more tertiary graduates to become an innovation leader. Austrian tertiary education attainment increased over the last 10 years by 20.5 pps to 41.4% in 2020¹⁷. Despite lack of further improvement in the last year, attainment levels remained above the EU-27 average of 40.5%. In 2019, Austria had a high share of STEM graduates at 31%, above comparable countries such as Sweden (27%), Finland (29%) and Estonia (28%). Between 2014 and 2019 the share of enrolled students in ISCED levels 5-8 did not change, but there was a 5% fall at short-cycle and

⁹ Cedefop ReferNet Austria (2020): vocational education and training during the corona crisis.

¹⁰ As above.

¹¹ Bundesgesetzblatt I Nr. 18/2020.

¹² Digital learning.

¹³ Weiterlernen.

¹⁴ Konferenz der Erwachsenenbildung Österreichs (2021): 35. KEBÖ-Statistik (Arbeitsjahr 2020), <https://cms.adulteducation.at/en/structure/keboe>

¹⁵ Eurostat (2021), European Training Monitor data 2020 – Adult Learning.

¹⁶ Gerhard Bisovsky (2021), Adult Learning – Status Report (2021), Report on National Developments in Adult Learning.

¹⁷ The biggest increase of 13.5 pps occurred in 2014 due to an ISCED reclassification of a part of the upper secondary education.

master level and a 10% rise at bachelor level. Participation in doctoral studies contracted sharply (-21 pps). Austria needs more tertiary graduates, especially in STEAM subjects,¹⁸ to become an innovation leader.

The rate of higher education attainment of people born outside Austria has increased.

Between 2010 and 2020, the tertiary attainment rate of foreign-born people doubled (from 20.0 to 39.7), for non-EU born people it increased by 17.1 pps to 31.6 and for EU-born people it increased by 20.5 pps to 49.2. Attainment rates in rural areas more than doubled to 34.9, and with the rate higher in cities (27.4-50.8), a gap of 15.9 pps remains in 2020.

A recent higher education reform clarifies the framework conditions, improves flexibility and issues of recognition.

After lengthy and thorough preparations, Austria amended the University law in May 2021. The main changes are: (1) the requirement to complete a minimum of 16 ECTS within two years to remain registered as a student, (2) more autonomy for universities to react to unforeseen circumstances such as the recent pandemic, (3) easier recognition of international school diplomas and accrediting extracurricular, professional or non-professional achievements and (4) a clearer definition of the beginning and the end of semesters.

Reforming continuous education in higher education contributes to reskilling and upskilling adults to support the digital and green transition.

The reform package on continuous education in higher education¹⁹, entering into force on 1 October 2021, provides a reform of continuing education at higher education institutions, standardised legal framework conditions, introduces a range of bachelor's and master's degrees for continued education and their specifications, specifies that these degree courses can only be offered in cooperation with non-university partners, and enables transfers to other courses and comparison at international level.

Distance learning during the pandemic did not have a major negative impact on learning outcomes but students prefer face-to-face teaching.

Three quarters of students²⁰ did not have problems with online exams nor lacked information when learning at home. Only 5% reported negative experiences. About a quarter of the polled students during the second lockdown indicated a worsening of their well-being. Students were generally able to maintain contacts with people they cared about (32% equal, 22.3% improved, 15.5% worse). A quarter of students believed that they learned less or less efficiently. Distance learning improved their independent communication skills and learning, time management and self-organisation, all competences conducive to successful studies. Nevertheless, most students wish to return to face-to-face learning (47.1% positive, 25.5% neutral and 27.4% negative).

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¹⁸ STEAM subjects are science, technology, engineering, the arts, and mathematics.

¹⁹ [Reform package of further education in higher education \(bmbwf.gv.at\)](https://www.bmbwf.gv.at/Content/Navigation/Reform%20package%20of%20further%20education%20in%20higher%20education.pdf).

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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04

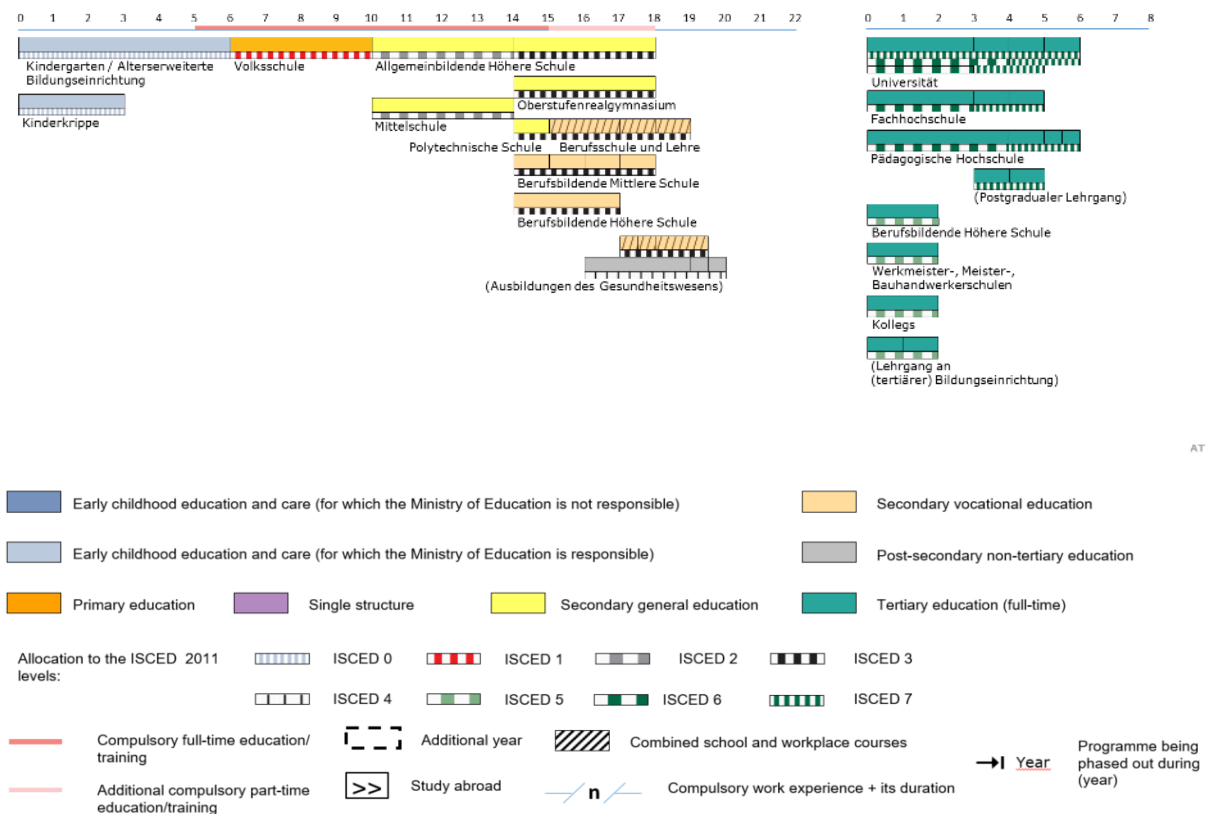
Indicator

Upper secondary level attainment

Eurostat online data code

edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. The Structure of the European Education Systems 2021/2022: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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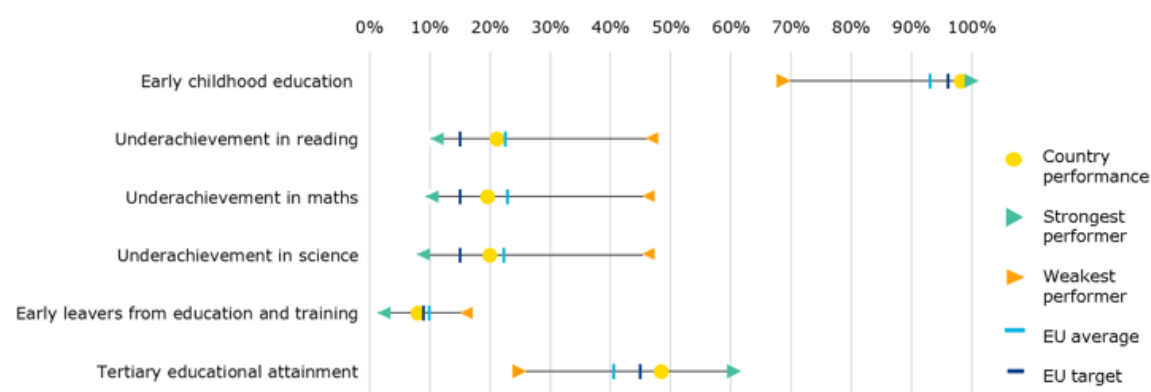
1. Key indicators

Figure 1 – Key indicators overview

			Belgium		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		98.3% ¹³	98.3% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
	Reading	< 15%	17.7% ^{09, b}	21.3% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
Low achieving 15-year-olds in:	Maths	< 15%	19.1% ^{09, b}	19.7% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	18.0% ⁰⁹	20.0% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		11.9%	8.1%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		43.8%	48.5%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
	Public expenditure on education as a percentage of GDP		6.0%	6.2% ¹⁹	5.0%	4.7% ¹⁹
Education investment	ISCED 1-2		€7 943 ¹²	€8 629 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
	ISCED 3-4		€9 455 ¹²	€10 194 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
	ISCED 5-8		€12 054 ¹²	€14 142 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		10.7%	7.5%	12.4%	8.7%
	EU-born		17.5%	7.2% ^u	26.9%	19.8%
	Non EU-born		24.6%	15.6%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			82.5%	85.7%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		46.0%	51.1%	33.4%	41.3%
	EU-born		47.2%	48.2%	29.3%	40.4%
	Non EU-born		26.7%	34.0%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Belgium is strengthening its well-being policies in education and training, and taking some measures to address pupils' learning loss and increased inequalities in education following the COVID-19 crisis.
- The pandemic has contributed to slowing down the adoption and implementation of reforms in education.
- The Flemish Community (BEfl) is taking measures to make its higher education fit for the 21st century; the French Community (BEfr) is addressing student poverty and promoting academic success to fight the negative impact of COVID-19.
- The Recovery and Resilience Plan (RRP) aims to strengthen education and training systems, including by investments in digital infrastructure, equipment and skills; there are no comprehensive strategies to strengthen participation in lifelong learning.

3. A focus on well-being in education and training

Belgian schools perform better on school climate than the EU average. According to the OECD PISA 2018 report, Belgium shows that high performance and a strong sense of well-being can be achieved simultaneously (OECD, 2019a). Belgian 15-year-olds behaved less disruptively than their average European peers. The disciplinary climate in schools is better overall, with bullying less frequent. One in five students (18.6%; EU 22.1%) reported being bullied at least a few times a month (European Commission, 2020). Students skip class less often, but arrive late at school more often. However, only 58.2% of 15-year-olds surveyed in 2018 PISA felt that they belonged at school compared with 65.2% at EU level. In 2021, Flemish schools scored very well on class and school climate in the inspection report (Vlaamse Overheid, 2021a).

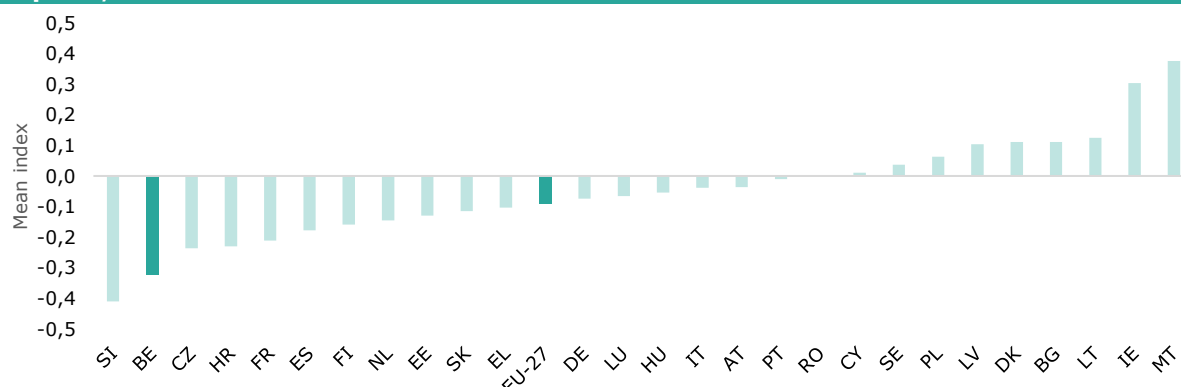
Further strengthening of well-being policies in schools could improve learning outcomes. 2018 PISA data suggest that measures addressing student behaviour and supportive action from teachers have the potential to increase reading performance in Belgium. Students who report being bullied perform 18 points lower in reading than their peers, representing up to 6 months of schooling. The gap between schools with low and high prevalence of bullying²¹ is even more substantial (68 points; EU: 70 points). While students reported that they receive a great deal of emotional support from their teachers, feedback culture from teachers to pupils could be further strengthened. Belgian teachers score second lowest on feedback, as perceived by their students (see Figure 3). The gap between schools with low and high prevalence of teachers helping students with learning is equivalent to 48 score points (EU 25 points). More positively, disadvantaged students and students in socio-economically disadvantaged schools were more likely to report that they had supportive teachers, which is particularly important in a COVID-19 context. More parental involvement, which is relatively low compared to other EU countries, would also benefit student well-being and have a positive impact on learning outcomes.

Well-being, mental health and resilience are increasingly part of school policies and curricula. Schools play a key role in promoting the mental health and well-being of children and young people. In BEfl, this is part of the mandatory policy on pupil guidance of each school, and implementation is evaluated during inspections (Vlaamse Overheid, 2021b; 2021a). Physical, mental and emotional awareness and health, socio-relational competences, learning to learn, self-awareness and resilience and cultural awareness are 5 of the 16 key competences in the new secondary education curricula. In BEfr, these competences are covered transversally (FWB, 2013a) and also partly by the civic competences. From 2020/2021, physical activity, well-being and health constitute one of the seven learning areas included in the early childhood education curriculum; this will be gradually rolled out in the period up to 2028 in the new curricula of pupils up to grade nine (FWB, 2020a). Well-being must also be included in school management plans and is subject to evaluation

²¹ Table III.B.1.2.7

(FWB, 2017; 2019). Schools can voluntarily take part in anti-bullying policy projects. Anti-bullying and anti-violence policies and related training for educators will be gradually developed from 2021/2022. Belgian schools work with specialised psycho-medical-social centres (PMS) or student counselling services (CLB), (guidance) support services, organisations and supporting tools. There is still room for streamlining and integrated approaches, including more parental involvement (UFAPEC 2018; VLOR 2021).

Figure 3 - Index of students' perceived feedback from teachers based on students' reports, PISA 2018



Source: OECD, (2019).

The pandemic has greatly increased concerns about mental well-being and health among students. Surveys during COVID-19 reported significantly higher levels of stress, anxiety, feelings of depression, sadness and loneliness, demotivation and poorer health among pupils and students. Young people aged 16-25 seem to be the most affected; students more than workers (Gordts, 2021). Among younger people, findings show larger gaps in educational outcomes and higher inequalities, pupil demotivation and school dropout.

Keeping schools open was therefore a key aspect of the national priority to support students' mental and social well-being and to limit learning loss and early school leaving (ESL) in the 2020-2021 school year. Schools closed for only 10 days, one of the shortest periods in the EU. Children from pre-primary level to the second year of secondary education were taught face-to-face. The highest 4 grades alternated between part-time distance and in-class teaching from the end of October 2020 until 10 May 2021. The latter were the most at risk of learning loss and early school leaving (see Section 5).

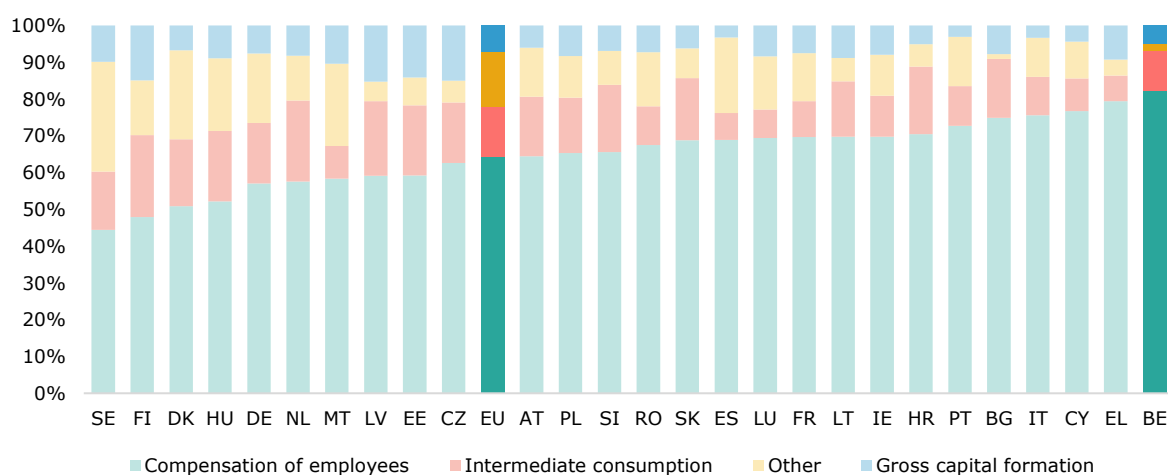
Belgium took additional measures to support pupils' well-being during the pandemic. In BEfr, additional multidisciplinary teams supported pupils' psychosocial well-being in secondary schools and psycho-medico-social centres during 2020/2021 (EUR 19 million). In BEfl, well-being measures include additional means to support pupils' psychosocial situation (EUR 14 million) and an online low-threshold consultation platform for the CLB centres. Stakeholders regret the lack of a whole school approach, as recent reviews indicate that a systemic, whole school approach to mental health and well-being leads to better outcomes (Cefai, 2021).

Well-being policies are also being developed for higher education students, who have been severely affected by distance teaching. In BEfr, almost two thirds feel that their institution offers support for students struggling with well-being issues (UMons, 2021). By early 2022, BEfl will develop a new participatory well-being policy. The mandate of the Support Centre Inclusive Higher Education (SIHO) has been extended to include student well-being. BEfl is also developing a digital well-being platform with an online e-health offer and an annual survey (Vlaams Parlement, 2021a). Despite distance teaching, initial data show that study results in higher education were better than last year because of, among other factors, a lack of other activities.

4. Investing in education and training

In 2019, Belgium's expenditure on education as a share of GDP was among the highest in the EU (6.2% vs 4.7%) and its expenditure on employee compensation as a share of public spending on education was also the highest (82% vs 64%). The latter accounts for 9.7% of total government expenditure. Above-average teacher salaries, below-average class sizes and, to a lesser extent, less time on teaching and instruction explain this high share. Since 2010, the share of public spending on education rose from 11.2% to 11.8%, and the real-term increase of 12.5% is well above the EU average of 6.4%. Investment increased more markedly at pre-primary and primary levels (+14.4%) than at secondary (7.7%) and tertiary (9.8%) levels; expenditure by education level reached the EU average in 2019 for pre-primary and primary education (33%) and secondary education (39%), but remained below the EU average for higher education (14% vs EU 16%). In 2018, private funding as a share of total educational expenditure was relatively low at 6% (EU-22 11%), of which 13% (20%) was at tertiary level²² (OECD, 2021a) (see Section 7).

Figure 4 - General government expenditure on education by category, 2019



Source: COFOG, [gov_10a_exp].

The National Resilience and Recovery Plan (NRRP) supports larger federated recovery plans and investment policies (2019-2024) in education and training. Gross capital formation (e.g. buildings, digital infrastructure and equipment) has grown by 21.3% since 2010, but remained comparatively low at 5.2% of public expenditure (EU average 7.1%) in 2019. The ambitious sustainable school infrastructure plans should address the shortage of adequate school infrastructure (*Masterplan School Buildings 2.0*, with EUR 3.078 billion over 2019-2024 in BEfl and a future target of EUR 1 billion, of which EUR 230 million through the NRRP in BEfr). This will be complemented in BEfr with sustainable green investments in childcare places, universities, vocational education and training and lifelong learning infrastructure. Recovery plans also include investments in digital infrastructure, equipment and skills in education and training in all federated entities (regions and communities), partially financed by the NRRP. The latter will partially address the funding needs of higher education institutions (EUR 74 million) in BEfr. The Flemish recovery plan includes measures to improve the resilience of vulnerable students and students' digital skills in compulsory education, and investments in higher and adult education (EUR 585 million) (see other Sections).

²² Table C3.1.

Box 1: The National Recovery and Resilience Plan

Of the EUR 5.295 billion in grants under the Recovery and Resilience Facility, approximately 22% will be invested in education, training and skills related measures, with a strong focus on sustainable/green infrastructure and digital infrastructure, equipment and skills development. Some reforms are planned in training, compulsory and higher education, while investments cover all education sectors and lifelong learning in one or the other federated entities (see other Sections).

5. Modernising early childhood and school education

Early childhood education and care (ECEC) policies remain a priority. Belgium has lowered the age of compulsory education to 5. As of September 2020, compulsory education starts at 5 instead of 6, which mainly benefits vulnerable pupils (European Commission, 2020a). In 2019, Belgium was the third best performer in the EU on participation of children aged 3-6 in ECE (98.3% vs EU average of 92.8% and the new EU-level target of 96% by 2030). For children at risk of poverty or social exclusion, this rate is below the target (95.8% in 2018). In BEfl, from 1 September 2021, additional nursery staff is being funded in pre-primary education (EUR 23 million) and children need to take a Dutch language screening test at the age of 5 and follow language integration pathways if they do not have sufficient command of Dutch. In BEfr, measures to improve quality include the gradual roll-out of free ECE over 2019-2021 and the implementation of a first curriculum of 'initial competences' beginning in September 2020 (*Pact for Excellence in Education*). Due to COVID-19, the related teacher training still needs to be fully completed.

COVID-19 further increased inequality in education and the risk of early school leaving.

While Belgium shows good average performance in basic skills, there is a high level of inequality linked to socio-economic factors and migrant backgrounds and between schools (European Commission, 2020a). In BEfl, the school closures of spring 2020 resulted in a general learning loss of up to half a year in sixth grade (Maldonado & De Witte, 2020) and higher inequality between pupils within and between schools (Onderwijsinspectie 2021 and others). Disadvantaged schools and students in urban areas were more affected by the learning loss. In 2020, the national rate of early leavers from education and training continued its downward trend by 0.3 pp. to 8.1% (EU 9.9%; the new EU-level target by 2030 is less than 9%). However, COVID-19 may reverse this positive trend and may also increase the number of pupils repeating a year, which is one of the highest in the EU. In BEfr, 43% of pupils (2018/2019) and 23.1% of pupils in BEfl (2020/2021) had a delay of at least 1 year during primary or secondary education.

Communities have taken some measures to reduce learning loss and the risk of early school leaving, targeting vulnerable pupils in particular. In the NRRP, BEfr has committed to adopting a comprehensive action plan to tackle early school leaving. In 2020/2021, it allocated specific funding to socio-economically disadvantaged schools to hire more teachers and provide individualised support and remediation. Secondary schools could rely on more psychosocial support provided by multidisciplinary teams (see Section 3). Similar actions will be financed through the NRRP in 2021/2022 (reaching 30000 pupils), complementing actions under the European Social Fund (see Box 2). Key learning content was defined and extra-curricular activities were encouraged to tackle school dropout and remedy learning difficulties (FWB, 2021a); summer schools were also organised (FWB, 2021b). Nevertheless, given the high level of inequality within the education system, additional measures in BEfr could be needed. BEfl allocated funding for additional teaching staff in ECEC, compulsory and part-time vocational education within or outside regular school time in 2020/2021. From 2021/2022, 540 additional teaching staff will be permanently allocated to disadvantaged schools and 2 000 will be temporarily allocated to requesting schools during 2021/2022 (Vlaams Parlement, 2021a). Stakeholders have requested long-term measures to tackle the structural problems in education exacerbated by COVID-19, such as cooperation between education and other policies, and equal access to education for vulnerable pupils (VLOR, 2021). Following a positive evaluation, summer schools will become a permanent measure (Departement Onderwijs, 2021).

Box 2: European Social Fund project: 'Moorings (Amarrages)'

The project (122 partnerships with 377 organisations involved) in BEfr provided support to and follow-up for 11 450 young people aged 15-24 who were playing truant, attending school irregularly or dropping out of school. Partnerships focused on first-line intervention within schools, on support mechanisms outside of school (e.g. non-institutionalised youth support centres, retention services (*'Services d'accrochage scolaire'*), non-governmental organisations, public services) or on compensation measures for young people who had left the school system. The partnerships achieved more effective and coherent actions to prevent young people from dropping out of and disengaging with education.

The EUR 7.4 million project (67% from the ESF) ran from September 2018 to December 2020.

<http://www.ccgpe-dgeo.cfwb.be/index.php?id=6385>

The implementation of digital education ecosystems is higher on the priority list as a result of COVID-19. Education systems were not ready to shift to distance digital learning when schools closed. Teachers' digital skills were lower than the EU average (European Commission, 2020a). The German-speaking and Flemish Community (see country Box 8 of Volume 1) adopted digital education strategies, partly financed by the NRRP. BEfr has accelerated implementation of its 2018 digital education strategy, including by deploying digital equipment for students and ICT coordinators in schools. Improving teachers' digital skills will be key for successful ecosystems.

BEfl focuses on improving education quality to counter the negative trend in learning outcomes (European Commission, 2020a). From September 2021, new more ambitious attainment targets and curricula will be gradually rolled out in the second and third cycle of secondary education. From 2023/2024, standardised and validated tests will measure how well pupils achieve set attainment targets, and also the learning gains achieved by individual students and schools. Underperforming schools will enter a guidance pathway to improve their performance. From September 2021, the new collective agreement should reduce work pressure on teachers and school heads and allow them to concentrate more on their core tasks. It should also make teaching and school management more attractive (EUR 188 million). However, the reform of special needs education has been delayed until September 2022 due to COVID-19.

In BEfr, despite COVID-19, some planned reforms of the Pact for Excellence in Education are being progressively adopted or implemented. The reform of the continuing professional training of teachers and psychosocial staff (adopted in June 2021) will be operational from September 2022, with a tripling of the budget to EUR 33 million, modernisation of the offer and special focus on novice teachers (FWB, 2021c). From 2022/2023, a revised school timetable with shorter summer holidays and longer holidays during the year is being discussed, which would mainly benefit disadvantaged students. From September 2021, the reform of inclusive education has been gradually implemented. Forty underperforming schools are entering a guidance pathway to improve their performance. The evaluation of teachers and principals continues through the legislative process. However, implementation of the school governance reform has been extended for the last third of schools. The new curriculum for the first 2 years of primary education and related teacher training, as well as the initial teaching reform, have been delayed until 2022/2023.

6. Modernising vocational education and training and adult learning

The share of upper secondary students in vocational education and training (VET) is high. Despite a slight decrease (of 0.6 pps since 2018), the share of upper secondary VET graduates was 56.2% in 2019, still 7.8 pps above the EU average. In 2020, 76.5% of recent VET graduates (ISCED 3-4) found employment between 1 and 3 years after graduation, which remains, at 15.2 pps, well above the employment rate of students graduating from general education. However, there remain concerns over the quality of VET programmes as well as the capacity of the VET offer to adapt quickly to a changing labour market (European Commission, 2020a; Cedefop, 2021).

The long period of distance learning is expected to have negatively impacted VET students disproportionately. In general, the lack of equipment and adequate competences in distance learning (among both teachers and students) caused some difficulties in the provision of distance learning. This has affected in particular students from more disadvantaged socio-economic backgrounds, who are overrepresented among VET students. In addition, the public health restrictions imposed by the government have led to many apprenticeships being discontinued. Today, companies remain reluctant to offer apprenticeships and the shortage in the number of places, which was already apparent before the COVID-19 crisis, has further increased (Dewitte and Verhaest, 2020). BEfl plans to improve educational outcomes by sharing examples of good teaching practices in VET and promoting computational thinking through the strengthening of extended reality technology and infrastructure in technical and vocational education (Vlaams Parlement, 2021a).

A sizeable share of EU funding helps make dual learning more attractive. During the COVID-19 crisis, BEfl used part of the additional funding under REACT EU to address the shortage in apprenticeships by increasing financial support for companies that offer apprenticeships. A similar measure (the 'encouragement premium') was introduced in BEfr in May 2021 to encourage entrepreneurs who had to close during the lockdown to offer apprenticeships. In addition, provision has been made for substantial investment in education and training under the national recovery and resilience plan, including in equipment and infrastructure. For example, the plan provides for substantial investment in public training agencies in BEfr.

The COVID-19 crisis has stalled policy development as regards VET, although some reforms are in the pipeline. In BEfr, the reform of dual learning is included as one of the major strands of the Walloon recovery plan. One of the key objectives of this reform would be to increase the labour market relevance of the system and improve the quality of the guidance offered in apprenticeships. The French Community is also discussing the reform of its VET school system to increase its labour market relevance. There is scope to rationalise the governance, the offer and the labour market relevance of the VET systems. In BEfl, SYNTRA Vlaanderen, the agency for entrepreneurial training, was discontinued in 2021 and its services integrated into three other organisations.

The COVID-19 crisis decreased further participation of adults in training, which was already at a low level. In 2020, only 7.4% (EU 9.2%) of the working age population (25-64) participated in lifelong learning in the 4 weeks before the Labour Force Survey, a decrease of 0.8 pp. (EU -1.6 pps). The main barriers to adult learning are work, childcare and family responsibilities – costs were the least-cited barrier in all OECD countries (OECD, 2019b).

The fast transition to e-learning following the COVID-19 crisis highlighted the need for increased investment in digital skills. Digital learning was possible for some groups, but gave rise to significant difficulties for the most vulnerable groups, who often lack the equipment and basic digital skills required. In order to prepare for the digital transition, upskilling and reskilling, in particular as regards digital skills, is at the core of the recovery instruments proposed by the different regional governments. The Flemish government and social partners agreed in December 2020 to the roll-out of a 'learning and career initiative'. It includes measures to encourage participation in lifelong learning, such as an increase in the transparency of the training offer, a temporary increase in the time credit for lifelong learning, the roll-out of competence checks for employees and companies and the setting-up of an individual learning account. One of the five strategic strands of the 'Get Up Wallonia!' recovery plan includes measures such as the establishment of a universal instrument to support lifelong learning ('skills wallet') as well as investment in training equipment and infrastructure. The strong focus on digital skills is also reflected in the 'Start digital' and 'Upskills Wallonia' projects, adopted in May 2020.

Several of the measures proposed in the regional recovery plans to boost skills development are included in the NRRP. The latter devotes more than EUR 500 million (or 8%) to boosting adult skills development, including for vulnerable groups. The plan includes measures such as the establishment of individual learning accounts, investment to increase the labour market relevance and transparency of the training offer as well as investment in equipment and training infrastructure. However, the plan does not represent a comprehensive strategy to strengthen

participation in lifelong learning. It includes few measures to incentivise participation in training and develop a learning culture, the lack of which were identified as the main causes of low participation in lifelong learning. This is especially a concern in Wallonia, where investment in training is almost exclusively focused on building and renovating training centres.

7. Modernising higher education

Tertiary education attainment is high, but the gender gap and disparities related to socio-economic background are significant. In 2020, 48.5% of adults aged 25-34 held a tertiary-level degree (vs EU average of 40.5% and new EU-level target of 45%). However, the gender gap is significant (15.4 pps vs EU 10.8 pps). While the share of men increased by 2 pps to 40.8% between 2010 and 2020, for women it increased by 6.8 pps to 56.2%. There are also wide disparities related to socio-economic and migrant backgrounds and the attainment gap for people with disabilities far exceeded the EU average (European Commission, 2020). The employment rate of recent tertiary education graduates aged 20-34 (88% in 2020) is above the EU average (83.7%), but there is a significant shortage of science, technology, engineering and mathematics (STEM) graduates, including in ICT, to meet labour market demand. BEfr intends to develop a STEAM²³ action plan and make STEAM more attractive in higher education. BEfl has tabled a new STEM-Agenda 2030 in June 2021 (Vlaamse Overheid, 2021c).

Internationalisation of higher education is high on the agenda. Ten Belgian higher education institutions (HEIs) participate in the European Universities Initiative (EUI). BEfr has allocated EUR 0.9 million in grants to its four institutions participating in the initiative. BEfl will introduce more flexibility in its legislation to facilitate the development of the EUI. Belgium is also party to an agreement to further automatic mutual recognition of higher education degrees between the Baltic and Benelux countries.

The Flemish Community aims to transform its higher education for the 21st century, supported by the Recovery and Resilience Fund. It has committed to create a long-term vision to transform its higher education, with the involvement of all stakeholders, by the end of 2023. It will also support medium-term projects to make its training portfolio more flexible and future-proof, develop further lifelong learning and new (digital education) methods to improve labour market relevance, digital and green readiness and international competitiveness, including through micro-credentials (*Voorsprongfonds*, Vlaams Parlement, 2021b).

The French Community is addressing student poverty and promoting academic success to fight the negative impact of COVID-19. Students could still enrol in higher education in 2020/2021 in case of failure in 2019/2020 (FWB, 2020b). From 1 July 2021, the reform of student allowances will extend eligibility to students and will simplify the eligibility criteria. Exceptionally, the eligible funding ceiling will also be doubled in 2021/2022 (FWB, 2021d). Other measures include an increase in open-ended social subsidies for HEIs to provide students with material and psychological support, lower enrolment fees, support to (first year) students to help them succeed, and flexibility measures for graduation. On 30 June 2021, the parliament of the French Community adopted a comprehensive plan to fight student poverty, which affects more than 1 in 3 students (FWB, 2021e). The proposal to reform the 2013 Higher education decree (*décret Paysage*) includes provisions to limit the time in which students must graduate, strengthen remediation activities for students encountering difficulties and to provide additional funding for HEIs in order to help students succeed academically (FWB, 2021f).

²³ STEM and arts.

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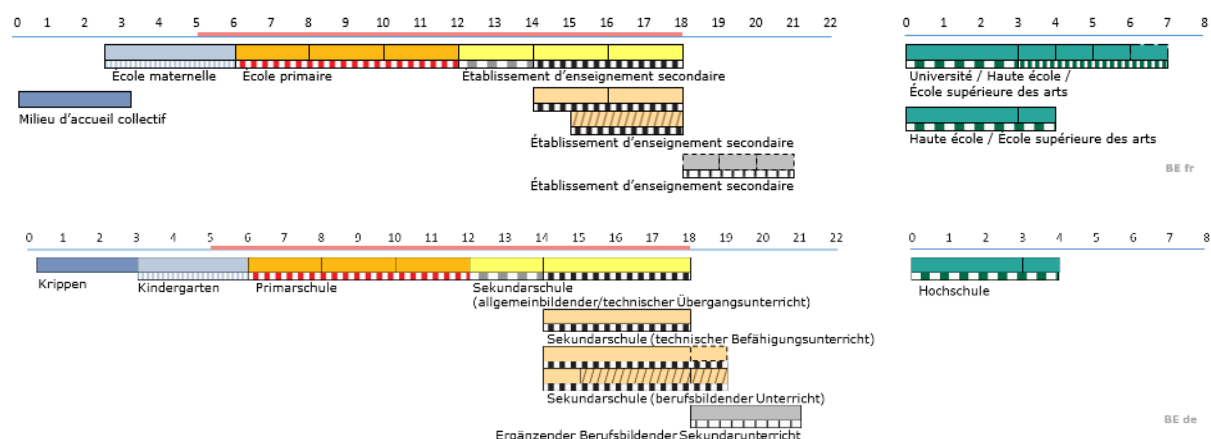
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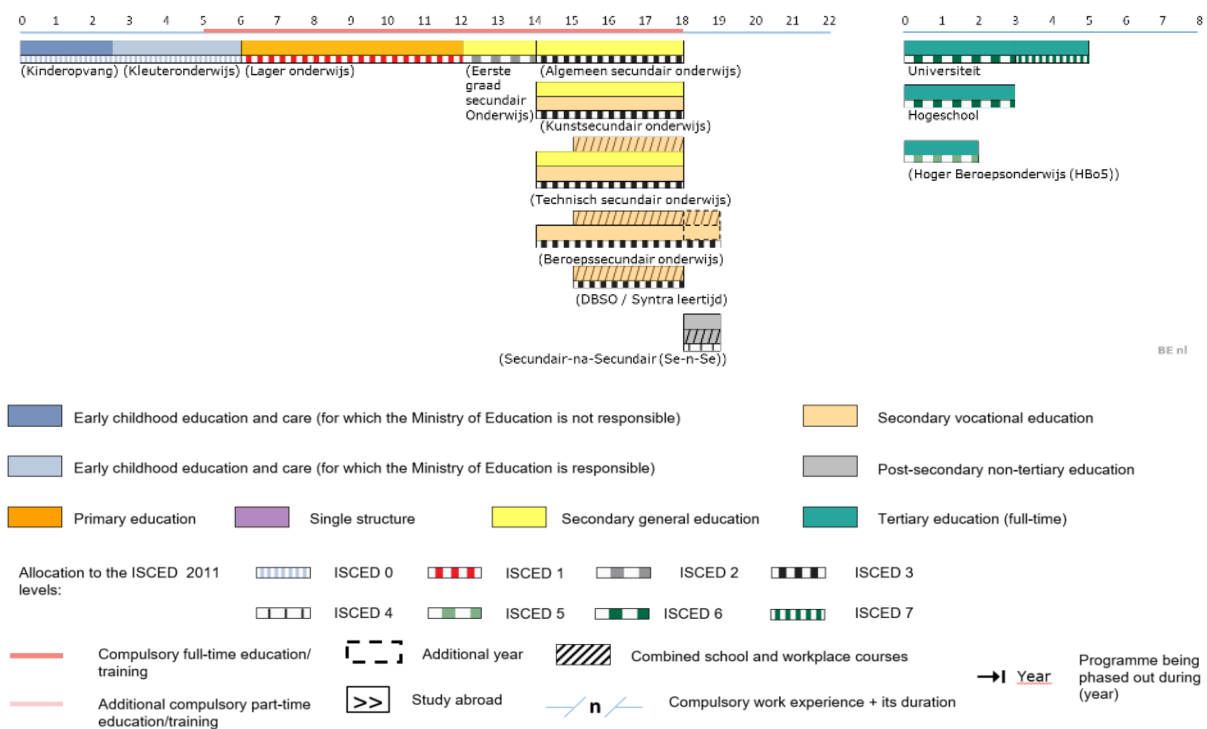
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system





Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Any comments and questions on this report can be sent to:
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BULGARIA

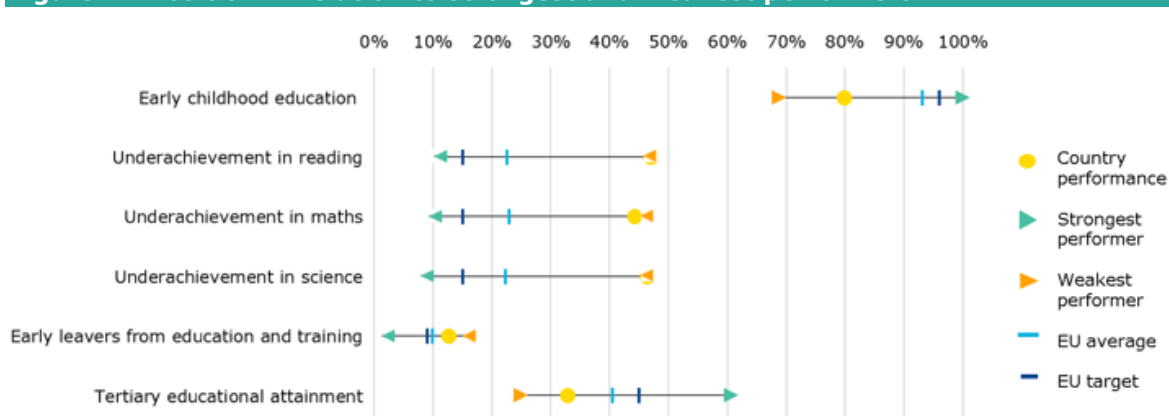
1. Key indicators

Figure 1 – Key indicators overview

			Bulgaria		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	83.8% ¹³	79.9% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	41.0% ^{09, b}	47.1% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	47.1% ⁰⁹	44.4% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	38.8% ⁰⁹	46.5% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	12.6% ^b	12.8%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	27.5%	33.0%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
	Public expenditure on education as a percentage of GDP		3.6%	3.9% ¹⁹	5.0%	4.7% ¹⁹
Education investment	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€2 034 ¹²	€3 096 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€2 106 ¹²	€2 858 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€3 818 ¹²	€6 578 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		12.7% ^b	12.8%	12.4%	8.7%
	EU-born		:	: ^u	26.9%	19.8%
	Non EU-born		: ^b	:	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			85.9% ^b	85.4%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		27.5% ^b	32.9%	33.4%	41.3%
	EU-born		: ^{b, u}	: ^c	29.3%	40.4%
	Non EU-born		: ^{b, u}	: ^u	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, c = confidential, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Apart from ensuring educational continuity during the pandemic, Bulgaria's efforts over the past year focused on increasing participation in early childhood education and care, strengthening the teaching profession and pursuing the reform of higher education.
- European funds will continue to provide significant support for national efforts towards increasing access to and improving the quality, equity and labour-market relevance of education and training.
- The school climate in Bulgarian schools scores lower than the average in the EU. Despite measures taken by authorities, the pandemic has had a negative impact on the well-being of Bulgarian students. The school closures also risk exacerbating already significant inequalities in education and increase early school leaving.
- The challenges in terms of access to training and skills development in Bulgaria remain considerable and may hamper workforce adaptation to rapid labour-market and technological changes.

3. A focus on well-being in education and training

At the policy level, 'quality of school life' and 'personal development' are used in relation to students' well-being. The concept of well-being in education is not defined explicitly by the Education Act and its educational standards, which refer instead to 'quality of school life' and 'personal development'. Relevant measures are implemented primarily through personal-development support centres, usually operating within the regional centres for inclusive education support. The centres provide inclusion and training services as well as services for general and skills development. In practice, they offer pedagogical and psychological support, training for students and support for families, and assistance in preventing violence and bullying. During the school closures, the centres provided technical and logistical support to facilitate remote learning.

Compared with the rest of the EU, Bulgarian teenagers feel less safe at school and experience lower well-being. As part of the 2018 Programme for International Student Assessment (PISA), Bulgarian 15 year-olds reported one of highest incidences of bullying in the EU. 34% said they were bullied at least a few times per month. This percentage is significantly higher than the EU average (22.1%) and 9 percentage points higher than in 2015. 44% of Bulgarian students reported skipping a day at least once in the two-week period before taking the PISA test, compared to the EU average of 25.1%. Furthermore, twice as many Bulgarian teenagers reported feeling lonely at school than on average in the EU (13%). Only 65% said they were satisfied with their life, while 35.5% did not feel they belonged at school (EU average: 35%).

Data collected before the pandemic showed that improving certain aspects of student well-being could significantly improve student outcomes. Using data from two international surveys²⁴, a study (Institute for Research in Education, 2020) identified several aspects linked to the quality of school life in Bulgaria that are associated with better student outcomes. Improving students' sense of belonging at school, especially those from disadvantaged backgrounds, is associated with the most significant improvement; increasing pupils' sense of achievement is also associated with a very positive impact. Sense of achievement is defined as the self-perceived ability to cope with school work. Improving the safety of the school environment by reducing bullying and violence is also linked to improved outcomes. Furthermore, increasing the support provided by teachers could particularly benefit the outcomes for students who do not speak Bulgarian at home and whose parents have lower levels of education.

²⁴ 2018 PISA and 2016 Progress in International Reading Literacy Study (PIRLS).

COVID-19 has had a negative impact on the well-being of Bulgarian students at all levels of education. All educational establishments were forced to close during the first wave of the pandemic. In the subsequent waves, educational institutions operated with physical presence and/or remote learning, in line with the epidemiological situation. During school closures, priority was given to physical presence for pre-school and primary school children. Lower and upper-secondary education operated for a time in a rotating system of face-to-face teaching and remote learning, with children in grades 6 and 9 spending the longest time in remote learning. Universities remained almost entirely closed. A survey by UNICEF conducted at the start of the pandemic (UNICEF, 2020) showed that around half of respondent students had experienced negative feelings due to limited social contacts. 35% of parents surveyed believed that their children's mental health had deteriorated (ibid.).

Students from disadvantaged backgrounds were particularly impacted by school closures and the shift to remote learning. A recent survey of schools with a high concentration of children from vulnerable groups (Amalipe, 2021) showed that those schools had managed to significantly increase the percentage of students participating in remote learning. Wider use of synchronous forms of teaching was also noted compared to the first school closure of 2020. However, in the 2020/2021 school year, a high proportion of students still did not participate effectively in distance learning, increasing their risk of low achievement and of dropping out of school. The study further found that over 61% of respondent schools had managed to engage in remote education between 76% and 100% of their students. Another 31% engaged between half and three quarters of their students. The study also revealed that in spite of measures by authorities, challenges for distance learning remained; these included lack of IT devices, low student motivation and interest, and fatigue and stress among teachers (ibid.). With inequalities in education already high before the start of the pandemic and with the challenging school climate, the risk of falling further behind constitutes a particular risk for disadvantaged students, including Roma.

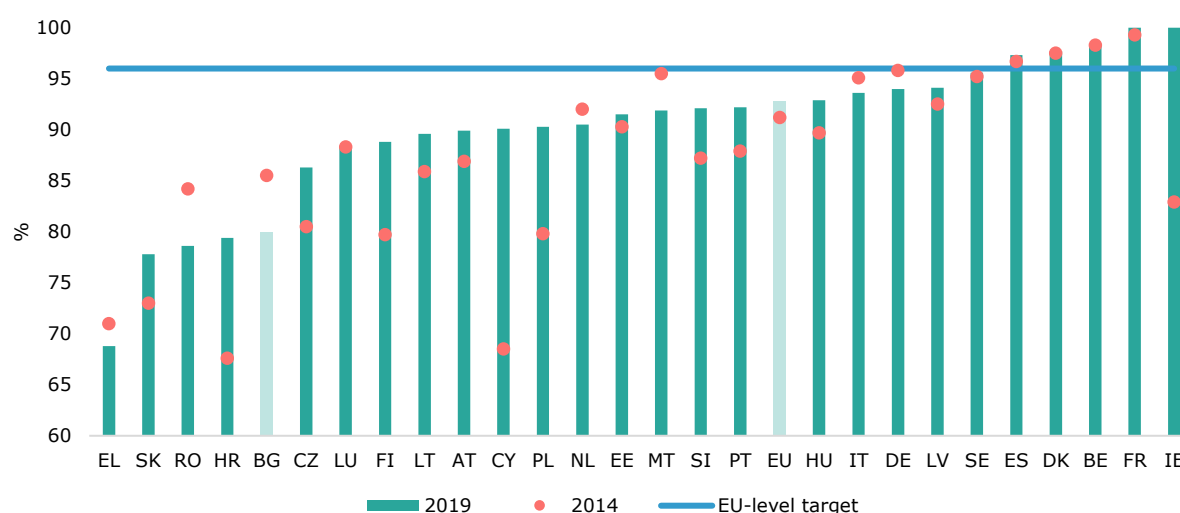
4. Investing in education and training

Bulgaria's investment in education continued to increase in 2019 but was still one of the lowest in the EU. In 2019, Bulgaria's general government expenditure on education increased by 14%, reaching the equivalent of 3.9% of GDP; this was largely due to increases in teachers' salaries. Although above the EU average as a proportion of total public spending (10.7% vs EU average of 10%), spending on education remains among the lowest in the EU as a percentage of GDP (the EU average is 4.7%); this partly reflects a comparatively low level of public spending. Between 2021 and 2027, support for education measures under the European Social Fund (ESF+) is expected to more than double compared to 2014-2020, when ESF support for education totalled about EUR 352 million.

5. Modernising early childhood and school education

Key priorities for Bulgaria are to increase participation and improve the quality of early childhood education and care (ECEC). Despite sustained efforts in recent years, in 2019 only 79.9% of children aged between 3 and the starting age of compulsory school education (7) were attending ECE. This is significantly below the EU average of 92.8% and the EU-level target of 95% by 2030. In September 2020, Bulgaria lowered the starting age of compulsory pre-school education from 5 to 4 and it is planned to implement this gradually by 2024. In its newly adopted 2021-2030 strategic framework for education, Bulgaria set a participation target of 91% for children aged between 4 and the starting age of compulsory school education. In 2019, the enrolment rate for that age group was 82.7%, below the EU average of 95.3%. Between 2021 and 2027, ESF+ will continue supporting measures to facilitate the participation of disadvantaged children, including Roma. Also, a national quality framework for ECEC is being drawn up with support from the EU's structural-reform support programme. The objective is to help Bulgarian authorities design a single set of tools – including a policy framework, indicators and benchmarks – to manage and monitor the quality of ECEC across the entire national system, in which responsibilities are currently split between the education and health sectors.

Figure 3 - Participation in early childhood education of pupils from age 3 to the starting of compulsory primary education, 2014 and 2019 (%)



Source: UOE, [educ_uoe_enra21]

Socio-economic factors and lack of places in some municipalities negatively impact participation rates. In the 2019/2020 school year the number of places available at national level exceeded the number of children, with a ratio of 108 to 100 (National Statistical Institute, 2020). That ratio was higher in northern Bulgaria and lower in the southern part, which includes Sofia. The uneven territorial distribution of ECEC institutions within cities and their often insufficient capacity in larger cities means that parents do not always find a place for their child (National Statistical Institute, Fundamental Rights Agency, 2021, forthcoming). In Sofia the overall ratio was 98 places for every 100 children and this increased markedly as of 2015 (from 87.7 places to 100 children), though the ratio varies across Sofia's different districts. As a result of internal migration, infrastructure needs to be upgraded and additional infrastructure is needed in several major cities (e.g. Sofia, Plovdiv, Varna). At the same time, the participation of children from disadvantaged backgrounds – including Roma – is still low, with fees continuing to act as a barrier despite the implementation of some measures to address this issue. Overall, the low level of participation of children from hard-to-reach and/or segregated communities is still a challenge (National Statistical Institute, Fundamental Rights Agency, 2021, forthcoming). In April 2021, 52 municipalities (20% of the total) expressed their readiness to enrol 4-year-olds in the compulsory pre-school programme and received government funding for that purpose. An additional 100 municipalities (38% of the total) were expected to follow suit in September 2021.

Early school leaving remains a major challenge. In 2020, the rate of early leavers from education and training in the 18-24 age group was 12.8%, above the EU average of 9.9%. Early school leaving continues to be particularly high among Roma and in rural areas (25.5%). For 2030, the Bulgarian authorities have set themselves the ambitious target of reducing the rate of early leavers from education and training to 7%. Achieving such progress in the aftermath of school closures and remote learning will require sustained efforts. In recent years, reducing early school leaving has been a priority in Bulgaria. The mechanism that ensures outreach to out-of-school children, inclusion in compulsory education and prevention of dropout has begun to yield results. However, with net enrolment rates in school education at only around 85%, further efforts are needed to improve participation rates and reduce early school leaving. Between 2021 and 2027, ESF+ will support the mechanism and that it operates effectively.

Significant efforts were made to increase teachers' salaries as a means to improve the attractiveness of the teaching profession. In 2019, 51% of Bulgaria's school teachers (i.e. in both primary and secondary education) were older than 50. 11% were already at least 60 and only 6% of teachers were younger than 30. Raising salaries to increase the attractiveness of the profession was a priority. Between 2017 and 2021, the starting teacher salary almost doubled in nominal terms

(from BGN 660 to BGN 1260). In 2020, the average wage of pedagogical professionals was 11% above the national average, though it still lagged below the national target of 120% (Ministry of Education and Research, 2021a). At the same time, the proportion of new pedagogical studies entrants increased, with 7.6% studying in 2020. To further attract young people into initial teacher-training programmes, tuition fees at public universities were abolished and additional scholarships were introduced. However, teacher education programmes still do not attract high-performing graduates from upper-secondary education. The average leaving grades of future teachers remain below that of candidates accepted into higher-degree programmes; between 40% and 65% graduating from pedagogical programmes do not enter the teaching profession (World Bank, 2021, forthcoming). Furthermore, available evidence suggests that the status of the teaching profession is generally low, although possibly improving as a result of higher salaries, and working conditions and advancement opportunities are perceived negatively compared to alternatives (ibid.).

Bulgaria has taken additional measures to strengthen initial teacher education (ITE) and continuous professional development (CPD). New requirements for the acquisition of professional teacher qualifications were adopted in February 2021 with a focus on strengthening the competence-based approach in both ITE and CPD. The state requirements for obtaining a vocational teacher qualification were also updated. Compulsory subjects were introduced in various pedagogy fields²⁵, while others were reinforced with additional hours of training. It should be noted that the proportion of teachers taking part in professional development has increased markedly in the past few years²⁶. Between 2021 and 2027, ESF+ is expected to continue providing support to upgrade teachers' competences. A review and assessment of Bulgaria's teacher policies conducted recently with EU support concluded that the system is guided by appropriate policies, standards, qualifications framework and institutional arrangement (World Bank, 2021, forthcoming). However, shortcomings in workforce planning and management have resulted in staff shortages, an unbalanced distribution of qualified teachers across schools, and an ageing workforce. These have contributed to stagnating learning outcomes (ibid).

Improving learning outcomes and equity in education remain key challenges for the school system. The findings of international and national assessments of student outcomes show that for many years the education system has not shown a stable trend of improving learning outcomes. Underachievement in basic skills, as measured by PISA, is twice as high as the European average (47% in reading, 44% in mathematics and 47% in sciences), with percentages above 60% among disadvantaged students. Bulgaria aims to reduce the proportion of underachieving students to 25% by 2030. Reaching this target will require substantial efforts and targeted policies to compensate for learning losses during the pandemic. Furthermore, in spite of efforts made in previous years (see European Commission, 2020a), students' levels of digital skills is still low. According to the Digital Economy and Society Index (DESI), which collects data on digital skills based on self-reported information on the use of digital tools, 57% of young Bulgarians aged 16-19 had basic or above-basic digital skills, significantly below the EU average of 82%. Previous surveys (E. Paunova-Hubenova et al., 2019) have shown that meaningful integration of technology in the classroom was not strongly evident; for example, teacher reported lack of technical equipment and appropriate tools for digital education, as well as lack of skills. With a view to overcoming some of these challenges, the ESF+ will continue providing additional support for digitalisation in education.

²⁵ E.g. 'competence approach and innovation in education', 'inclusive education', 'information and communication technologies in training and digital work'.

²⁶ In a survey conducted in 2019/2020 by Sofia University St. Kliment Ohridski, 83% of respondent teachers reported participating in at least 5 training and qualification courses over the past five years. One third reported participating in 10 courses (Education Bulgaria 2030, 2020).

Box 1: Equal access to school education in times of crisis

Through this REACT-EU project, the Ministry of Education and Science seeks to prevent interruption of the educational process and support inclusive education. The project helps ensure conditions for effective education and mitigates the risk of dropout associated with remote learning. The project directly addresses the consequences of the COVID-19 pandemic and the needs of teachers and students. Several activities are carried out, such as the purchasing of technical equipment for pedagogical professionals and students, training of students to acquire distance-learning skills, training of pedagogical professionals to improve their teaching skills in an electronic environment, and training for educational mediators and parents. Some 210 000 people are expected to acquire distance-learning skills, while 20 000 teachers will gain an additional qualification. With a budget of EUR 56 million, the project started in March 2021 and has a duration of 35 months.

More information: [UMIS 2020 \(eufunds.bg\)](https://umis2020.eufunds.bg)

6. Modernising vocational education and training and adult learning

The employment rate of recent graduates from vocational education and training (VET) is still low, indicating that labour-market relevance remains a challenge. Despite a slight decrease compared to the previous year, the latest available data show that enrolment in upper-secondary VET was 52.1% in 2019 (the EU average was 48.4%). However, after a significant increase to 73.5% in 2019, the employment rate of recent VET graduates fell to 69.6% in 2020, below the European average of 76.1%. Dual VET is being rolled out but challenges remain for its implementation. With ESF support, the number of students in dual VET increased substantially compared to 2016, when it was first introduced in legislation and piloted (in the 2019/2020 school year there were more than 5 200 students, compared to about 350 in 2016).

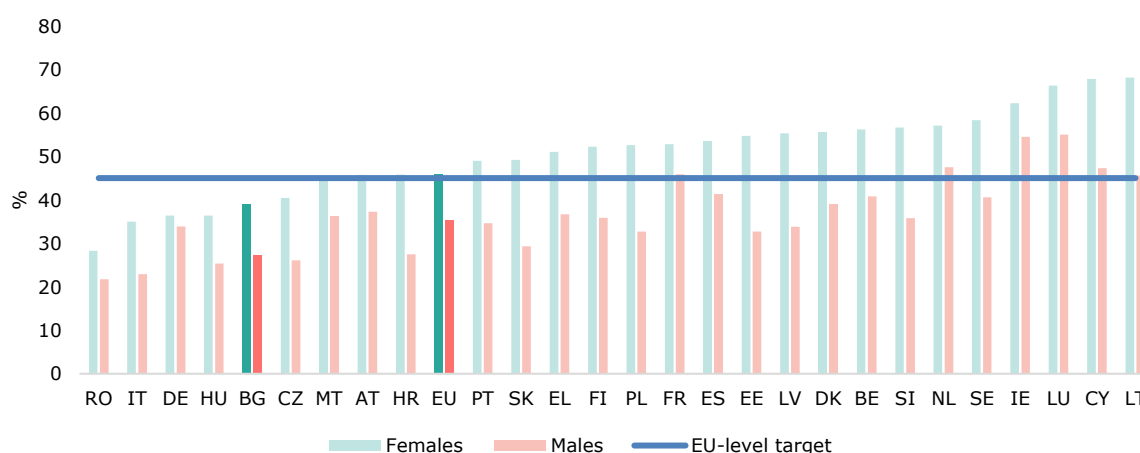
Additional measures were taken to increase VET's labour-market relevance and adjust to the challenges of the COVID-19 pandemic. Through an Erasmus+ project, the Ministry of Education and Science started implementing a graduate-tracking mechanism for 2020 graduates from initial VET. It uses indicators designed for better understanding labour-market outcomes and employment characteristics by region, gender and specialisation, as well as qualitative indicators on the transition from training to employment. In addition, a survey is being developed to complement the missing data in administrative registers, such as satisfaction with acquired skills and their applicability in a working environment or in a subsequent higher degree. In the context of COVID-19, the national electronic library (e-content repository), created to assist teaching staff and learners in the switch to remote learning, also contains a VET section. Like students in general education, VET students without internet access or appropriate equipment were provided with printed material and supported by education mediators. Between 2021 and 2027, VET will continue to be supported by ESF+, as will further development of dual VET programmes.

The challenges of access to training and skills development in Bulgaria remain high and may hamper adaptation of the workforce to rapid labour-market and technological changes. In 2020 only 1.6% of the population aged 25-64 was enrolled in adult learning, well below the EU average of 9.2%. Upskilling and reskilling the population remain a significant challenge in fostering rapid adaptation to new work patterns such as distance working and working online. Labour-market policies in the current year and in future years will be focused on investing in mainly digital skills and upskilling and reskilling the labour force in accordance with new labour-market needs. Upskilling, reskilling and digital skills acquisition will be funded both by the State budget and by EU funds. For example, in 2021 the ESF-supported digital skills development operation was launched for implementation by mid-2023. Its aim is to identify key economic sectors with digital-skill needs and develop unified digital-skill profiles per profession. Sectoral frameworks for digital competences and tools for assessing them will also be developed. In addition, as of 2021 new opportunities are expected under ESF+. Utilising the funds to increase adult learning in line with labour-market needs in the light of the EU's 'green' and 'digital' ambitions will be a key opportunity for Bulgaria.

7. Modernising higher education

Tertiary attainment is rather low. In 2020, 33% of Bulgarians aged 25-34 held a university degree, below the EU average of 40.5% and the EU-level target of 45% by 2030. At the same time, a marked gender gap persists, with 27.2% of men in this age group educated at tertiary level compared to 39.1% of women. In the 2020/2021 academic year, 43.8% of the population aged 19-23 were enrolled in tertiary-education programmes and this percentage has remained stable in recent years. Nevertheless, demographic factors, including lower birth rates, emigration and a high percentage of students studying abroad²⁷, have led to falling student numbers in higher education – although the marked trends started slowing down even before the pandemic. As a result of these factors and the rather slow adjustment of the range of university courses on offer, the number of candidates is significantly below the number of university places available, making it even more important to improve access to higher education and internationalisation (Ministry of Education and Science, 2021b). Participation of students from disadvantaged backgrounds is rather low. To improve access, students from disadvantaged backgrounds received targeted support from the ESF+ from 2014 to 2020. Such measures will continue in the 2021-2027 programming period. The number of foreign students increased, accounting for 8% of the total in 2020.

Figure 4 -Tertiary educational attainment (25-34) by sex, 2020



Source: Labour Force Survey, [edat_ifse_03].

New measures to improve quality and labour-market relevance were put in place. Since 2015, Bulgaria has been using the funding system to shift graduate profiles towards qualifications in high demand on the labour market and has taken measures to attract students to the corresponding fields. To continue higher-education reform, several other measures were recently put in place. The higher-education governance model was changed by introducing performance contracts with state-funded universities. Full or partial funding of tuition fees from the State budget was made possible for students under contract with an employer, with the employer in turn providing internships during and upon completion of studies. Furthermore, a 2021-2030 higher education strategy was adopted. Its objective is to improve labour-market relevance, including by introducing a mechanism to update and create new curricula, link admissions with labour-market needs and promote digitalisation. Other objectives are to improve access to higher education and lifelong learning and to promote research, for example by establishing research universities. A higher-education map is already being prepared to help determine universities' territorial structure by professional fields and specialties, in line with socio-economic development and labour-market needs. The map will inform admission numbers in public universities together with the Bulgaria University Ranking System (BURS), and will help identify opportunities for attracting foreign students. In addition, the government has expanded the list of priority programmes and allocated additional funding for these programmes.

²⁷ In 2018, 8.8% of upper-secondary graduates from Bulgaria had completed tertiary education abroad.

Regional imbalances reinforce labour market mismatches. The draft Higher education map (Ministry of Education and Science, 2021c) showed a number of imbalances between demand for and supply of educational services at national and regional level and the labour-market outcomes for graduates. At the national level, only 53% of university places are filled. In 29 professional fields, uptake is less than half of the places available. The least attractive programmes include several considered priorities at national level, such as mathematics and engineering. The most attractive programmes are economics, pedagogy, medicine, ICT, law, administration and management. About half of Bulgarian students study in these fields. Of all Bulgaria's universities, 27 (53% of the total) are situated in the southwest region, which includes Sofia, and only five (including branches of other universities) are in the north-west region. The higher-education strategy identifies additional challenges such as the mismatch in knowledge and skills between labour-market needs and the university courses on offer, as well as curricula that are outdated. There is also a need for more active participation of the business sector and for upgrading the skills of academic staff (ibid.). At the same time, additional challenges may also arise from the fact that universities have practically all remained in distance-learning mode for the entire academic year 2020/2021, with very limited periods of face-to-face teaching. This has not only affected the well-being of higher education students, it also risks affecting the acquisition of skills.

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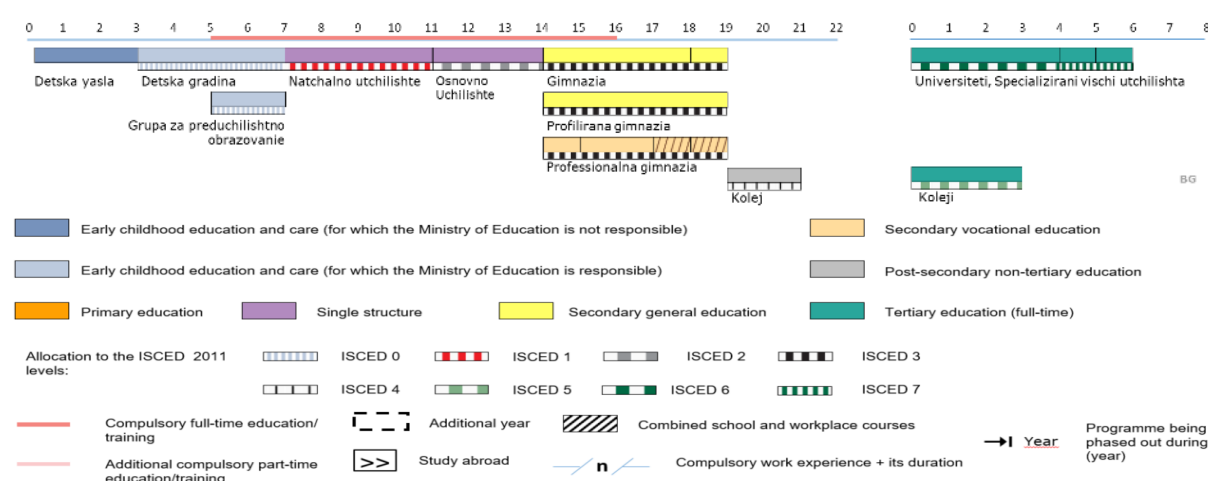
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022*: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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CROATIA

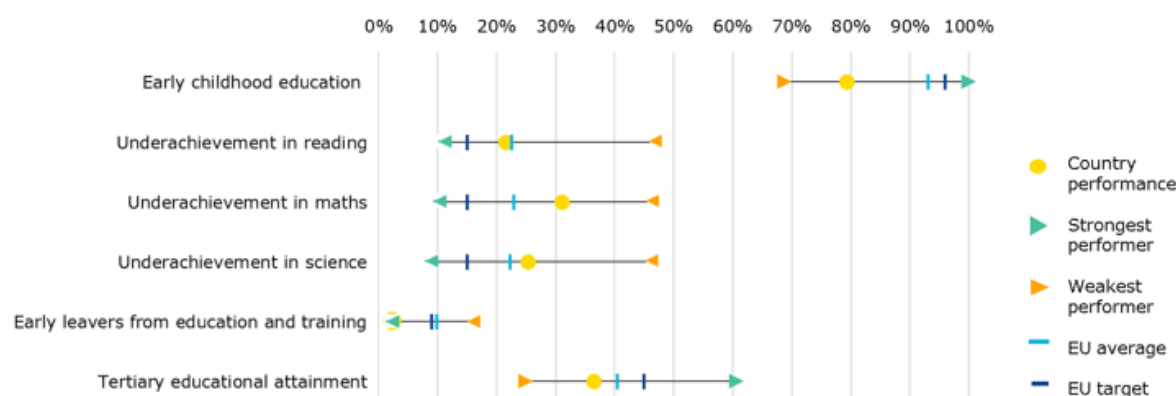
1. Key indicators

Figure 1 – Key indicators overview

			Croatia		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)			≥ 96%			
Low achieving eighth-graders in digital skills			< 15%			
Reading			< 15%			
Maths			< 15%			
Science			< 15%			
Early leavers from education and training (age 18-24)			< 9 %			
Exposure of VET graduates to work based learning			≥ 60%			
Tertiary educational attainment (age 25-34)			≥ 45% (2025)			
Participation of adults in learning (age 25-64)			≥ 47 % (2025)			
Other contextual indicators						
Public expenditure on education as a percentage of GDP			4.7%	4.8% ¹⁹	5.0%	4.7% ¹⁹
Education investment	ISCED 1-2		:	:	€6 072 ^{12, d}	€6 359 ^{17, d}
	ISCED 3-4		€3 337 ¹²	€4 963 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
	ISCED 5-8		:	€6 316 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		5.3% ^b	2.2% ^u	12.4%	8.7%
	EU-born		:	:	26.9%	19.8%
	Non EU-born		5.0% ^{b, u}	:	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			94.2% ^b	97.2%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		25.9% ^b	36.2%	33.4%	41.3%
	EU-born		31.9% ^{b, u}	45.2% ^u	29.3%	40.4%
	Non EU-born		22.8% ^{b, u}	42.0%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Croatian pupils report overall high happiness, but their well-being has suffered due to COVID-19 at all levels of education.
- Major investments are taking place in ECEC to increase participation and in schools to increase the instruction time.
- The low percentage of students in general secondary education, combined with the high failure rates among students completing the upper secondary vocational education and training (VET), may constitute a bottleneck for increasing the tertiary attainment rate.
- Croatia's Recovery and Resilience Plan aims to streamline VET and increase the labour market relevance of VET and adult education.

3. A focus on well-being in education and training

Challenges for well-being in early childhood education and care (ECEC) increased due to COVID-19. The closure of ECEC facilities in spring 2020 had a negative impact on children's well-being. While some ECEC facilities provided activities, emotional and social support online, the absence of ECEC services had a particularly negative impact on children from minorities, migrant children and those with special needs. Upon reopening, the Government recommended providing psychological support to children in vulnerable situations (MZO, 2020a). In 2020/2021, ECEC facilities remained mostly open, closing partially only where there were clusters of infections. Children's well-being in ECEC could be improved by monitoring their mental and physical health (NSPD, 2014) and by improving cooperation with parents (SEED, 2018).

The school climate is good and Croatian students report high overall happiness. Bullying is below the EU average, with 18.2% of pupils reporting being bullied at least a few times a month (EU: 22.1%). Pupils who feel excluded perform 30 PISA score points below their peers (EU: 21.4 points). The sense of belonging to the school is very strong (80%, vs EU 65.2%) and students feel happy overall (7.6, vs EU: 6.8 points). The effects of gender, socio-economic status (SES) and migrant background on bullying and sense of belonging are low (OECD, 2019, Vol. III), coinciding with the relatively low effect of SES on education outcomes and high academic resilience (15.2%, the second best in the EU) (OECD, 2019, Vol. II). Teachers in schools with more bullying seem to provide pupils with more help (5.4 pps vs EU 0.5 pps) (OECD, 2019, Vol. III). Interestingly, the sense of belonging in primary education is lower than in secondary. A study among grade 4 pupils shows that Croatian pupils have a much lower sense of belonging at that stage (high for 38% vs EU-22 50%) – going from 2nd lowest at grade 4 (TIMSS, 2020) to 4th highest in the EU in PISA, at the age of 15 (Figure 3). Unlike in most other countries, it is sometimes stronger for pupils with lower educational aspirations (among girls and among pupils with highly educated parents) (see Volume I).

Well-being and resilience are addressed in cross-curricular topics. Well-being is covered under personal and social development (mostly addressing violence prevention and anti-bullying) and health (including mental health). Their mode of implementation depends on individual schools. In February 2020, Action Plan for Prevention of School Violence 2020-2024 was adopted. It has six objectives, including a change in the legislative framework, systematic data collection, and improving the quality of schools' programmes on the prevention of violence.

Figure 3 - Pupils' sense of belonging at school, TIMMS 2019 and PISA 2018



Source: TIMMS (2019) and OECD, PISA 2018.

COVID-19 negatively affected well-being in schools and higher education. Pupils reported that distance education made learning harder due to increased workload (Baketa, Kovačić, 2020), a lack of direct communication with teachers (90% of secondary graduates), difficulties in organising time (80%) and concentration problems (90%) (NCVVO, 2020). Pupils reported a high level of stress, citing symptoms of exhaustion, anxiety, sadness, loneliness and helplessness related to social isolation, school closures and online teaching (Bezinović, 2020). They needed increased psychological support. The closure of schools meant that many students lost necessary support such as hot meals and psychological and learning support. Disadvantaged pupils were affected the most (Đaković, Novosel, 2021). In Zagreb, the combined effect of the pandemic and the earthquakes caused strong anxiety and depressive symptoms in 9% of school pupils, and 15% were experiencing post-traumatic stress symptoms (individual issues are worse: 56% of all pupils have trouble focusing, 51% show emotional instability, 51% experienced anxiety, etc.) (Buljan Flander, G. et al., 2021). Moreover, studies show that only every fifth child with mental health problem receives appropriate professional help (Jokić Begić, N. et al., 2020). To enhance well-being, crisis teams for psychological support from the Ministry of Science and Education have been activated, providing telephone and online support to all students, teachers and their parents who needed help. Civil society organisations were also active in providing information and training. Higher education (HE) students were concerned about whether they would complete the academic year successfully (75%) and about their own mental health due to stress (67%). Half of students suffered from depression (very severe for 23%), anxiety and stress (very intense for 17-20%) (Jokić Begić et al., 2020). This was also the case for staff in higher education institutions (HEIs). According to another study, anxiety and/or depression increased for 50% of the HEI students and 44% of employees during online study. Over 40% of students and staff say that psychological well-being in distance learning is much lower and over 42% of them believe that teachers' ability to interact with students is much worse than before, even though 82% of students and 86% of teachers are satisfied with their digital competences. Students reported that support provided to them was weaker (30% of students) and workload higher (56% of students) than before, but only 34% of the teachers agreed with that assessment (Bezjak et al., 2020).

4. Investing in education and training

Investment in education is increasing, but expenditure per pupil/student remains low in ECEC and tertiary education. In 2019, investment in education increased by 4.3%. Both spending on education as a share of GDP (4.8% vs EU 4.7%) and as a share of total general government expenditure (10.2% vs EU 10%) are slightly higher than the EU average²⁸. Annual expenditure per

²⁸ Eurostat, COFOG, 2019.

pupil in purchasing power standards (PPS) for tertiary education (6 316.1 PPS) is lower than in other countries²⁹.

Central government investment in ECEC has substantially increased in recent years. A number of ECEC facilities have recently been built or rebuilt (EUR 20 million invested from the state budget in 2016-2020), and additional investments are planned in the RRP (EUR 215 million). In 2019-2021, 60 projects providing training in ECEC were financed from the European Social Fund (ESF - value of approximately EUR 7 million). In the last 3 years, the State invested over EUR 45 million to introduce a second shift, extend opening hours and introduce additional programmes in ECEC. In a second phase, another EUR 40 million are now available³⁰. The upcoming reform of ECEC funding aims to reduce regional disparities and provide sustainability for ECEC services, thus addressing two key challenges in the sector. It will, however, not provide a universal model for all of Croatia.

EU funds play an important role in supporting education. Between 2014 and 2020, more than EUR 760 million was allocated from the European Structural and Investment Fund to education and training. In schools, the ESF financed the purchase of 109 885 tablets (EUR 20 million) for primary school students and, together with the ERDF, funded the purchase of 26 350 laptops (EUR 13.15 million) for teachers. In HE, the EU funds many projects on qualification standards, internationalisation and students' work-based learning, with total value of EUR 60 million. The European Economic Area and Norway grants 2014-2021 provided EUR 30.6 million for pupils and teachers in primary schools to reduce social and economic differences: EUR 23.53 million for science, technology, engineering and mathematics (STEM) education in primary schools and EUR 3.53 million to equip 27 centres for the education of children with disabilities. The reconstruction of educational institutions damaged in earthquakes is partially financed from the EU funds and partially from a World Bank loan³¹.

Box 1: The National Recovery and Resilience Plan

Croatia's RRP (NPOO, 2021) has an estimated total budget of EUR 6.4 billion in grants. Investments related to education, training and skills represent about 10% of the Croatian RRP budget. They mostly provide infrastructure (such as 22 500 new places in ECEC and construction and reconstruction of schools supporting the move to one-shift teaching in primary schools) needed for substantial reforms.

5. Modernising early childhood and school education

Participation in ECEC is increasing, but remains low, with marked regional differences.

Only 15.7% of children under 3 attended formal childcare in 2019 (EU average: 35.3%), almost all of them full time. Participation between age 3 and the beginning of compulsory primary education continues to increase (2.9 pps up from 2018 and 11.8 pps up from 2014³²) reaching 79.4% in 2019. Despite these increases, the rate remains substantially below the EU average of 92.8% and the new EU-level target of 96%. Data indicate that most children participate in ECE only in the last obligatory year before compulsory school (250 instruction hours)³³. Regional differences are high, with up to five times' higher enrolments in the most developed regions (ed. Čosić, 2020). This is partly due to the differences in municipalities' budget allocations for ECEC: in 2017-2019 they varied from far

²⁹ Eurostat, [educ_uoe_fini04]

³⁰ <https://gradonacelnik.hr/home-glavna-vijest/polovica-gradova-u-ovome-mandatu-znacajno-povecala-izdvajanja-evo-koji-su-najvise-ulagali-u-vrtice/>

³¹ <https://www.worldbank.org/en/news/press-release/2020/06/26/world-bank-supports-croatia-to-weather-difficult-times-caused-by-covid-19-pandemic-and-recent-earthquake>

³² Eurostat, [educ_uoe_enra21].

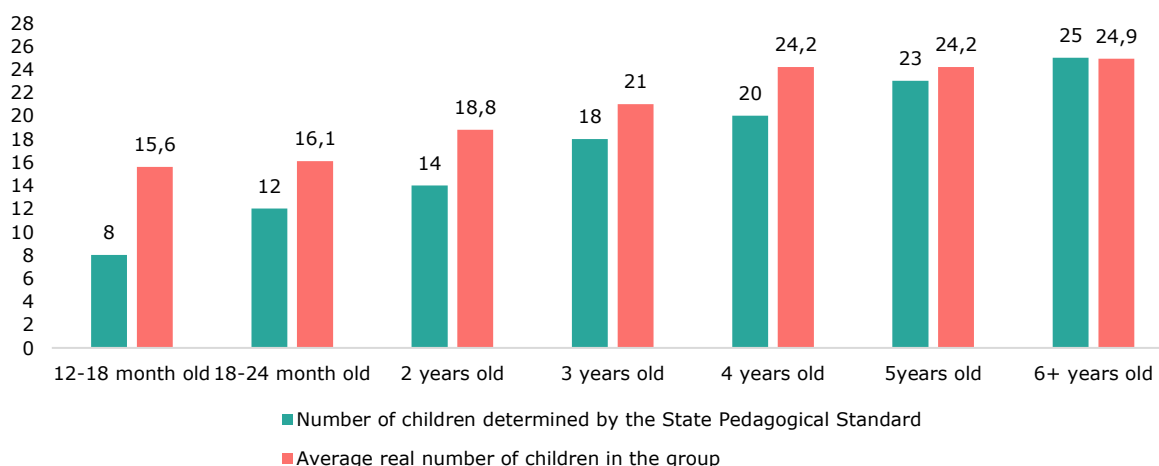
³³ Eurostat [educ_uoe_enra20] and SEED research reporting participation for 3-6 year-olds as 59% (SEED, 2018).

below 10% to 20% for towns³⁴ and 15.5% of children live in towns or municipalities investing less than 6% for ECEC (ed. Čosić, 2020). Provision is especially scarce in rural municipalities: 40% lack a nursery and more than 25% lack a kindergarten. For children with developmental difficulties, only 23.9% of rural municipalities offer early intervention and only 11.2% offer day care (Berc, G. et al., 2020). In Zagreb, the new mayor is looking into abolishing the 'parent-educator' measure, which reduced participation in ECE by offering unemployed parents with several children financial incentives to keep their children at home and educate them themselves (63% of users of this measure disenrolled children from ECE to get the incentive)³⁵.

The government is committed to raising the accessibility of ECEC. This commitment is present in both key policy documents adopted this year: the National Development Strategy – Croatia 2030 (NDS) aims to have 97% of children from 4 years to school age in ECEC by 2030 (NRS, 2021), and the Recovery and Resilience Plan (RRP) aims to increase capacities in ECEC and participation from the age of 3. In addition, RRP reforms will increase the number of instruction hours in the last year before school, provide additional ECEC teachers, and include state involvement in financing ECEC in municipalities with low financial capacity. Currently four cities provide ECEC free of charge³⁶. In 2018, UNICEF (Bouillet, 2018) recommended systematically educating ECEC teachers about the education of children in vulnerable groups, and it has developed a much needed curriculum for teacher education on improving inclusion (Domović et al, 2021).

Challenges persist in the quality of ECEC; a comprehensive quality framework would help address them. Currently only two of the five areas of the EU Quality Framework for ECEC³⁷ are regulated: curriculum, and monitoring and evaluation (Križman Pavlović et al, 2020). In most ECEC institutions, the maximum number of children per group and teacher-child ratio prescribed under the State Pedagogical Standard are not respected, with 30% of ECEC teachers having much bigger groups (mostly in nursery groups) and 30% having more children with disabilities than allowed. Spatial conditions in ECEC institutions in larger cities can be an obstacle to the implementation of the curriculum (Ivšić, Jaklin, 2020).

Figure 4 – Pedagogical standard limit and average real number of enrolled children by age



Source: 'Working in kindergartens: Results of research on working conditions in early and preschool education' [1] Ivšić, Jaklin, 2020, pg. 83

³⁴ <https://gradonacelnik.hr/home-glavna-vijest/polovica-gradova-u-ovome-mandatu-znacajno-povecala-izdvajanja-evo-koji-su-najvise-ulagali-u-vrtice/>

³⁵ <https://www.zagreb.hr/userdocsimages/demografija/REZULTATI%20ANKETNOG%20ISTRA%20C5%BDIVANJA%20MI%20C5%AOLJENJA%20KORISNIKA%20O%20MJERI%20RODITELJ%20ODGOJITELJ%20-%20za%20web.pdf>, p. 25

³⁶ <https://gradonacelnik.hr/home-glavna-vijest/polovica-gradova-u-ovome-mandatu-znacajno-povecala-izdvajanja-evo-koji-su-najvise-ulagali-u-vrtice/>

³⁷ https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_9014_2019_INIT&from=EN, Annex to the annex.

Working conditions in ECEC are problematic, causing a shortage of ECEC teachers. ECEC employees represent 20% of all education sector staff. Temporary contracts are three times more frequent (19.7% for ECEC, 6.9% for the public sector). Availability of continuous professional development (CPD) is a problem (only 1 day or less per year for most ECEC teachers), while training usually does not meet teachers' needs and sometimes has to be co-financed by them (Ivšić, Jaklin, 2020). Average income is approximately 24% lower than the public-sector average and due to the decentralised salary model depends on the financial capacities of the founders of ECEC facilities (CBS, 2020). According to Croatia's public employment service, ECEC teacher is one of the 10 professions where staff is most needed³⁸.

Education continued to be affected by COVID-19 and earthquakes. There was no nationwide closure of schools during 2020/2021, with regional authorities deciding which of three teaching models to use based on epidemiological developments. This resulted in face-to-face delivery of 98% of primary, 85% of lower secondary and 71% of upper secondary education (but 90% for the pupils in the last year of secondary education). While renovation work following the March 2020 Zagreb earthquake is still ongoing (208 educational facilities damaged, about 20 requiring multi-year renovations), another major earthquake struck in Sisak-Moslavina County in December 2020, damaging nearly 50% of all schools in that county. Teachers' salaries increased as promised last year (12.23% since 2019), but teachers faced a higher workload, additional health risks and lower compensation in case of inability to work due to COVID. In February 2021, teachers were given priority for vaccination.

Pupils rarely leave education early or repeat a grade, but their basic skills are low. The share of early leavers from education and training is the lowest in the EU (2.2% vs EU 9.9%), well below the EU-level target, and the gender gap is one of the lowest, 0.4 pps. Very few pupils leave school without a certificate (1.4% vs EU 4.4%), and differences related to SES are low (1.3 pps vs EU 4.3 pps). Grade repetition is also the lowest in the EU (1.5% vs EU 14.7%), with the lowest difference by SES (2.5 pps vs EU 24.2 pps) (OECD, 2020 Vol. V). Despite this, the percentage of low-achieving 15-year-olds in basic skills is above the EU-level target of 15% and above the EU average for all three subjects tested, while for maths (31.2%) and science (25.4%) the rates are among the highest in the EU. The share of 16-24 year-olds who report they have above-basic digital skills is among the highest (82% vs EU 56%) and significantly increased between 2015 and 2019 (22 pps vs EU 1 p.p.)³⁹.

Learning about Roma language and culture might help reduce inequalities and early school leaving. Roma girls are especially likely to leave school early (78% vs 60% for boys), with only 6% completing secondary or higher education (24% for Roma men) (World Bank, 2019). The implementation of a Roma curriculum in schools started in 2020/2021⁴⁰, with the aim to preserve the Roma's language and culture. Roma children can attend 2-5 hours of extra classes per week taught in their native tongue.

Reforms are under way to introduce whole-day schooling and increase the teaching force. Both the National Development Strategy (NDS) and RRP concentrate on improving education outcomes in primary school by increasing the instruction time and introducing whole-day schooling. Other NDS goals include attracting and retaining quality teachers and developing comprehensive support for students at risk. The RRP aims to support the curricular reform, provide support to teachers in implementation of new curricula following previous European technical support, introduce national exams in primary schools, provide scholarships for student-teachers in understaffed subjects, and increase teachers' salaries by streamlining expenses. Stakeholders criticise the NDS for neglecting the social and humanistic dimension of education⁴¹ and for not including cooperation with stakeholders.

³⁸ https://burzarada.hzz.hr/Posloprimac_RadnaMjesta.aspx?trazi=1&pojam=ODGOJITELJ&top=1

³⁹ Eurostat: [isoc_sk_dskl_i].

⁴⁰ https://narodne-novine.nn.hr/clanci/sluzbeni/2020_04_52_1046.html

⁴¹ <https://www.cms.hr/hr/ljudska-sigurnost/nacionalna-strategija-razvoja-hrvatske-propustena-prilika-za-razvoj>

The share of pupils in general secondary schools is low, and varies across regions. The percentage of students in general secondary schools is among the lowest in the EU (31% vs EU 52%)⁴². This percentage varies greatly from county to county and is lower in the less developed ones. In VET schools, two thirds of pupils attend 4-year programmes. This is the alternative route to HE, often chosen by male students and students with lower school achievement and lower self-efficacy. Research shows that parental aspirations are more relevant than socio-economic status for the pupils' intent to enrol in VET (Šabić et al., 2020). In 2020, 83% of VET students applied for the state *matura* exams, with 67% of them passing, and 61% enrolling in HEIs. However, they are more likely to drop out of HE. VET principals perceive a lack of equity due to a different educational experience and curriculum (Baketa et al, 2020). The results of the 2019/2020 *matura* seem to support this view: 44% of participants graduated from general secondary schools and 56% from VET schools, but failure rates were 3.9% and 37.8% respectively. Recent policy recommends reducing the share of learners in VET to 60% by 2024, rebalancing the figures in favour of general education (Cedefop, 2020a). This is also supported by the RRP.

6. Modernising vocational education and training and adult learning

New dual education programmes have been launched and VET teacher training reinforced.

Four dual education IVET experimental programmes (salesperson, chimneysweeper, glazier and beautician) entered regular VET education in 14 schools in the 2020/2021, after evaluation and revision. Remaining five programmes will be revised and ready for implementation by the end of the 2021/2022. Regional centres of competences are not yet operational but are focusing on infrastructural investments, development of programmes and strengthening of human resources. New training material for CPD of teachers and trainers was created and published online (www.edu.asoo.hr), but capacity for its delivery was restricted due to the COVID-19 pandemic (Cedefop and ReferNet, 2021).

Modernisation of VET and continued development of VET curricula in line with occupational standards might help improve education and training's labour market relevance.

VET continues to face challenges over the discrepancy between graduates' education profiles and skills and labour market needs, too much focus on theoretical knowledge, and a lack of practical skills training (Cedefop 2020). Therefore, modernising VET and updating curricula in light of skills forecasts and existing needs would be crucial. With this aim, the RRP foresees a comprehensive analysis of needs to streamline secondary VET programmes. Further development of VET curricula in line with occupational standards and registering them in the National Qualifications Framework (CROQF) is a step in the right direction. Overall, Croatia would benefit from a wide-ranging reskilling strategy, including developing tools for skills anticipation and labour market forecasting.

Challenges related to the quality and access to adult education remain. The participation rate in adult education (4-week reference period) in 2020 was the 4th lowest in the EU (3.2% vs 9.2% in EU). Since monitoring of the outcomes of adult learning programmes is not yet developed, their effectiveness and impact on employability is unknown. In addition, the legislative framework is outdated, the quality control of the programmes is not at a satisfactory level, and recognition of informal learning underdeveloped (European Commission, 2019). Adoption of the new Adult Education Act and implementation of the voucher system for skills, also announced in the RRP, should help address these issues.

Various measures listed in the Strategy of Education, Science and Technology from 2014 will be implemented in order to improve the system.

The RRP will support implementation of some of them. The adoption of the new Adult Education Act by the end of 2021 should improve labour market relevance by aligning adult education programmes with the Croatian Qualifications Framework (CROQF). This should be further aided by establishment of a skills catalogue, with mapping of existing and needed skills in the labour market. The complementary skills voucher system

⁴² Eurostat, [educ_uoe_enra16].

(managed in an IT application), to be implemented from the beginning of 2022, should increase participation rates in adult education, particularly of vulnerable groups (long-term unemployed, inactive or young persons not in education, employment or training – NEETs). Quality assurance system and participation in the Programme for the International Assessment of Adult Competencies (PIAAC) are being developed through the ESF.

Box 2: Modernisation of the VET teacher training system

The Agency for Vocational Education and Training and Adult Education is developing a new system of professional development for vocational teachers. It will be based on a mapping of needs, improved implementation mechanisms, modern IT tools and solutions, and supported by a wide network of experts. The goal is to raise the quality of teaching and reform implementation capacities to improve learning outcomes. The training will involve practical application of knowledge gained during lessons and introduces practical training for teachers with employers.

Beneficiaries: 306 VET teachers in CPD and 1700 trained on Days of Vocational Teachers

Duration: May 2017 – September 2021

Budget: EUR 1 577 095.84 (85% ESF-financed).

7. Modernising higher education

Tertiary attainment rate is below the EU average and there are gender and urban-rural gaps. In 2020, the percentage of 25-34 year-olds with tertiary education was 36.6% (1.1 pps higher than in 2019), below both the EU average (40.5%) and the EU-level target for 2030 of 45%. The gender gap is high (18.3 pps vs EU 10.8 pps)⁴³, and the urban-rural gap is higher than the EU average (26.5 pps vs EU 22 pps).

Despite interest of secondary school students in tertiary studies and the increase in tertiary attainment, too many study places remain unfilled. Interest in tertiary studies is strong both among general secondary school (97.3%) and in VET school students (71.8%) (Jokić and Ristić-Dedić, 2019). Early signs are that high interest led to an increase in the number of available study places, but despite decreasing numbers of new entrants since 2016, the number of study places was maintained. Nearly 9 000 places at HEIs remained unfilled in 2020/2021⁴⁴ growing to 11 031 in 2021/2022⁴⁵, indicating a disproportion of available places and the total number of secondary school graduates.

The employment rate of graduates and their first salaries are lower than average in the EU, with better chances awaiting STEM graduates. The employment rate of recent HE graduates (77.2% in 2020, below EU 83.7%) decreased by 1.9 pps in the last year⁴⁶. A pilot survey of graduates' study and employment experiences in 7 EU countries and Norway shows that, Croatia has the second highest youth unemployment rate (23.8%) (European Commission, 2020). According to the Croatian Employment Service, more students are needed predominantly in maths and physics, ICT, medicine and pharmacy and the English language, and to train as speech therapists and rehabilitators⁴⁷. The share of female STEM graduates increased by 2.7 pps between 2014 and 2019 (EU 0.5 pps)⁴⁸. According to Eurograduate survey, Croatia has, alongside Greece, the lowest participation rate in mobility among 8 participating countries, but their students are the most likely to study abroad for their second degree (European Commission, 2020).

⁴³ Eurostat, [edat_lfse_03].

⁴⁴ <https://www.azvo.hr/hr/azvo-vijesti/2433-objavljene-konacne-rang-liste-za-upis-na-studije-u-jesenskom-roku-akademske-godine-2020-2021>

⁴⁵ <https://www.azvo.hr/hr/azvo-vijesti/2608-jesenski-rok-objavljene-konacne-rang-liste-za-upis-na-studije-u-ak-god-2021-22>

⁴⁶ Eurostat, [edat_lfse_24].

⁴⁷ <https://e-usmjeravanje.hzz.hr/preporuke-za-obrazovnu-upisnu-politiku>.

⁴⁸ Eurostat [educ_uoe_grad02].

New strategic documents introduce major reforms in higher education. The NDS priorities are the development of HE system, increasing its internationalisation and labour market relevance, and improving the students' standard of living. The planned legal framework should define and expand models of public and private funding, quality assurance and management in HE. The scholarship system will be improved on the principles of meritocracy and facilitate study for students from families with low SES. The RRP supports improving the quality of HE programmes through measures such as setting qualification standards and improving a CROQF Registry, and through digitisation. Amendment to the CROQF Act adopted in February 2021 clarified the distinction between qualifications acquired upon completion of professional and university studies⁴⁹. Currently, the CROQF Register contains seven occupational standards and eight qualification standards.

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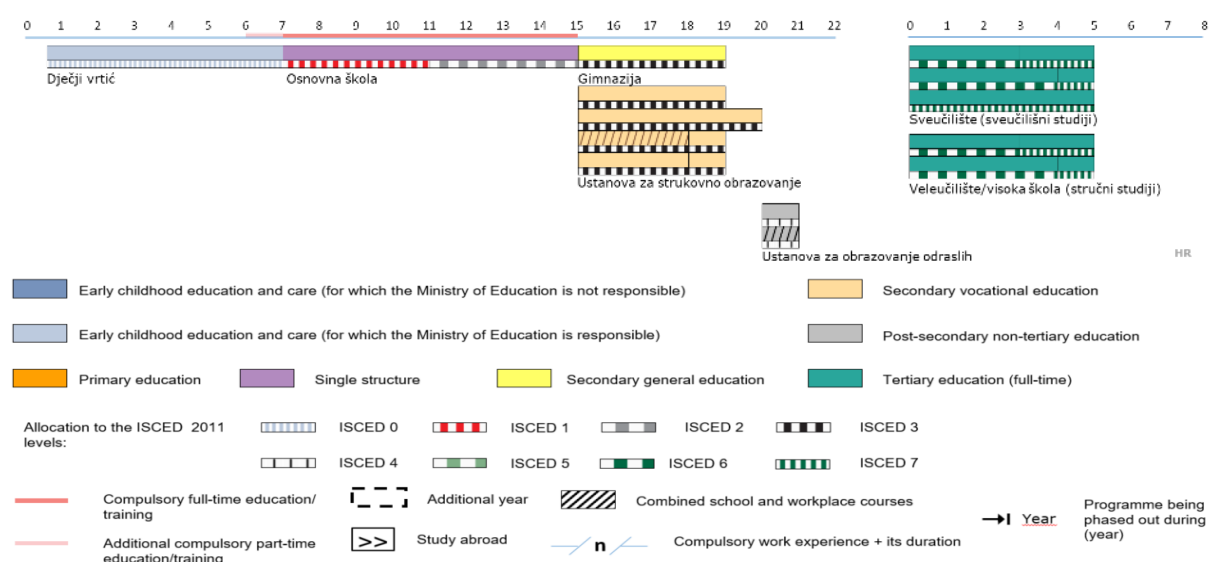
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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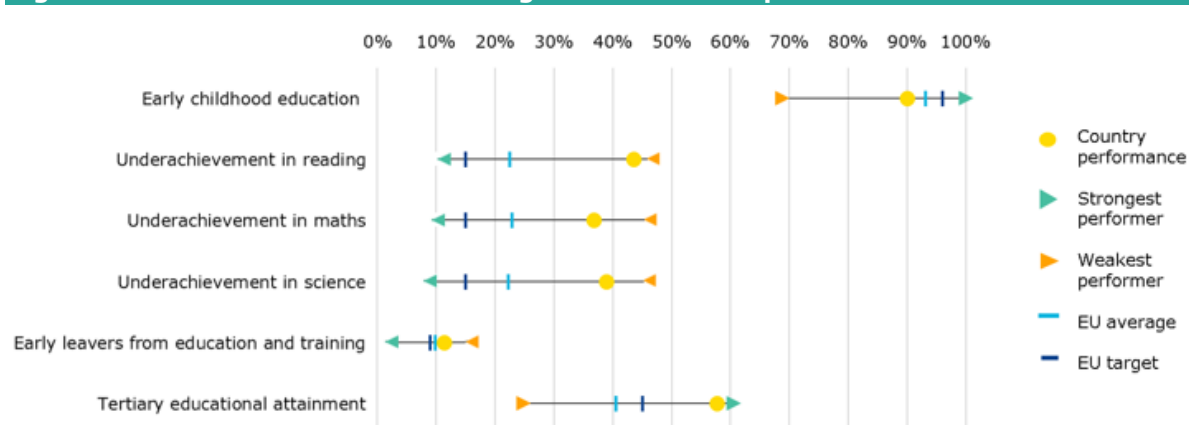
1. Key indicators

Figure 1 – Key indicators overview

			Cyprus		EU-27	
			2010	2020	2010	2020
EU-level targets		2030 target				
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		69.4% ¹³	90.1% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	32.8% ¹²	43.7% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	42.0% ¹²	36.9% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	38.0% ¹²	39.0% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		12.7%	11.5%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		48.1%	57.8%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		6.5%	5.4% ¹⁹	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€8 793 ¹²	€9 375 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€10 120 ^{12, d}	€12 916 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€9 926 ¹²	€8 870 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		7.5%	4.9%	12.4%	8.7%
	EU-born		26.6%	25.7% ^u	26.9%	19.8%
	Non EU-born		26.0%	27.3%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			86.2%	88.4%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		55.2%	68.7%	33.4%	41.3%
	EU-born		30.8%	34.4%	29.3%	40.4%
	Non EU-born		37.4%	39.9%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, : = not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Cyprus has a policy framework to tackle violence and racism at school, but lacks monitoring mechanisms to improve well-being.
- Effective use of funds under the EU Recovery and Resilience Facility (RRF) could help improve educational outcomes and reduce skills gaps.
- Higher education in Cyprus responded effectively to challenges imposed by the pandemic.
- Considerable work has been done to improve vocational education and training, including continuous education and training. Adult education in Cyprus is not always well organised and continues to have a low participation rate.

3. A focus on well-being in education and training

Although Cyprus does not have an explicit definition of well-being in education, a number of national strategies aim to improve the well-being of students. 'Health education' in primary education, 'Emotional empowerment' in pre-primary education as well as humanity subjects in secondary education (e.g. Home Economics, Religion Studies, Biology, History etc.) address the promotion of mental, physical and social well-being of students. The development of personal and social skills and values is part of those lessons. Cyprus has a policy framework to tackle violence and racism at school and strategies and action plans⁵⁰ to improve children's and teachers' well-being. The Ministry of Education, Culture, Sports and Youth (Ministry of Education) and the Cyprus Pedagogical Institute organise projects to support pupils and students at all levels of education, aiming to reduce the number of students dropping out from secondary education⁵¹, promote cyber safety and provide real-time advice on issues relating to illegal behaviour online. The Cyprus Agency of Quality Assurance and Accreditation in Higher Education provides feedback to universities on how they support students in improving their well-being (House of Representatives 2015).

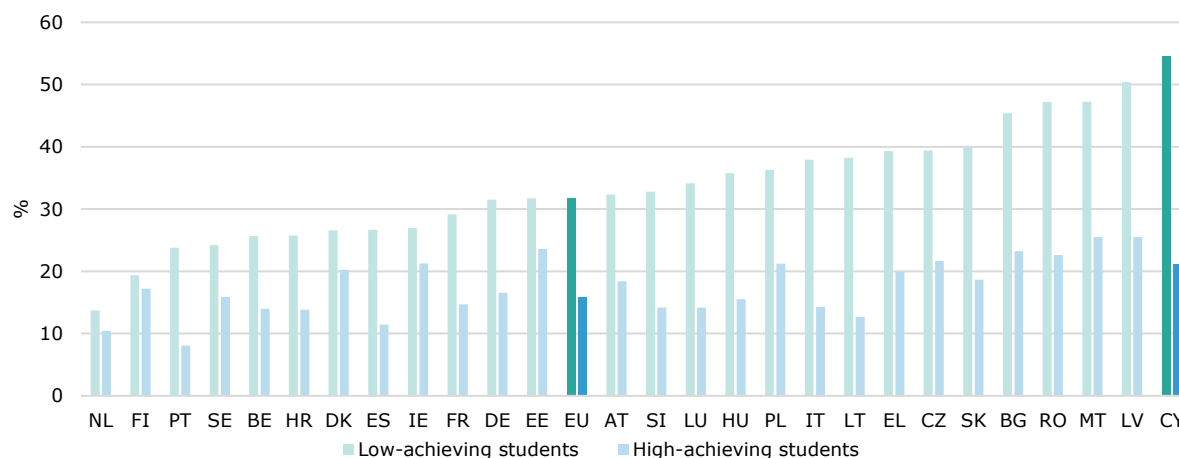
Assessment and evaluation mechanisms could improve the impact of initiatives relating to well-being. Cyprus is taking action to support schools in preventing bullying⁵². However, there is no systematic monitoring mechanism for pupils' well-being. One in three students report being bullied at least a few times a month (EU average 22%), and attend schools where bullying is widespread (OECD, 2019c). Students with low academic achievement are more exposed to frequent bullying (54.6%) than high achievers (21.1%), and reducing bullying and improving students' well-being can significantly increase learning outcomes (European Commission, 2020). Neither socio-economic status nor migrant background appear to be significant triggers for bullying, in contrast to gender. A much higher percentage of boys (40.9% vs EU average 24.4%) than girls (27.2% vs EU average 19.7%) reported being frequently bullied (OECD, 2019). As in other countries, Cypriot boys use more physical and fewer indirect forms of bullying than girls (OECD, 2019).

⁵⁰ National strategy for the fight against sexual abuse and child exploitation, National strategy for a better internet for children, National strategy on combating addictions, National action plan for the promotion of equality between men and women.

⁵¹ Through the EU structural reform support programme.

⁵² National strategy for preventing violence and bullying in schools.

Figure 3 - Students' exposure to bullying by performance in reading, PISA 2018



Source: OECD, PISA 2018.

Teachers in Cyprus are highly satisfied with their jobs, but they only participate in training on well-being to a limited extent. The well-being of teachers is not regularly monitored at national level and is not the focus of policy action. Despite this, according to the 2018 OECD teaching and learning international survey (TALIS) (OECD, 2020), 91.2% of Cypriot teachers report that they are satisfied with their job and they remain so after more than 5 years of work experience (91.3%). The Cyprus Pedagogical Institute and the Cyprus Observatory on School Violence offer teachers a variety of non-compulsory seminars, which aim to develop teachers' skills in managing crises, violence and delinquency in schools and to improve teachers' psychological resilience. However, rates of teacher participation are uneven. School leaders in primary and secondary education have access to a comprehensive, compulsory training programme which includes modules on how to promote a positive school culture and climate, and manage human resources.

Surveys in Cyprus have found increased mental distress during the COVID-19 outbreak, with young people being mostly affected. The youngest age group (≤ 21) had the highest prevalence (21.74%) of symptoms of major depression, mostly present among students (Stylianou 2020). However, during the lockdown periods, no systematic measures were taken to improve well-being in schools. Priority was given to students' cognitive knowledge and skills, to help them cope with distance learning. Sporadic actions were taken to address the impact of the pandemic on pupils and students' mental health, heading in the right direction. A key initiative by the Ministry of Education was to set up a helpline to provide support to students and their families. Political awareness of the negative impact of the pandemic, particularly on the mental health of students, was raised in the Parliamentary Education Committee.

4. Investing in education and training

Cyprus maintains a high level of public spending on education. In 2019, general government expenditure on education increased by 6.7%, reaching the equivalent of 5.4% of the GDP (EU average 4.7%). At 13.4%, Cyprus continues to exceed the EU average of 10% for the proportion of total government expenditure devoted to education. In contrast, public spending on early childhood education is among the lowest in the EU. However, the high overall levels of spending on education does not translate into educational outcomes⁵³ compared to countries that spend similar amounts per student, highlighting challenges with regard to the effectiveness and efficiency of investment in education in Cyprus.

⁵³ Based on the results of international comparative studies in education such as TIMSS and PISA.

The digital transition will be supported with EUR 28 million of national funds. An electronic education system for public schools will be developed as part of a broader strategy for the digital modernisation of education. Students, teachers and parents will be able to carry out a wide range of actions related to school matters electronically, such as accessing school timetables and exam schedules, apply for certificates, register students' presence and encode teachers' leaves.

An investment of EUR 7.5 million will support energy efficiency in 25 schools, bringing education into line with measures to support climate objectives. The project entails the restructuring of the schools participating to make them into 'zero energy' schools and is funded by the European 'Horizon' programme.

Box 1: The National Recovery and Resilience Plan

The Cyprus' National Recovery and Resilience Plan⁵⁴ (RRP) is worth a total amount of EUR 1.206 billion, of which EUR 1.006 billion will be funded in non-repayable support under the EU Recovery and Resilience Facility (RRF) during the period 2021-2026. Investments related to education, training and skills represent about 10% of the total budget for the plan. The plan contains reforms and investments focused on improving the quality and effectiveness of education and training at all levels and ages, thereby addressing key skills mismatches in the labour market and promoting employment and inclusive growth⁵⁵.

The Cypriot plan aims to address the challenges of low participation in vocational education and training (VET) and lifelong learning, rising skills mismatches - particularly among young graduates - and poor digital skills. It further aims to address the quality of teaching and the availability and affordability of early childhood education and care (ECEC) for children aged four years old as well as to address capacity gaps in ECEC. Its objective is to (i) improve the quality and effectiveness of education and training at all levels, (ii) foster the uptake of labour market-relevant reskilling and upskilling opportunities, in particular regarding the twin transitions, across society regardless of employment status, skills level or age, and (iii) modernise the school structures making them fit for the digital transition.

5. Modernising early childhood and school education

Participation in early childhood education (ECE) is below the EU-level target for 2030.

90.1% of 3-6 year-olds participated in ECE in 2020, below the EU average of 92.8%, and the EU-level target of 96% by 2030. The proportion of children below the age of 3 enrolled in childcare services increased by 11.1 pps between 2009 (20%) and 2019 (31.1%), but remains below both the EU average of 35.3% and the Barcelona target of 33%. To facilitate participation of younger children in pre-primary education the Ministry of Education will continue the operation of the community schools. Fees will remain low due to governmental subsidies. Cyprus is also planning to implement a project which will cover the tuition cost for children aged from 3 to the starting age of free compulsory pre-primary education (4 years and 8 months) enrolled in public facilities, which will be co-financed by the European Social Fund (ESF+). Provisions remain insufficient, however, particularly for younger children (ETM 2019).

Through a series of reforms, the pre-primary education period is being extended. One reform, recently approved by the Council of Ministers, aimed to gradually increase the entry age into primary education to 6 (instead of 5 years and 8 months). This change was partially implemented in the school year 2020/2021 and is being fully rolled out in 2021/2022. A further reform is planned in the Cyprus' National Recovery and Resilience Plan, aiming at gradually extending free compulsory pre-primary education, starting from the age of 4 (currently 4 years and 8 months). The plan also includes investments in childcare centres accompanied by a national action plan on early childhood education. Consequently, the attendance in compulsory pre-primary education will in total be two years (ages 4-6).

⁵⁴ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3485

⁵⁵ https://ec.europa.eu/info/files/commission-staff-working-document-analysis-recovery-and-resilience-plan-cyprus_en

Since 2015, early school leaving rates have increased, largely due to more foreign-born young people leaving school early. In 2020, 11.5% of 18-24 year-olds had not completed upper secondary education, compared to 9.2% in 2019 (an increase of 2.3 pps) and above the EU average of 9.9% and the EU-level target (<9% by 2030). The proportion of early leavers from education and training among foreign-born young people in particular continues to increase: 26.8% in 2020 compared to 23.3% in 2019. During the 2020/2021 school year, 9 838 primary school students have a migrant background, out of a total of 52 013 students. The number of students who do not have Greek as their first language is 8 291, which is equivalent to 15.9% of the total student population in primary schools. At secondary education, there were 2 286 (13.4%) foreign students in upper secondary schools, and 4 294 (18.6%) in lower secondary schools. The proportion of secondary level students having first language other than Greek was 8.7% for upper secondary and 13% for lower secondary education. The proportion of native-born early school leavers has remained almost at the same level as the previous year, 4.9% in 2020 (4.8% in 2019). The proportion of boys leaving education early (15%) is considerably higher than that of girls (8.4%), representing a gender gap of 6.6 pps. In Cyprus, the highest proportion of early leavers was reported in rural areas (12.4%), despite a decrease of 6.5 pps compared to 2010 (18.9%).

Cyprus provides support for students at risk of dropping out from secondary education. A project supported by the European Commission, completed in April 2021, aimed to improve the skills of young people in Cyprus by reducing the number of low achievers and students at risk of dropping out, as well as the total number of early leavers from education and training. A thorough analysis of the causes of students disengaging and dropping out was carried out, policy recommendations were made to improve student engagement and an action plan was drawn up to implement these effectively. The action plan includes skills support programmes, an early warning system, teacher training and a second chance schools for people aged under 18. The project also drew on experience from other EU Member States and Norway⁵⁶.

Addressing underachievement in basic skills remains a priority. During the TIMSS 2019⁵⁷ international survey, pupils in the fourth and eighth grades achieved scores slightly below the EU average in science and above the EU average in maths. For the first time since 1995, Cypriot students scored above the 500 mark in science (511). In contrast, in 2018, PISA showed that performance among 15-year-olds in Cyprus is below the EU average. (European Commission, 2020). In TIMSS, Cyprus saw the widest difference between the scores of girls and boys in maths (19 points) among EU Member States. The pandemic risks further increasing the number of underachievers and may have a long-lasting effect on student learning outcomes. In order to support students, the Ministry of Education extended the 2019/2020 and 2020/2021 school years, giving extra days for face-to-face teaching and evaluating the learning outcomes for each level of education. In addition, repetitions were planned for 2 weeks at the beginning of the 2020/2021 school year, and supporting electronic material was made available to students.

The Cyprus' Recovery and Resilience Plan aims to modernise and digitalise education. The shift to distance learning highlighted key challenges for students and teachers such as a lack of electronic equipment and digital skills. With a budget of EUR 13.8 million, a variety of projects will be financed to digitally transform schools and improve digital skills and skills in science, technology, engineering and mathematics (STEM), including:

- the purchase of digital equipment (tablets/laptops) for students from less socio-economically advantaged backgrounds;
- the purchase of digital equipment for schools;
- training in digital skills and STEM methodology for 3 375 teachers representing around one third of all primary and secondary teachers;
- changes to curricula and the development of educational material for developing digital and STEM skills.

⁵⁶ France, Sweden, Norway and Lithuania.

⁵⁷ TIMSS is an international assessment which measures how well students at fourth and eighth grades have mastered the factual and procedural knowledge taught in school mathematics and science curricula. Note: PISA results are not directly comparable with TIMSS as they assess different constructs and different samples of students, see OECD (2021).

Box 2: Actions for school and social inclusion plus – DRASE+

During the 2021-2027 programming period of the European Structural and Investment Funds (ESIF), Cyprus will continue to use ESF+ funding to implement the 'DRASE+, actions for school and social inclusion +' project. The word DRASE, which means 'act', has also inspired the project's motto: '*DRoume, Agkaliazoume, Stirizoume, Entasoume*', which translates to 'we act, we embrace, we support, we include'. The project will expand and build upon the DRASE project, which was implemented during the previous programming period.

The DRASE+ project has been expanded due to increasing migration flows in recent years in Cyprus and is being built upon the results of a peer⁵⁸ counselling programme coordinated by the European Commission, entitled 'Integration of students with a migrant background into schools in Cyprus' (2019). The integration of migrant pupils into schools is a complex process, and should give children access to quality education and provide any necessary language, learning and socio-emotional support.

DRASE+ aims to support social inclusion, reduce early school leaving, improve learning outcomes and tackle delinquency among disadvantaged students, including students with a migrant background. It is a comprehensive programme comprising morning and afternoon activities, to develop skills in various subjects and provide multilevel support to students and their families. The programme offers additional classes and access to socio-emotional support centres, new school equipment and educational material for developing social skills. As part of the programme, students from migrant backgrounds will be provided with extra tuition in Greek.

DRASE+ will be implemented in more than 100 pre-primary and primary schools, lower and upper secondary schools and technical schools, which have been selected based on objective and measurable criteria related to the composition and characteristics of their student population.

The programme's total budget for the 2021-2027 programming period is EUR 60 million.

6. Modernising vocational education and training and adult learning

Despite efforts to improve the attractiveness of vocational education and training (VET), participation in VET remains low. Only 16.9% of upper secondary pupils were enrolled in VET in 2019, the lowest rate in the EU and well below the EU average (48.4%). Cyprus is carrying out an education reform, which includes modernising the VET system and expanding VET capacity, aiming to address low overall educational and training outcomes and improve skills more broadly. The government has set a participation target of 35% by 2025 following the completion of the new infrastructure. The construction of two Model Technical Schools accompanied by updated labour market relevant training programmes is planned under the Cyprus' RRP with the objective to provide students and educators with a well-equipped environment for learning and to increase the capacity, quality and attractiveness of VET.

Cyprus is upgrading its technical and vocational education. The aim is to upgrade skills and address skills mismatches in the labour market, improve the quality of teaching and learning systems and increase students' participation. Steps have been taken to strengthen the links between VET and labour market needs through the development of new or the review of existing curricula and the introduction of new specialisations. Students enrolled in VET had, at best, limited exposure to work-based learning. In order to increase employers' engagement, measures to facilitate placement of VET students in enterprises have been introduced. The number of evening VET schools increased from one to five in 2020, increasing learning opportunities for adults and in particular unemployed people, in order to enhance their skills or acquire new skills.

⁵⁸ Peers from four EU Member States: Netherlands, Sweden, Greece and Belgium.

Steps have been taken to strengthen continuous vocational education and training. In 2020, the Human Resource Development Authority of Cyprus launched a special scheme to provide vocational training for unemployed people in the public sector, local government authorities, non-governmental organisations and non-profit institutions. In addition, the integrated student evaluation system began operating during the 2019/2020 school year for learners in primary schools and in the first grade of upper secondary education and technical and vocational schools. It aims to emphasise formative assessment, diagnose learner needs in relation to specific expected outcomes and intervene at an early stage for improvement. It is expected that by 2022, this system will be implemented gradually for all grades of general technical and vocational education.

Skills provision for adults in Cyprus is considered to be poor but a Lifelong Learning Strategy is being developed. Participation in adult learning (25-64) remains low, at only 4.7% in 2020, compared to an EU average of 9.2% and the 2020 target of 15%. This has also decreased compared to the previous year (5.9%), partly due to the effects of the COVID-19 pandemic. Women's participation in lifelong learning remained stable. However, 13% of adults engaged in online learning activities in 2020 in Cyprus, representing an increase of 160% between 2019 and 2020. In 2020, the quality of adult learning improved through customised support for learners, including psychological and career counselling, financial support and family therapy for vulnerable adult learners. The new Lifelong Learning Strategy will enhance efforts and assist Cyprus to reach the EU targets in the relevant fields.

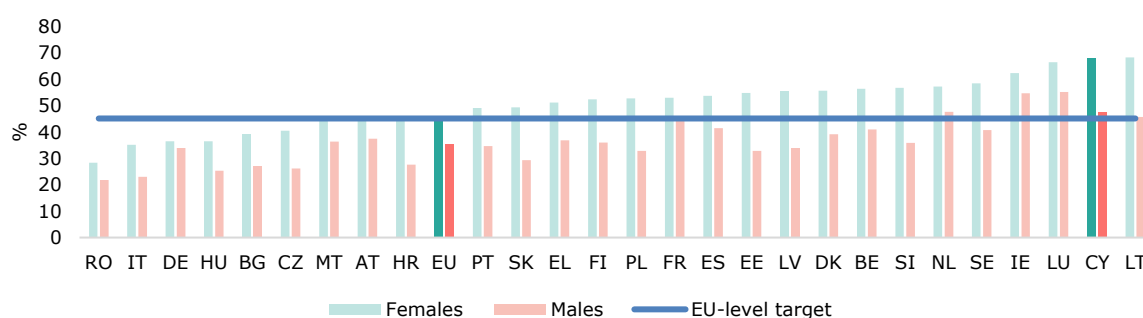
An important strength of the Cypriot adult education system is the availability of numerous free programmes in formal and non-formal education. This removes a significant obstacle to learners' participation. In addition, in higher education (in particular for postgraduate studies), there are many institutions which offer e-learning courses, such as the Open University of Cyprus.

A number of actions to support adult learning will be financed by the EU in the programming period 2021-2027. The ESF+ will support the development and promotion of individual learning accounts (ILA) while the RRF will support training initiatives to improve digital skills, upskilling and reskilling actions, and actions towards the green and digital transitions. The new Lifelong Learning Strategy currently being developed with support from the Commission's Technical Support Instrument (TSI) will help in that direction.

7. Modernising higher education

Cyprus ranks third in the EU regarding the number of adults between 25 to 34 years old holding a tertiary education degree. In 2020, the percentage stood at 57.8%, considerably above the EU average (40.5%) and the EU-level target of 45%. The rate increased by 9.7 pps in the last 10 years (vs 8.3 pps for the EU average). However, a slight decrease of 2.5 pps has been seen compared to 2019, where the proportion was 60.3%. A significant gender gap in tertiary attainment is also to be noted: 47.3% of men hold a tertiary degree, compared with 67.8% of women. This translates to a gender gap of 20.5 pps, well above the EU average of 10.8 pps. A large gap of 30.8 pps also exists between native-born (68.7%) and foreign-born (37.9%) people in Cyprus.

Figure 4 - Tertiary educational attainment (ages 25-34) by sex, 2020



Source: Labour Force Survey, [edat_ifse_03].

A national graduate tracking system is underway and will be financed under the EU Recovery and Resilience Facility. The development of the system is part of a reform aiming to address skills mismatches between the labour market and the secondary and higher education systems. It will give insight into improving education in Cyprus and will trigger the enhancement of skills across all population groups.

Cyprus has the lowest proportion of STEM graduates in the EU, currently standing at 13.8%. The number of graduates in health and STEM fields has been lower than in most EU Member States in recent years (ETM 2020). In 2019, the proportion of female STEM graduates in relation to the total number of female graduates stood at 7.7% (vs an EU average of 14.7%) with a decrease of 2.6 pps compared to 2014 (10.3%). One in three STEM graduates is a woman (36.2%). Cyprus aims to improve skills relating to STEM education through the EU Recovery and Resilience Facility.

During the lockdowns, higher education in Cyprus turned to the hybrid teaching method⁵⁹. Higher education institutions in Cyprus were able to respond efficiently to the pandemic and they took advantage of distance learning methods. The semester exams took place remotely and although higher education institutions took measures to safeguard their objectivity and credibility, difficulties were noted and an evaluation could facilitate improvement in the future. Open-book exams and problem-solving exercises were recommended by the Cyprus Quality Assurance Agency⁶⁰.

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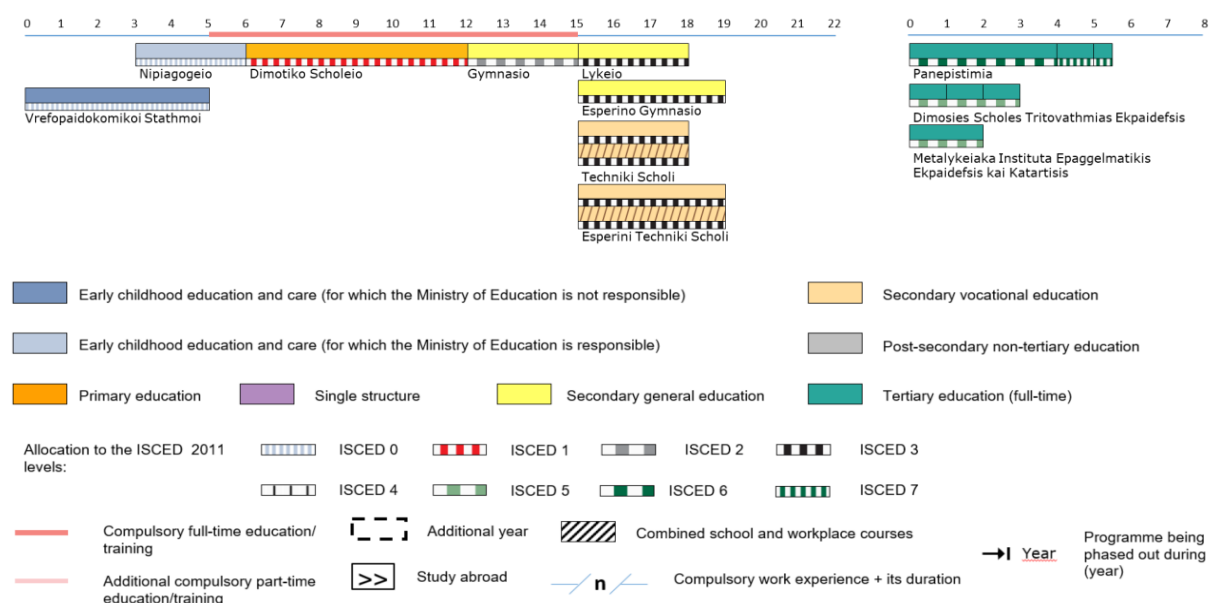
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. The Structure of the European Education Systems 2021/2022: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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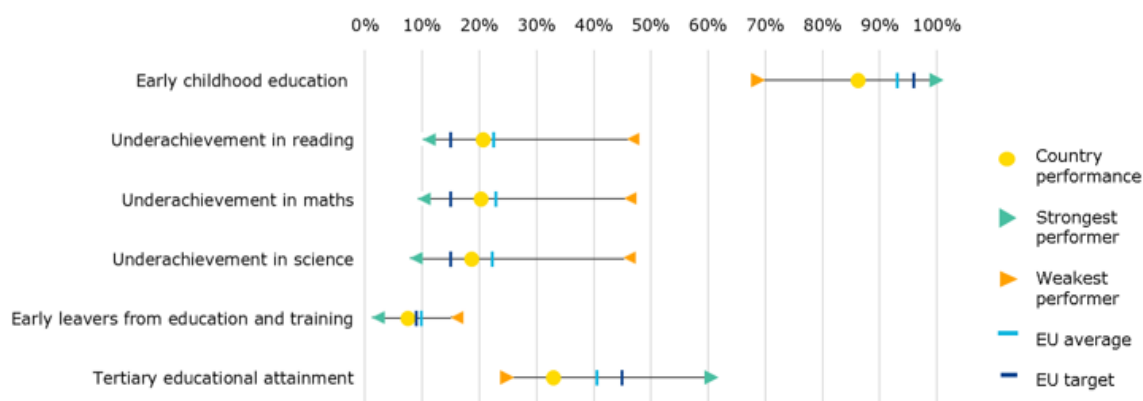
1. Key indicators

Figure 1 – Key indicators overview

			Czechia		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	76.8% ¹³	86.3% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	15.0% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	23.1% ^{09, b}	20.7% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	22.4% ⁰⁹	20.4% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	17.3% ⁰⁹	18.8% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	4.9%	7.6%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	22.6%	33.0%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		4.6%	4.9% ¹⁹	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€4 629 ¹²	€5 889 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€5 191 ¹²	€7 545 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€7 726 ¹²	€11 156 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		4.7%	7.4%	12.4%	8.7%
	EU-born		13.6% ^u	19.0% ^u	26.9%	19.8%
	Non EU-born		12.8% ^u	8.0% ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			91.9%	87.4%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		22.5%	32.3%	33.4%	41.3%
	EU-born		32.3%	50.8%	29.3%	40.4%
	Non EU-born		20.0%	41.3%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

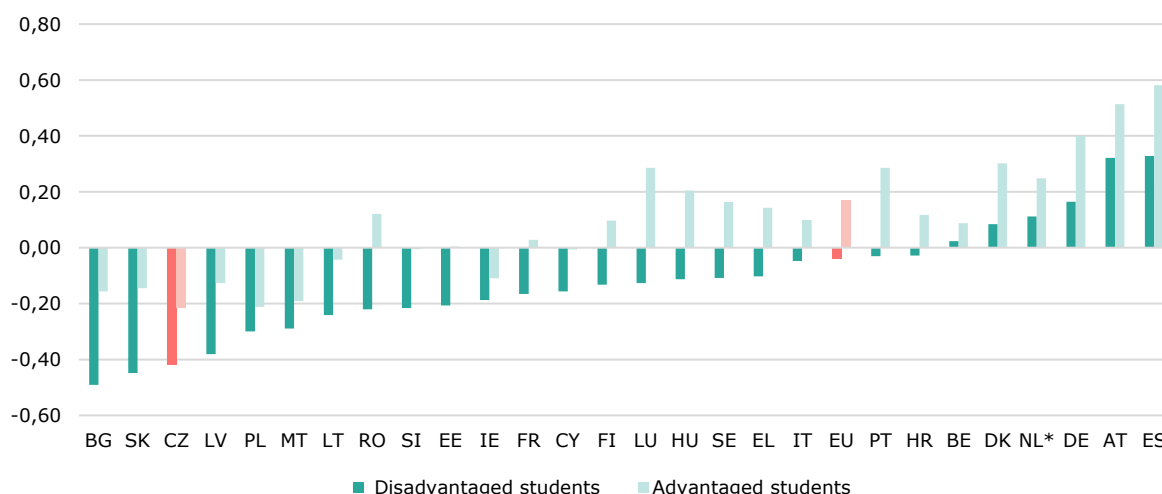
2. Highlights

- Well-being in education receives more attention in the wake of the COVID-19 pandemic and brings inequality into the spotlight.
- Czechia put forward a long-term vision for developing its education system. Reducing major inequalities is a priority.
- Early childhood education and care remains inadequate for children under 3 years old. The government's plan to build more childcare facilities should improve matters.
- Early school leaving is on the rise.

3. A focus on well-being in education and training

Pupils' well-being, performance and socio-economic status are linked. Czech pupils' sense of belonging in school is one of the lowest in the EU, with a significant gap between advantaged and disadvantaged pupils (PISA 2018 index of belonging of -0.28 v +0.1 on EU average, see Figure 3). More than half of pupils – the highest value in the EU – reported feeling sometimes or always scared, compared to a third on average in the EU (OECD, 2019). Bullying is higher than the EU average. One in three pupils reported being bullied at least a few times a month (22% in the EU). Bullying is more widespread at disadvantaged schools (more than 13 pps difference between advantaged and disadvantaged schools v 10 pps in the EU). Overall, pupils with high well-being tend to cluster in certain schools. Czechia is among the countries with the largest inter-school differences in pupils' well-being (OECD, 2021)⁶¹. A lower sense of belonging and exposure to bullying are linked to lower educational aspirations and outcomes (OECD, 2019). The strong relationship between socio-economic status and educational outcomes in Czechia also extends to pupils' well-being, therefore increasing inequality.

Figure 3 – Index of sense of belonging at school by student characteristics, PISA 2018



Source: OECD, PISA 2018. *NL: Data did not meet the PISA technical standards but was accepted as largely comparable.

Well-being was not an explicit policy focus in the past, but receives increasing attention. Official policy documents do not define well-being. It is seen as a condition for good learning, rather than an objective in itself. Recently, the Czech School Inspectorate dedicated two publications to the issue (CSI, 2021b,c). It found that the well-being of teachers is strongly linked to confidence in

⁶¹ The OECD uses the term 'social-emotional outcomes' which focuses on school climate (bullying, teacher enthusiasm, school community etc.), student well-being (psychological/cognitive) and student interest in school (motivation, educational expectations).

teaching and the motivation and performance of pupils. However, only 16% of Czech teachers felt their profession was valued by society compared to an OECD average of 31% (TALIS 2018). The new education strategy 2030+ proposes some measures to improve the well-being of teachers and pupils. It set out plans to support teachers with:

- professional development;
- burnout prevention;
- conflict and stress management;
- mental health; and
- psychological issues.

It also proposes to involve pupils in the decision-making of the school (pupils' parliaments), raise awareness of mental health (also for VET students) and strengthen school counselling services and parents' participation in the functioning of the school. Digital well-being such as being able to react to cyber-bullying or discern false information is addressed under digital skills (MŠMT, 2020a).

The shift towards distance learning has had an impact on the well-being of learners.

According to a national survey, 77% of parents thought that their children were less motivated than during classroom schooling. More than a third of pupils (36%) said that they did not manage to learn the subject matter during distance learning. This figure rose to 45% among pupils with lower socio-economic status. Parents' aspirations for their children's education were lower than before the pandemic (in April 2020, only 31% of parents expected their child to complete higher education, compared to 37% in December 2019; PAQ, 2021). Following the spring 2020 school closures, around 10 000 pupils did not have access to distance learning at all (CSI, 2021a). Higher education students, too, felt the pandemic's impact on their mental health. Almost half indicated that the change in teaching methods caused them major stress and a third were worried about not completing their academic year successfully. In addition, the number of students who feared not to make ends meet tripled (Van de Velde, 2021).

Public and private actors aim to offset the negative effects of distance learning. The Ministry of Education proposed measures, together with the National Institute of Mental Health, to support mental health in schools when pupils return to school. It includes making mental health information available to children and educators, organising a mental health day for pedagogical staff and promoting social and emotional skills to increase resilience and stress management. During distance learning, schools also took steps to support pupils' well-being. They organised regular informal online meetings, including on mental health, support for cooperation among peers, outdoor activities, psychological support and project work on resilience (Partnerství, 2021c). If schools reached out to disadvantaged pupils struggling with distance learning, they were often successful (CSI, 2021a). The NGO Partnership for Education 2030+ published recommendations for educators to support students' return to school after prolonged closures. These included re-establishing social relationships, giving pupils time to re-adapt and supporting self-regulation (Partnerství, 2021b). The EU-funded initiative Minimalizace šikany⁶² has broadened its activities to cover cyber-bullying. It runs courses and a hotline to:

- raise teachers' awareness of bullying;
- help schools set rules on preventing bullying; and
- help schools react in specific cases.

⁶² www.minimalizacesikany.cz (Minimising Bullying)

4. Investing in education and training

Public spending on education has increased. Inflation-adjusted education spending rose, from EUR 8 361 million in 2018 to EUR 9 299 million in 2019. This was a comparatively high increase of 11.2% versus 1.9% at EU level. With 4.9%, education spending as a share of GDP was slightly above the EU average (4.7%) in 2019. Czechia earmarked 11.8% of its overall public spending to education, which was above the EU average (10%). Compared to 2018, spending increased most in tertiary education (by 10%), and almost equally for pre-primary, primary, secondary and post-secondary non-tertiary education (by 7-8%). The allocation of government funding for the different levels of education remained broadly stable over the last decade. In 2019, this was 16% for tertiary education, 46% for secondary education and 23% for pre-primary and primary education. The latter share remains rather low compared to the average share allocated to pre-primary and primary education in the EU (33%).

Several reforms might have an impact on future education spending by central government. Since 2020, following a funding reform of primary and secondary education, funding is provided per hours taught and according to the quality of pedagogical work instead of on a per pupil basis (cf. 2020 Education and Training Monitor). Funding is allocated to schools directly from the state budget and not by regional authorities as before, thus re-centralising financial decision-making at central government level. Following a reform of early childhood education, funding for child groups will also be provided by central government. The rising pay levels of teachers and the need to hire more teachers in the future add to increasing demands on the education budget (Münich, Smolka, 2021).

Box 1: The Czech Recovery and Resilience plan

The EU will give out EUR 7 billion in grants to Czechia under the Recovery and Resilience Facility (RRF) to help it emerge stronger from the COVID-19 pandemic. Investments related to education and skills represent about 18% of the total RRF budget. The Czech Resilience And Recovery Plan⁶³ aims to build childcare facilities, provide digital equipment to schools, especially to disadvantaged schools, improve digital skills of teachers, revise the IT curriculum, provide catch-up classes for pupils after the return to school, modernise higher education, invest in key academic sites and expand life-long learning in digital technologies.

5. Modernising early childhood and school education

Capacities and participation in early childhood education and care could be further improved. In 2020, 86.3% of children aged between 3 and 6 participated in early childhood education compared to 92.8% at EU level. After a slow, but steady participation increase in the last decade, progress has stalled in recent years. Regional and socio-economic differences persist. Whereas in the east of the country, around 98% of children above the age of three participate in childcare, for the region around the capital this was only 80.5%, pointing to a capacity shortage in urban areas. Children at risk of poverty and social exclusion are less likely to attend childcare (79.4%). Roma children record an even lower participation with 34% (FRA, 2018). Pandemic-related partial closures of childcare facilities might deepen these inequalities. The means through which education should be ensured at a time of long-term closure of facilities was not officially formulated during the spring 2020 lockdown, although the last year of pre-school education is compulsory in line with the Education Act. Even though many pre-school directors wished to have more centrally provided information and methodological guidance, pre-schools generally managed the situation and strived to fulfil their role in ensuring pre-school education during the state of emergency. For example, most pre-schools offered ideas for children's development activities at home (CSI, 2020a).

⁶³ www.planobnovycr.cz

Early childhood education, particularly the compulsory pre-school year, is a priority of the education strategy 2030+. The benefits of going to pre-school were highlighted in a recent study which analysed the results of the 1995 reform extending parental leave from 3 to 4 years. It concluded that the additional year of parental care at home, instead of attending pre-school, negatively impacted the children's future educational and labour market outcomes. Those children were 4 pps more likely to be neither studying nor working at the age of 21-22, and 6 pps less likely to study at university. For those whose caregiver did not hold a higher education degree, this was 9 pps and 12 pps respectively (Bičáková et al., 2021). The 2030+ education strategy aims to increase the available places and participation rates and improve the quality of pre-schools, e.g. by lowering the teacher-child ratio, reducing the high proportion of children that enter primary school late and supporting teaching staff (MŠMT, 2020a).

The low participation in early childhood education of under three-year-olds remains a challenge. Czechia recorded, with 6.3%, the lowest participation level in formal childcare in the EU (35.5%). An amendment to the Child Group Act entered into force in October 2021. It is expected to provide stable public funding for child groups which are to date often EU-funded. Plans for a more far-reaching reform of the system were abandoned; child groups will continue to welcome children up to the age of six and will not be renamed as crèches. New requirements in terms of infrastructure and staff profiles are aimed at improving the quality of childcare. Critics of this reform warn that the new quality requirements imposed on child groups could lead to fewer places, especially in urban areas. The ministry of labour and social affairs, who remains responsible for child groups, plans to make funding available for child groups to adapt to the new requirements. The EU's Recovery and Resilience Facility will also provide funding to expand childcare. Under this facility, the government plans to increase the number of childcare facilities by 40% until the end of December 2025; it will also carry out a study to investigate the barriers to participation in early childcare (Gov, 2021a).

As teacher shortages persist, Czechia is looking for new ways to train and retain teachers. The 2030+ education strategy sets out measures to make the teaching profession a more appealing career path (MŠMT 2020a). Previously, measures were taken to widen access to the teaching profession and reduce shortages (cf. 2020 education and training monitor). The intense public debate around opening alternative pathways to the teaching profession continues. However, even critics admit that a stronger link between study and practice is needed to improve the job retention and job satisfaction of teachers. Only two thirds of current teachers reported that they have gained classroom practice during their studies – less than any of their European peers (Eurydice, 2021).

Teachers' salaries are increasing. The government is on track to reach its pledge to increase teachers' salaries to 150% of their 2017 levels by 2021. Czechia was one of the EU countries with the highest increase of teachers' salaries between 2014 and 2019, including starting salaries (Eurydice, 2020b). Pay also became fairer as it was decoupled from changes in the number of pupils attending a particular school. Even if teachers' salaries remain rather low compared to other university graduates, this is a good step to raise the appeal of the teaching profession (Münich, Smolka, 2021).

After the adoption of a new multiannual strategy for the inclusion of Roma, changes in practice are needed to improve the educational success of Roma pupils. Improving the educational attainment of Roma is one of the aims of the new 2021-2030 Czech Roma Inclusion Strategy. It acknowledges that most of the previous strategy's aims have not been achieved. Training teachers on how to work with diverse classrooms, providing support for pre-school education and setting up school counselling services are some of the measures proposed in the new strategy (Gov, 2021b). Roma children and pupils from disadvantaged backgrounds are often overrepresented in certain schools. With 57%, the early school leaving rate of Roma children was more than nine times higher than among the general population (FRA, 2018). The problem of 'segregated schools' persists especially in primary education, despite previous de-segregation efforts (MŠMT, 2020a). Full implementation of the new Roma strategy will be crucial to make progress on de-segregation.

High inequalities remain a key challenge for the Czech education system, even more so in the wake of the COVID-19 pandemic. Czech schools were closed or partially closed for 46 weeks between March 2020 and September 2021. This was one of the longest closures across the EU

(UNESCO, 2021). The related learning losses are higher among disadvantaged pupils (Blaskó et al., 2021). As a result, inequalities were made worse by the pandemic. Reducing inequalities is one of major aims of the 2030+ education strategy, for example by avoiding parallel educational structures. Lowering the number of students that leave basic education early to move on to more selective multiannual secondary schools is essential in this respect. The Recovery and Resilience Facility will help to reduce inequalities in education through more support for:

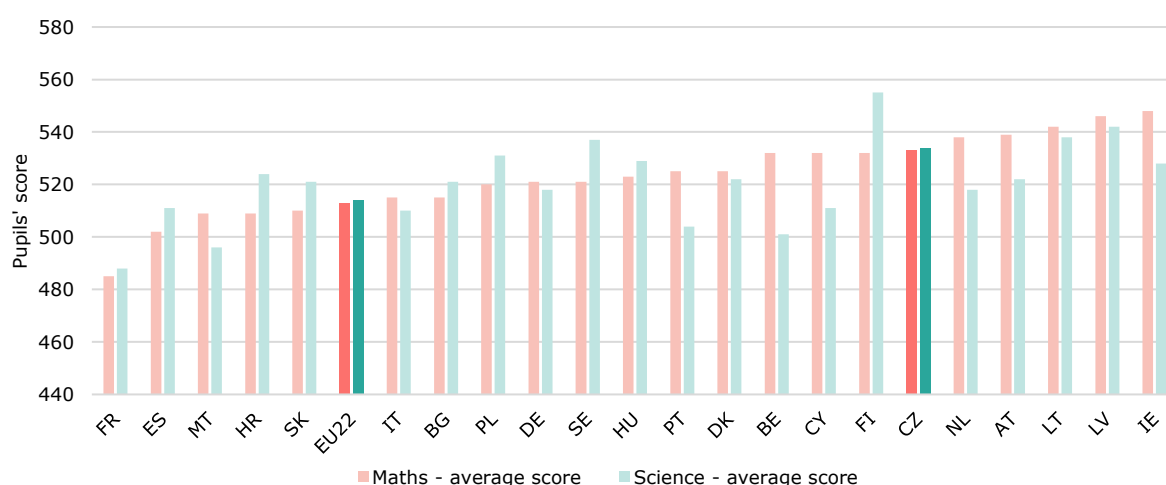
- schools with a high proportion of children from disadvantaged socio-economic backgrounds;
- training and mentoring of teachers dealing with diverse groups of pupils; and
- additional tutoring for children at risk of failure due to the prolonged remote learning caused by the pandemic.

The Czech Recovery Plan also envisages investing in digital equipment for schools to ensure access to learning for disadvantaged pupils.

Policy experimentation introduces a new level of support for schools. The Czech Education Ministry is piloting a new structure, the 'middle points of support' (*střední článek podpory*), which can potentially reduce inter-school inequalities. These bodies have an advisory role, adding a support layer between individual schools and government (local and central). They provide methodological support, help schools cooperate with each other, inform them of developments in their region (e.g. available grants from government), reduce the administrative burden of schools and help organise professional training. The 'middle points of support' facilitate communication and information flows between schools and central government. They consist of experts with hands-on experience in education, such as former school principals. Czech schools have a high degree of autonomy compared to their EU counterparts, which is generally seen as positive feature of an education system (TALIS 2018).

Czech students performed very well in maths and science, but do not feel confident about their abilities. With an average score of 533 points in maths and 534 points in science, Czech students outperformed most of their European peers (EU average: 513 points in maths and 514 points in science) (TIMSS 2019). Yet, Czech pupils had some of the lowest self-confidence levels in maths and science in the EU. This paradox has been pointed out by the Czech School Inspectorate and was subject of public debate (CSI, 2020b). Higher self-confidence levels are associated with better performance, raising the question if educational outcomes could be further improved by strengthening pupils' confidence.

Figure 4 - Pupils' average achievement in science and maths, TIMSS 2019



Source: 2019 Trends in International Mathematics and Science Study (TIMSS).

Early school leaving is slowly rising. The overall share of 18-24 year-olds with at most lower secondary education was 7.6% in 2020, up from 6.7% in the previous year. While below the EU-level target (less than 9%), it remains above the national 'Europe 2020' target (5.5%) and has increased at the second highest rate across the EU in the last decade (+2.7pp between 2010 and 2020 v an EU average of -4pp). The national average hides regional disparities: in the Karlovy Vary and Ústí nad Labem regions the early school leaving rate was 17.4% in 2020. Among marginalised groups such as Roma there are also significantly higher rates of early leaving (see above). Young people with disabilities (aged 18-24) also tend to leave school earlier than those without. Reasons lie in the shortage of relevant professionals such as specialised educators, school psychologists and school counsellors, as well as insufficient training of teaching assistants and cumbersome administrative procedures to request additional support for students with special educational needs (Šiška, Kanova 2021). Reducing early school leaving is one of the aims of the education strategy 2030.

Box 2: The European Social Fund helps to develop teaching and learning about democratic values in schools

The project '**Experience democracy**' helped to promote democratic values and respect for cultural differences, and to prevent extremism, xenophobia and other negative phenomena in society. Eighteen primary schools were involved in the different activities. The project was carried out between September 2018 and August 2021 with a budget of EUR 130 450. More information at <https://cedu.cz>

6. Modernising vocational education and training and adult learning

Vocational education and training (VET) is popular and graduates fare well on the labour market. The share of upper secondary school pupils participating in VET was 70.5% in 2019. The employment rate of VET graduates, one to three years after graduation, is 84.8%, whereas the EU average is 76.1%.

Czechia has focused on a systemic approach to skills development. Skills shortages could worsen, notably in the digital sector. While the level of basic digital skills is above the EU average, further efforts are needed to promote advanced digital skills (only 24% have advanced digital skills compared with 31% as an EU average). To fully capture the benefits of digitalisation and labour market automation, initial and continuous education and training on digital skills is needed: Digital skills are an important part of the 2030+ education strategy, focusing on the development of digital skills of teachers, revision of the curriculum and ensuring the support of pupils' digital literacy. Under the Recovery and Resilience Facility, Czechia plans to invest in reskilling and upskilling the employed and the unemployed; by 2025, 130 000 people are expected to have participated in training courses on digital and other skills required by the digital transition and Industry 4.0 and regional training centres will be equipped to provide life-long learning in these areas.

The 2030+ education strategy introduces major changes in vocational education and training (VET). It aims at a gradual career choice, postponing specialisation and reducing the total number of study fields. The changes also include broadening the profile of some VET subjects and eliminating outdated ones. Under the strategy, interdisciplinary content will be promoted in fields such as electronic engineering, mechanical engineering or computer science. A system of learning units, acquisition of qualifications and their sub-elements as specified in national qualifications framework in the course of education will be implemented. These principles will also be applied at the horizontal - i.e. interdisciplinary - level. The current curriculum will be revised, too. Professional and transferable competences will be strengthened. The revision will focus on digitisation, automation, robotics and other high added value fields. One of the most important novelties of the VET transformation is introducing a modular curriculum and more (practical and theoretical) teaching carried out in cooperation with employers. Employers' organisations and business representatives will be involved in the process of sectoral optimisation and content updating to meet the requirements of the labour market.

Increasing participation in adult learning remains crucial, especially for low-skilled adults.

In 2020, 5.5% of adults (25-64 year-olds) participated in life-long learning, falling significantly short of the EU-level target of 15% and the EU average of 9.2%. The pandemic negatively influenced the participation rate, which fell by 2.6 pps compared to 2019. On the other hand, the share of adults (16-74 year-olds) with basic digital skills increased to 62%, 6 pps above the EU average. The share of low-skilled adults remained rather low in 2020 with 5.9% (EU average 21%). More than half of the low qualified adults (57%) had a job in 2020 which is in line with the EU average. That said, the share of low-skilled adults who participate in life-long learning stood at only 2% in 2020, a drop of 1.1 p.p. compared to the previous year.

7. Modernising higher education

Tertiary educational attainment remained broadly stable. Among 24-35 year-olds, 33% held a tertiary education degree in 2020 compared to an EU average of 40.5%. Whereas this share increased considerably between 2010 and 2017, it has remained broadly stable since then. The gender gap increased slightly compared to the previous year, with 40.4% of women holding a higher education degree, while only 26.1% of men held one. With 14.3 pps, this gender gap is higher than the EU average (10.8 pps). The EU-level target of 45% of tertiary educational attainment is not yet within reach. Higher education graduates were in demand on the labour market: with 90.8% in 2020, the employment rate of recent university graduates remained high and well above the EU average of around 84%.

New strategic goals and funding aim to increase the flexibility and labour market relevance of higher education. In January 2021, the new strategic plan for higher education 'SP2021+' was put in place. It will apply for 10 years and is accompanied by a strategy for the internationalisation of higher education (MŠMT, 2020b). Strengthening the autonomy of higher education institutions, while holding them accountable to the public, is formulated as a leading principle. Taking the experience with distance learning during the pandemic into account, offering more flexible and blended learning opportunities, also for life-long learning, is a priority.

Financial support will be made available to higher education institutions to:

- improve the digital skills of staff;
- develop quality standards in distance learning; and
- build the required digital infrastructure.

Additionally, funding from the Recovery and Resilience Facility will support the modernisation of universities: by 2026, 35 new study programmes will be created in areas lacking highly-skilled employees (for example cybersecurity, artificial intelligence, Industry 4.0, e-government services) as well as 20 life-long learning courses, including through micro-credentials. Key academic sites in medicine, biomedicine and pharmaceutical science will be expanded thanks to funding from the Recovery and Resilience Facility. Universities in Brno, Olomouc and Prague participate in the European University Alliances, funded from the Erasmus+ programme. By strengthening their collaboration across Europe, they will modernise further, make life-long learning and mobility a reality and better engage with society.

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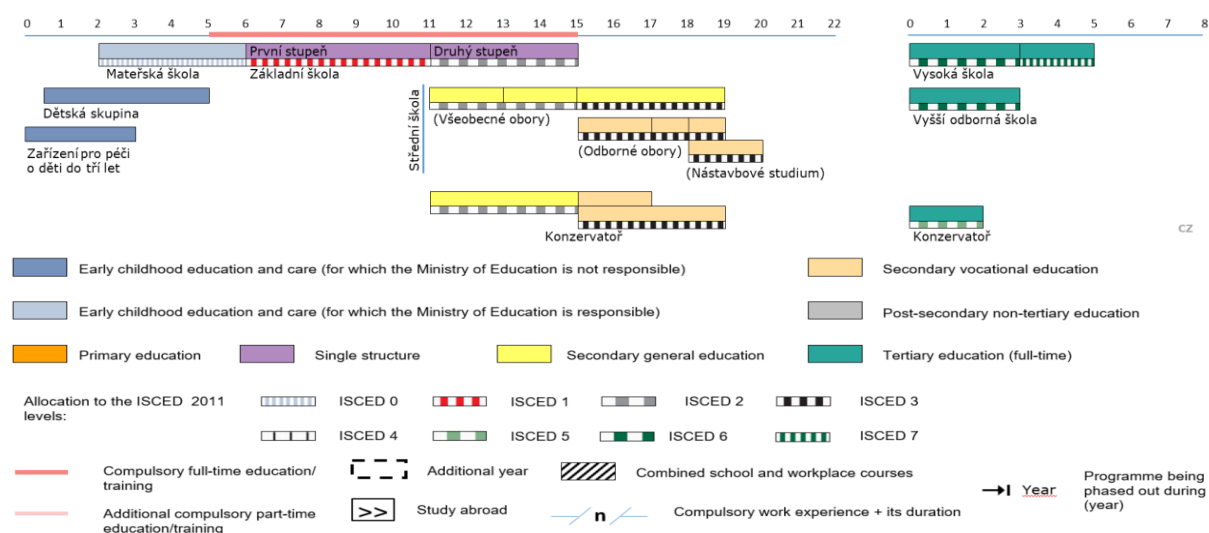
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Annex I: Key indicator sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. The Structure of the European Education Systems 2021/2022: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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DENMARK

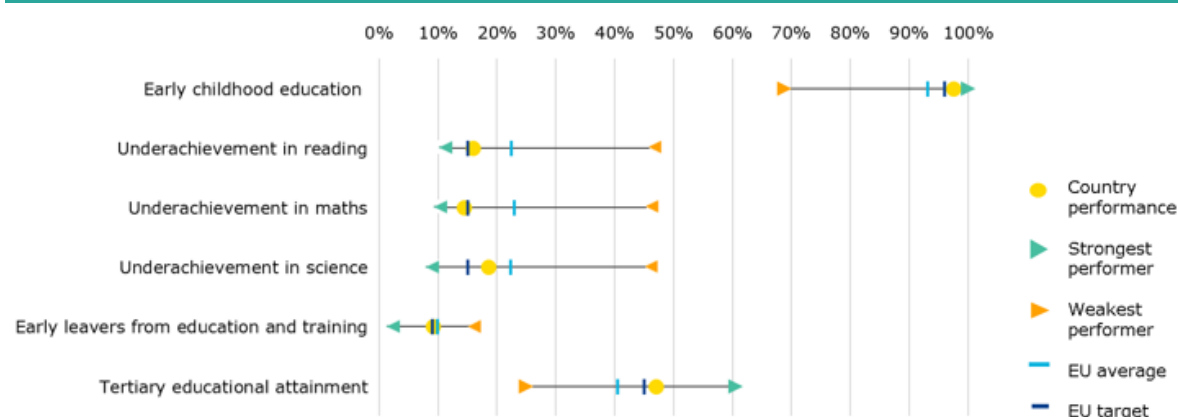
1. Key indicators

Figure 1 – Key indicators overview

			Denmark		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	97.6% ¹³	97.7% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	21.4% ^{13, **}	16.2% ^{18, †*}	:	:
Low achieving 15-year-olds in:	Reading	< 15%	15.2% ^{09, b}	16.0% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	17.1% ⁰⁹	14.6% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	16.6% ⁰⁹	18.7% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	11.5%	9.3%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	37.6%	47.1%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Public expenditure on education as a percentage of GDP			7.1%	6.3% ¹⁹	5.0%	4.7% ¹⁹
Education investment	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€8 517 ¹²	€8 389 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€7 624 ¹²	€6 862 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	:	€12 980 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		11.1%	9.2%	12.4%	8.7%
	EU-born		:	:	26.9%	19.8%
	Non EU-born		17.3% ^u	11.4% ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			69.1%	76.1%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		38.7%	47.1%	33.4%	41.3%
	EU-born		41.4% ^u	61.9%	29.3%	40.4%
	Non EU-born		23.9% ^u	40.7%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019; † = Met guidelines for sampling participation rates only after replacement schools were included; * = National defined population covers 90% to 95% of the national target population; ** = Did not meet the sample participation rate.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- After several years of spending cuts, Denmark has stepped up investment in education, including by earmarking funds to mitigate the negative impact of the pandemic.
- Participation in early childhood education and care is high, with Denmark taking steps to further improve its quality, in particular by increasing staffing levels.
- Well-being policies are well-established, and wide-ranging monitoring mechanisms are in place, yet the overall mental health of students does not seem to have improved in the past years.
- Although a lack of interest in dual vocational training continues to have an impact on skills shortages, participation increased during the pandemic thanks to improved guidance, financial support and the new obligation on schools to secure training places.

3. A focus on well-being in education and training

Denmark addresses well-being by a well-established policy that covers all levels of education. It formally introduced well-being as a key policy objective in primary and lower secondary education by the Folkeskole reform of 2013 and by the general upper secondary reform in 2017. Since 2018, well-being has also become a priority in higher education policy with better monitoring arrangements and improved data collection and policy design. The Danish concept of well-being was developed by an expert group for primary and lower secondary education launched in 2014 and identifies three aspects: (1) psychological and physical well-being, (2) students' self-assessment of their competencies, in particular self-efficacy, resilience and social competencies, as well as their ability to participate in and contribute substantially to school activities, and finally (3) whether the students' environment (including parents, peers and teachers) supports and inspires them (*Undervisningsministeriet*, 2014).

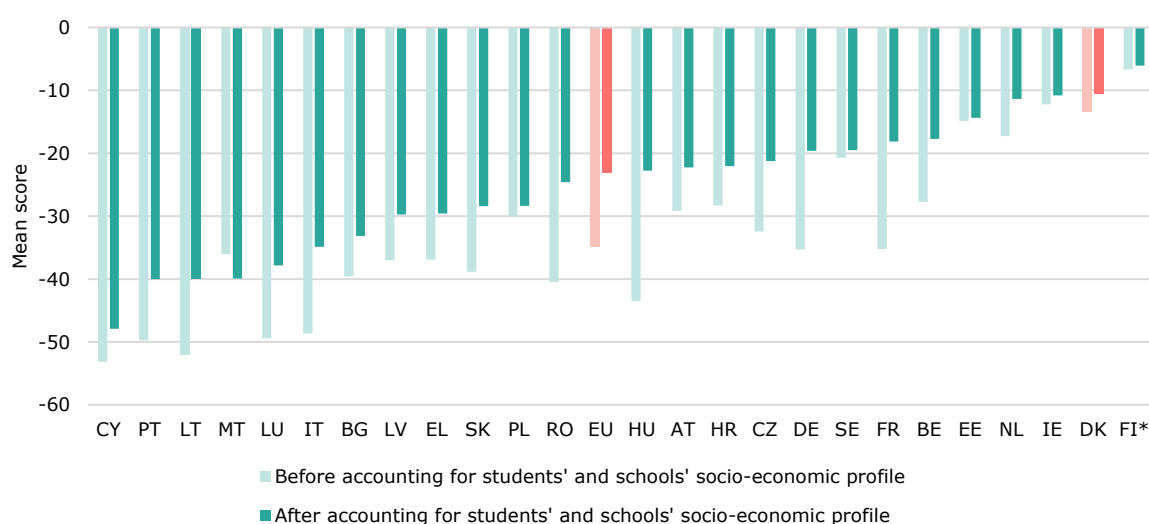
Student well-being is closely monitored through regular surveys. It is compulsory for all primary and lower secondary schools (since 2014) and upper secondary schools (since 2017) to measure student well-being. The monitoring is carried out annually through an online survey. The aggregated results are made available online, and each school has access to its aggregated data. The outcomes of the well-being survey are not only used by schools and municipalities, but also feature in the Ministry's of Children and Education annual status report (*Undervisningsministeriet*, 2017a). In addition, at least every third year schools must measure the educational environment and publish an assessment of it. Each school must publish a set of values, including strategies for dealing with bullying and digital bullying, and guidance on the relations between teachers and students, as specified in the national legislation on the educational environment (*Undervisningsministeriet*, 2017b). In the area of higher education, the Danish Evaluation Institute has collected data on well-being since 2016 in its annual survey on dropout rates. A budget of DKK 25 million (EUR 3.35 million) has been earmarked for pilot initiatives in higher education, including evidence-gathering and policies that aim to improve student well-being (*Danmarks Evalueringsinstitut*, 2019b).

Despite considerable policy efforts over the past years, the overall well-being of Danish students does not seem to have improved. The Folkeskole reform in 2013 was accompanied by a comprehensive research programme. According to the 2020 evaluation report, there has been no overall progress in student well-being, despite the reform focusing mainly on well-being (VIVE, 2020a). The 2020/2021 annual well-being survey of the Ministry of Children and Education confirmed a stable level of well-being in primary and secondary school. Another study by the Danish Evaluation Institute (EVA) on student well-being in upper secondary education, published in 2019, found that many students felt challenged and had negative feelings for extended periods, which in turn had a negative impact on their academic performance (*Danmarks Evalueringsinstitut*, 2019a). Similarly, another survey on well-being in higher education carried out in 2018 revealed that every fifth student was doing poorly and showing symptoms of stress (21.2% of female students compared to 13.6%

of male students reported very frequent strong symptoms of stress) (*Uddannelses- og forskningsministeriet*, 2019). A study published by the Danish Evaluation Institute in 2019 shows a clear correlation between higher education students' feelings of frustration in relation to their studies and an increased risk that they will not thrive and will drop out (*Danmarks Evalueringsinstitut*, 2019b).

Danish schools score around the EU average on bullying and the disciplinary environment but with a negative trend. According to the OECD Programme for International Student Assessment (PISA), every fifth student (21.4%) reports being bullied at least a few times a month (EU: 22.1%), girls less so (19.7%) than boys (23.1%), with there being no significant difference by socio-economic or migrant status and having little impact on reading performance. The overall disciplinary environment broadly corresponds to the EU average, but teachers report a significant worsening in all related indicators since 2009. In line with EU trends, advantaged and private schools record less truancy and have a better disciplinary environment, although the gap is slightly smaller than in other EU countries. Advantaged students report receiving more academic support than disadvantaged ones. Those different levels of support may partly explain why young people with a migrant background have less favorable educational outcomes, although they participate to the same extent in ECEC, and why advantaged students drop out of school much less often.

Figure 3 – Change in PISA reading performance when students reported being bullied at least a few times a month, 2018



Source: OCED, (2019b). Note: the data for FI are not statistically significant

During the pandemic, teachers attached great importance to the well-being of students. School principals and teachers underlined that well-being and maintaining relationships was a key goal. Consequently, during lockdown some schools focused more on student well-being than on fully implementing curriculum requirements (*Danmarks Lærerforening*, 2020). For instance, when schools reopened in spring 2020 for fifth grade pupils, some schools arranged smaller groups in order to have closer contact between pupils and teachers.

Denmark launched a number of policy initiatives underpinned by substantial funding to mitigate the impact of the crisis. In February 2021, the government allocated DKK 600 million (EUR 80.7 million) to crisis-related measures in the educational sector. Of that amount, 65% was allocated to boost students' learning and to better prepare students for the 2021 summer final exams through reorganised and locally-adapted learning opportunities. 20% is intended to compensate for lost practical training in vocational dual education and 15% has been allocated to enhance students' well-being. Additional DKK 295 million (EUR 39.7 million) are invested to deal with academic challenges following Covid-19 in 2021, and schools, educational institutions and municipalities have been given more freedom to organise and adapt teaching to local conditions.

(Undervisningsministeriet, 2021). A stakeholder summit was also organised by the Minister for Higher Education and Science and the Minister for Culture to explore ways to boost the well-being of students during the pandemic.

Despite the measures taken, the pandemic has affected the well-being of students. 33% of the school principals surveyed consider that the lockdown has had a negative impact on pupil well-being. Teachers and pupils largely concur in their assessment of the situation (*Danmarks Evalueringsinstitut*, 2021a). About half of the surveyed students were more depressed and felt lonelier (*Danmarks Evalueringsinstitut*, 2021b). The national well-being survey of students in primary and secondary education 2020/2021 observed indicators to be rather stable over time. In higher education, too, loneliness of new students increased from 56% in 2017 to 63% (measured until the end of 2020). That trend was more pronounced for first-year students, as the share of students who could easily make contact with others dropped 30 pps to 43% in the same period in 2020. In addition, students faced financial stress as a result of the loss of typical student jobs (*Danmarks Evalueringsinstitut*, 2021c). The pandemic has shown that face-to-face learning better supports the social aspects of learning across the educational sector.

Well-being challenges during lockdown affected learning outcomes, with a higher risk for low-achievers. 88% of the school principals surveyed reported that the pandemic had had a negative impact on academically weak students, while 19% considered that high-achieving students were affected. At primary school level, regular contact with teachers and peers, and having parents with an positive attitude, were reported to strengthen students' resilience. Two thirds of upper secondary students reported lower education outcomes and motivation during school closures in contrast to a small group who believed that they did better than usual (*Danmarks Evalueringsinstitut*, 2021b). About two thirds of students in higher education prefer face-to-face teaching to distance learning and one third favour a hybrid approach (*Danmarks Evalueringsinstitut*, 2021c).

4. Investing in education and training

2019 saw the first real increase of 1.1% in general government expenditure on education after a period of spending cuts. Denmark's spending on education as a share of GDP remains at 6.3% - 1.6 pps above the EU average - after contracting between 2016 and 2019. While Denmark's gross capital formation and compensation for employees are around the EU average, Denmark spends significantly more on intermediate consumption and double on other types of expenditure (COFOG). This higher spending could be explained in part by more generous student support in general.

Denmark is increasing funding for education, in particular at pre-primary and primary level, with a focus on teacher support. Education received DKK 678 (EUR 91.2) million in funding as the 're-prioritisation contribution' (Omprioriteringsbidraget) - a budget-savings method used in Denmark - ended in 2020. The investments target pre-primary and primary education. A 2020 government and multi-party agreement stipulates an additional annual investment of about DKK 1.8 billion (EUR 242 million) as of 2024 to especially ensure minimum staff levels in ECEC. At the same time, funding for basic education (Folkeskole) increased in 2020 by DKK 275 (EUR 34.5) million annually, further increasing to by DKK 807 (EUR 108.5) million annually as of 2023. These additional funds are intended to enable municipalities to improve the conditions in their schools, especially by increasing teacher numbers by more than 1 000 in the coming years. A number of tripartite agreements resulted in investments of DKK 6.1 billion (EUR 820.4 million) in vocational education, of which DKK 500 (EUR 67.3) million per year are devoted to new initiatives (Danish Ministry of Finance, 2021). Public investment in tertiary education amounted to DKK 14 (EUR 1.88) billion in 2019, an increase of approximately 23% since 2008. However, over the same period, admission to tertiary education in Denmark increased by 42%.

Box 1: The National Recovery and Resilience Plan (RRP)

Denmark's Recovery and Resilience Plan, with a volume of about EUR 1.5 billion, targets 59% of its measures at supporting climate objectives and 25% at the digital transition. The plan has six components: (i) green transition of agriculture and the environment; (ii) energy efficiency, green heating and carbon capture and storage; (iii) green tax reform; (iv) sustainable road transport; (v) investing in green research and development and, finally, (vi) digitalisation. Under the latter component, Denmark will develop a digital strategy before the end of 2021, which may specify more detailed measures for education and training, and competencies and skills.

5. Modernising early childhood and school education

Participation in early childhood education and care (ECEC) remains high. Nearly all children between the age of 3 and the age of starting compulsory primary school attend ECE (97.7% in 2019), above the EU-level target of 96%. Participation in formal childcare by children aged under 3 is also high at around 66% (2019), almost double the EU average and the highest participation rate of all EU countries. With 58.1% Denmark also leads the EU in terms of children attending more than 30 hours of ECEC a week⁶⁴. There is practically no difference between the attendance rates of disadvantaged and advantaged children (OECD, 2019).

Major investments and reforms aim to improve the quality of ECEC. In December 2020 the government announced an agreement with several parties in Parliament to especially gradually increase staffing levels in ECEC by about 3 900 additional teaching staff by 2024. That agreement is connected with the plan to bring in minimum staffing levels as of 2024 to 1 to 3 in nurseries and 1 to 6 in kindergarten. The total investment will be about DKK 1.8 billion (EUR 242.1 million). Of that, a sizeable share will be used to train more educators and assistants. Since municipalities are responsible for ECEC provision, quality can differ. A 2020 report of the Danish Evaluation Institute identified significant differences between the 98 municipalities (Danmarks Evalueringsinstitut (2020).).

There has been another drop in the early school leaving rate, although it has yet to reach the 2015 low. After a sharp increase in 2016 (7.5%) and 2018 (10.4%), the rate of early school leavers from education and training (ELET) has gradually dropped to 9.3% in 2020, which is below the EU average (9.9%), but slightly above the EU level target of 9% by 2030. There is a stable 4 pps gap between the best and the worst performing regions (the Capital Region (7.9%) and Zealand (11.9%), respectively). While early school leaving in cities has nearly halved in a decade, there has been only a slight decrease in rural areas. In 2020, boys dropped out of school 1.7 times more than girls; a gender gap of 4.9 pps (1.1 percentage points above the EU average). A government expert group is being set up to determine how to decrease the academic gap between boys and girls. Over the last 10 years, boys have narrowed the gap by 1.2 pps. There is a small difference between native-born and foreign-born children of 1.4 percentage points, which is less than half the EU rate. This could be partly explained by the fact that nearly all foreign-born children attend ECEC. The government recently established a "Reformkommission" that also focuses on students with difficulties finishing primary and lower secondary school.

Parents' socio-economic background still determines educational outcomes in Denmark. PISA results show that Danish students are performing well overall (close to the 15% EU level target for the share of low-achievers, and above the EU average) in reading, maths and science. Nevertheless the share among disadvantaged pupils of low-achievers in reading is 20 pps higher than among their advantaged peers (27% against 7%), which represents a significant gap, but is still well below the EU average (26.9 pps). A recent Rockwool Foundation study analysed the link between the educational outcomes of pupils and their parents. While the impact of family background decreased for those born in the 1950s and 1960s as compared to the 1940s, it increased again for

⁶⁴ Children aged over 26 weeks are legally entitled to full time publicly subsidised ECEC and EU-SILC survey [ilc_caindformal]

those born in the 70s and 80s⁶⁵. Poor non-cognitive skills increasingly put students at a disadvantage' (Rockwool 2021). In addition, there has been a slow, consistent increase in the number of pupils attending private schools, from about 73 000 in 2015 to 79 000 in 2019 reaching 17% at the level of Folkeskolen. Their share increases to 30% in lower secondary and drops to 3.1% in upper secondary school.

Danish education reforms have not yet produced the desired results. In 2013, primary and lower secondary education systems were reformed through the Folkeskolen reform. Its goal was to increase both academic performance and well-being. The evaluation from 2020 showed that no significant improvement has been made yet, neither on outcomes nor on well-being. National primary school performance and graduation tests did not show any changes from 2012-2018. There is no difference in student learning outcomes and well-being between schools that are well-advanced in implementing the reform and those that are not. The impact of the socio-economic background on learning outcomes also remained unchanged (Vive, 2020a).

Attracting young people to the teaching profession remains a challenge in schools and ECEC. Denmark has a relatively balanced teacher workforce in terms of age, with only 32% of lower secondary teachers being above 50 and 26% below 34 years old. It also manages to attract a larger share of male teachers compared to the EU average, with 10.9% of teachers in early childhood education, and 31.6% at primary level, being male. According to a Eurydice study, Danish teachers are more stressed than their European peers (6.7 pps more than the EU average for 'total stress' and 8.2 pps for 'quite a bit' of stress). Mental health is also a concern for one out of three teachers in Denmark (European Commission, 2021). Teacher shortages and a lack of fully trained teachers is a challenge. Too few young people are attracted to initial teacher training programmes, and many drop out during training (European Commission, 2021). In the context of the Folkeskole reform, the number of compulsory teaching hours in primary education increased between 2014 and 2019 (by 39% or 2 080 hours) (OECD, 2020). In lower secondary education, teaching time increased by 29% and the distribution of time devoted to subjects changed significantly (OECD, 2020).

In Denmark, teachers are not obliged by law to participate in continuous professional development and compared with their peers in other countries they are generally less satisfied with the training available. Municipalities are required to develop professional development plans, and school heads are responsible for the professional development of their staff. Based on teachers' collective agreement, the school head and the individual teacher are expected to discuss the specific plan. Lower secondary school teachers are less satisfied with their continued professional development opportunities than their European peers. Only 70.9% of teachers attending training courses felt that they had a positive impact on their teaching practices (7 pps below EU-23). Compared with their European peers, Danish teachers consider that the specific course content is less adapted to their needs, has a less coherent structure and does not provide sufficient training opportunities for active or collaborative learning. Nevertheless, Danish teachers are among the European teachers (along with Italian, Dutch and Swedish teachers) that devote the most time to teamwork (European Commission, 2021).

6. Modernising vocational education and training and adult learning

The Danish labour market faces sector-specific supply and demand mismatches. Although mismatches have been less evident during the pandemic, they appear to be structural. This particularly concerns the supply of VET graduates, which remains low. The VET programmes fail to attract sufficient numbers of young people, with the share of young people starting a VET programme directly after compulsory school stagnating at around 20%, significantly below the government's 2025 target of 30%.

Within this context, Denmark is continuing its efforts to address one of the major issues: the shortage of apprenticeship places. This requires both attracting more young people to dual

⁶⁵ It is now comparable again to those born in the 40s.

training and reducing the number of dropouts from VET programmes, which will be achieved partly through a tripartite agreement signed in November 2020. Additional funding by employers will be invested in apprenticeship contracts via The Employers' Reimbursement Fund.

In the spring of 2020, the Danish Parliament extended the mandate of Study and Career Guidance Denmark (Studievalg Denmark). Besides offering guidance for higher education it will now guide students on VET programmes as well. Studievalg Denmark receives DKK 5 million (EUR 670 000) (Cedefop, 2020a) for this expanded role. In 2020, its additional activities were: (1) e-guidance and webinars for learners and parents, (2) information letters for parents and (3) new peer-to-peer guidance among learners (Cedefop, 2021).

In the context of the COVID-19 crisis, responsibility for organising apprenticeship contracts was shifted from students to schools. This new task for VET schools relieves students of a constant challenge and might help increase interest in dual training (Cedefop, 2021). Furthermore, the government and the social partners agreed to subsidise apprenticeship salaries to secure apprenticeship places (Cedefop, 2020c).

During the crisis, Denmark paid special attention to learners from the most vulnerable backgrounds, especially those with special educational needs. Schools had the obligation to provide extra support and to make sure that they were in daily contact with the child and their family. However, some regular activities in VET schools, like, making sure that every student has close contact with an adult at school, could not be maintained (Cedefop, 2020b).

Box 2: The *Faglært med Fordel* project (Skilled with advantage) – Improving VET enrolment and decreasing dropout rates

Faglært med Fordel aims to increase the number of VET graduates in areas where there are good opportunities of finding apprenticeship places, and emerging labour market shortages. The project has a dual focus, (1) on increasing the uptake to boost numbers of skilled workers and on (2) improving the retention rate to reduce the dropout rate.

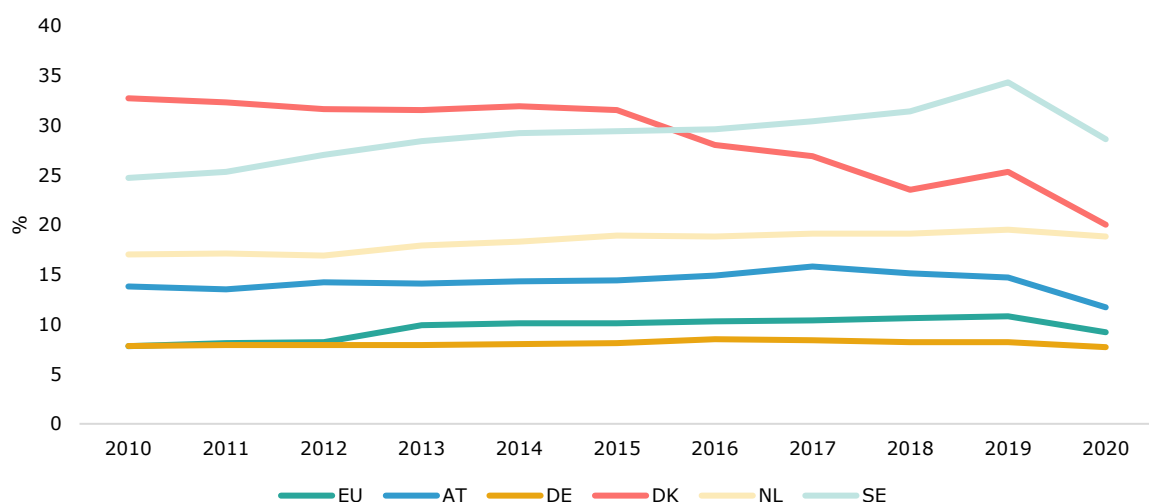
Increased communication and guidance on the programmes available, combined with more flexible enrolment opportunities will increase recruitment to VET programmes. Finding and securing apprenticeships at an early stage, as well as thorough, systematic monitoring of pupil well-being and pedagogical follow-up will improve the retention rate. Securing apprenticeship places and developing a tool that can continuously measure student well-being to supplement pedagogical methods of prevention will facilitate implementation of the project.

The project's target group are young people in education and training. The aim is to provide 10 680 online users with relevant educational material and to produce 450 additional skilled graduates in fields with good job opportunities.

Denmark's adult learning system performs well in general. However, its high participation rates have fallen over time and it does not fully address the shortage of skilled labour. Over the last 10 years, participation fell by a third from 32.7% to 20% in 2020, while funding remained stable overall (Figure 4). The reduced training capacity may limit Denmark's ability to face the technological twin transition. However, the government launched a plan to upskill unemployed adults in 2020, which allows them to receive 110% of their unemployment benefits while training as an incentive for reskilling and upskilling (Cedefop, 2021).

During the year 2000, Denmark relaxed the rules of the existing adult apprenticeship scheme (*voksenlærlingeordningen*). This enabled unemployed skilled workers to start adult apprenticeships after 3 instead of 6 months of unemployment, thereby helping them find a job in sectors with shortages. Unskilled and skilled workers with outdated training can receive higher unemployment benefits if they follow a vocational education course. This includes training for the care sector and for green jobs. Denmark improved and simplified the vocational training opportunities available to all unemployed people to ensure flexible transitions to new jobs and industries, and to increase adult learning opportunities among the unemployed.

Figure 4 – Adult participation rate in education and training (25-64), 2010-2020



Source: LFS, [trng_ifse_03]. 2020

7. Modernising higher education

While tertiary attainment rates remain stable, Denmark has fewer STEM and Master's graduates than other EU countries. In 2020, the tertiary education attainment rate (25-34) in Denmark was stable at 47.1%, which was above the EU average (table on Key indicators). Over 10 years, it has increased by 9.5 pps and now exceeds the new EU-level target of 45%. At 16.5 pps, the gender gap is clearly above the EU average (10.pps). The share of total STEM graduates (22.5%) is lower than in Finland (28.4%) and Sweden (27.3%). The number of students in public higher education institutions kept increasing until 2017, but dropped in 2018, and again in 2019 to reach 307 400. After oscillating between 83% and 85% until 2017, the employment rate of tertiary graduates increased over 2 years to 86.9% in 2018 and to 87.9% in 2019, before dropping back to 85% in 2020 [edat_ifse_24], probably also as a result of the pandemic. The gap between graduates (25-34) from cities and from rural areas is about 50% above the EU average which is also related to the small size of the country.

Denmark has brought in policies to increase the participation of women in digital studies and jobs. A key challenge remains motivating women to take up digital jobs, careers and entrepreneurship in ICT and, thus, to increase the total share of ICT specialists in the workforce. In 2019, the Ministry of Higher Education and Science also launched a 'national action plan for digital skills' based on ideas and experiences from higher education institutions. Those activities helped higher education institutions cope with the challenges related to the pandemic. Lockdowns forced many education institutions to move to distance learning. That increased the use of digital tools by a factor of up to 200 within a short time span. In 2020, the Ministry allocated DKK 6 million (EUR 0.8 million) to nine projects to boost digital competencies among teachers in higher education⁶⁶. Additional public funding of DKK 102 (EUR 13.71) million resulted in 1 380 additional students (+9%) in 2020/2021 an important step to increase participation in STEM subjects.

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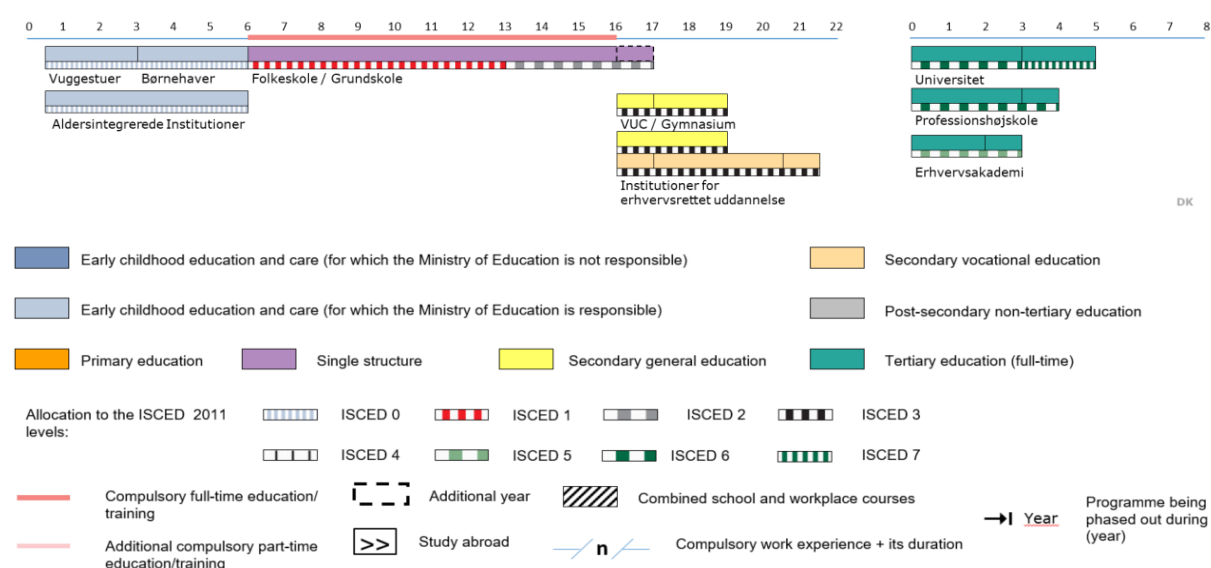
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14. Data by country of birth: edat_lfse_02.
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03. Data by country of birth: edat_lfse_9912.
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. The Structure of the European Education Systems 2021/2022: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Any comments and questions on this report can be sent to: EAC-UNITE-A2@ec.europa.eu

ESTONIA

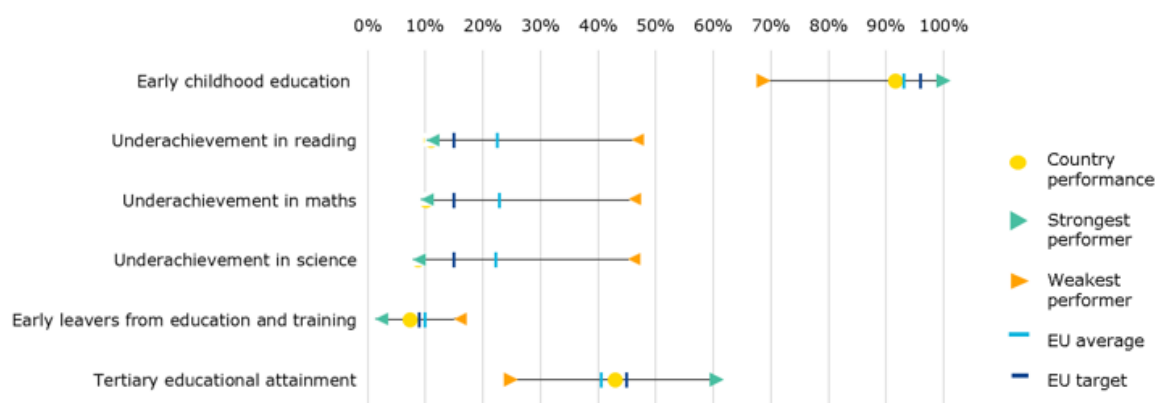
1. Key indicators

Figure 1 – Key indicators overview

			Estonia		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)			≥ 96%			
Low achieving eighth-graders in digital skills			< 15%			
Reading			< 15%			
Maths			< 15%			
Science			< 15%			
Early leavers from education and training (age 18-24)			< 9 %			
Exposure of VET graduates to work based learning			≥ 60%			
Tertiary educational attainment (age 25-34)			≥ 45% (2025)			
Participation of adults in learning (age 25-64)			≥ 47 % (2025)			
Other contextual indicators						
Public expenditure on education as a percentage of GDP			6.5%	6.0% ¹⁹	5.0%	4.7% ¹⁹
Education investment	ISCED 1-2		€4 654 ¹²	€5 822 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
	ISCED 3-4		€5 551 ¹²	€5 922 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
	ISCED 5-8		€6 414 ^{12, d}	€12 043 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		11.1%	7.6%	12.4%	8.7%
	EU-born		: ^u	: ^u	26.9%	19.8%
	Non EU-born		: ^u	: ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			83.6%	87.7%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		37.8%	41.7%	33.4%	41.3%
	EU-born		: ^u	84.2% ^u	29.3%	40.4%
	Non EU-born		47.2% ^u	60.5%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 – Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Estonia has a well-developed policy framework for well-being in education. This includes the objective of a learning environment focused on well-being and regular data collection through annual surveys conducted among students, teachers and parents.
- Digital skills, equipment and e-learning platforms facilitated the smooth transition to online learning in schools and higher education. Very few children had no access to distance learning.
- Against the backdrop of skills shortages and a declining population, there are currently not enough university and VET graduates to fill certain jobs in the future.
- Gender gaps exist across the education system, from early school leaving to tertiary education attainment.

3. A focus on well-being in education and training

Well-being is part of Estonia's education policy and is monitored regularly. In the Estonian education strategy 2021-2035 (pending adoption), a learning environment that focuses on well-being is defined as 'a combination of mental, social and physical conditions for learning that support the learner's self-efficacy and self-esteem, the development of life skills and social competences, and mental and physical health in general' (*heaolu loov õpikeskkond*). Since 2018, the well-being of pupils and teachers has been monitored regularly through a satisfaction survey, in which pupils, teachers and parents participate; each school gets a feedback report indicating areas for improvement. This year's well-being survey focused on distance learning and self-management; the results will be published in the autumn of 2021. The education strategy 2021-2035 will also contain indicators on well-being: the subjective well-being of staff and learners will be monitored during the implementation of the strategy. The value and image of the teaching profession in society will also be monitored⁶⁷.

Preparedness for distance learning helped to maintain well-being during school closures.

Estonia's education system was already well-prepared for distance learning in terms of digital equipment, e-learning platforms and skills. The majority of Estonian pupils were satisfied with their online learning experience and had access to devices and to their schools' online systems. This had a positive impact on well-being: half of the pupils felt safe, relaxed, happy and productive, especially older pupils (16-18 years) with more advanced self-management skills. For example, 70% of pupils said they had acquired new study methods and 80% felt more secure during online learning compared to contact learning (Telia, 2020). The number of children that were not reached by distance learning was very small (less than 1%), and for pupils with special educational needs it remained possible to arrange contact learning at school.

Well-being needs to remain a priority for policymakers, schools and teachers. As pre-pandemic data revealed, around 26.4% of pupils felt that they did not belong at school (EU average: 34.8%), lowering their reading performance by 29 points (EU average: 16 points). 25.4% were exposed to bullying at least a few times a month (EU average: 22.1%), which was also linked to a lower reading performance (by 15 points, compared to the EU average of 35 points, OECD 2019a). Only half of students said they felt happy sometimes or always (EU average: 70%). Less than half of teachers said they felt well-prepared to observe students' development and to manage their behaviour and the class (Taimalu et al., 2019); this indicates a need for further training of teachers to address students' and their own well-being. Teachers who have received such in-service training were better able to recognise and deal with stress factors during online learning (Carretero Gomez et al., 2021).

⁶⁷ The strategy's indicators are developed with the help of an EU-funded project (DG Reform), involving the OECD.

Some negative effects of COVID-19 could be observed, and measures were taken to address these. During school closures, the majority of pupils indicated that the time they spent with friends, doing exercise and collaborating with others had decreased; around 30% of pupils said they felt bored, lonely or tired (Telia, 2020). While 74% of students said they coped similarly or better with learning than before distance learning, 27% said they coped worse (Tammets et al., 2021). In March 2021, the Ministry of Education, together with several teachers' and psychologists' associations, issued a statement on the mental health of students during COVID-19. They recommended that teachers prioritise well-being and reduce stress during distance learning by offering the possibility to fill in learning gaps later, using formative assessment and providing additional support to pupils with learning difficulties (MoE, 2021a). School psychologists and other support professionals continued to be available, e.g. through the EU-funded *Rajaleidja* (Pathfinder) network, which offered free educational counselling services for parents and educators.

Raising resilience and well-being has also become a priority in adult learning. The education strategy 2021-2035 emphasises the importance of cooperation and self-management skills besides subject and professional knowledge. To develop the skills of adult learners, a new module, 'study path and work in a changing environment', has been introduced in the vocational curricula that all institutions must implement from September 2021 at the latest. The overarching goal of the module is to develop an attitude that values the self-development of a vocational learner. Teachers also receive in-service training, both to ensure their own well-being and to be able to create a positive learning atmosphere⁶⁸, although not all courses are available in all regions.

4. Investing in education and training

Estonia's investment in education and training remains very high compared to the EU average. In 2019, the government spent 15.5% of its budget on education, more than any other EU country and significantly more than the EU average (9.9%). This was the equivalent of 6% of Estonian GDP (EU average: 4.7%). 40% of its education budget was spent on primary and pre-primary education, a comparatively high share (EU average: 33%). In the last decade, the education spending in Estonia almost doubled from EUR 960.7 million in 2010 to EUR 1698.2 million in 2019.

Box 1: The National Recovery and Resilience Plan

To help the recovery from the COVID-19 pandemic, Estonia has requested a total of EUR 969.3 million in grants under the EU's Recovery and Resilience Facility (RRF). Estonia's recovery and resilience plan⁶⁹ aims to address long-term structural challenges such as climate change, the digital transformation, healthcare and social protection. Reforms and investments related to education and skills are also planned: To help companies succeed in the digital and green transitions, over 4 000 professionals will get help to acquire digital and green skills by 2026. Around 3 200 young people not in education, employment or training will receive support to get a job and additional training by 2025: The 'My first job' scheme will pay a wage subsidy to employers of young people between 16 and 29 who are registered as unemployed and have no or only short-term work experience.

5. Modernising early childhood and school education

Participation in early childhood education and care remains slightly below the EU average, but does not depend on socio-economic status. In 2019, 91.5% of children aged between 3 and compulsory school age (7 years) participated in early childhood education and care. While participation rates have increased somewhat since 2014, this is still slightly below the EU average of 92.8% and the EU-level target of 96% is not yet within reach. Among children under 3 years old, 31.8% were enrolled in childcare in 2019; this was below the EU average of 35.3%, but the trend is upwards. Low-income households were as likely as high-income households to enrol their children

⁶⁸ Examples of topics covered: communication, coping with tensions, positive psychology in the classroom, mental health.

⁶⁹ <https://rrf.ee/wp-content/uploads/2021/06/RRP-Taastekava-170621-VIISI.pdf>.

under 3 years old in early childhood education and care. Due to government subsidies, childcare remains affordable for most families, ensuring equal access (UNESCO, 2021). Early childhood education and care facilities were kept open during the pandemic as much as possible, although parents were encouraged to keep their children at home. Some municipalities waived fees for all families to incentivise staying at home, regardless of attendance.

Reform efforts in early childhood education and care concentrate on defining learning outcomes and early identification of learning support needs. The draft law on early childhood education and care, the Pre-Primary Education Act, is still under discussion. In its current version, it aims to define structured learning outcomes for early childhood education and care. Children's development will be regularly assessed, even if children are cared for at home. The aim is to detect learning difficulties earlier than is currently the case, so that children get the educational support they need. According to a recent audit report, a third of kindergartens lacked education support services, potentially leading to an increased need for support at school – which is associated with higher costs (National Audit Office, 2020). The bill also obliges municipalities to proactively offer a kindergarten place to every child aged one and a half. Several points of the bill remain controversial and another consultation round with stakeholders is expected to take place in the second half of 2021.

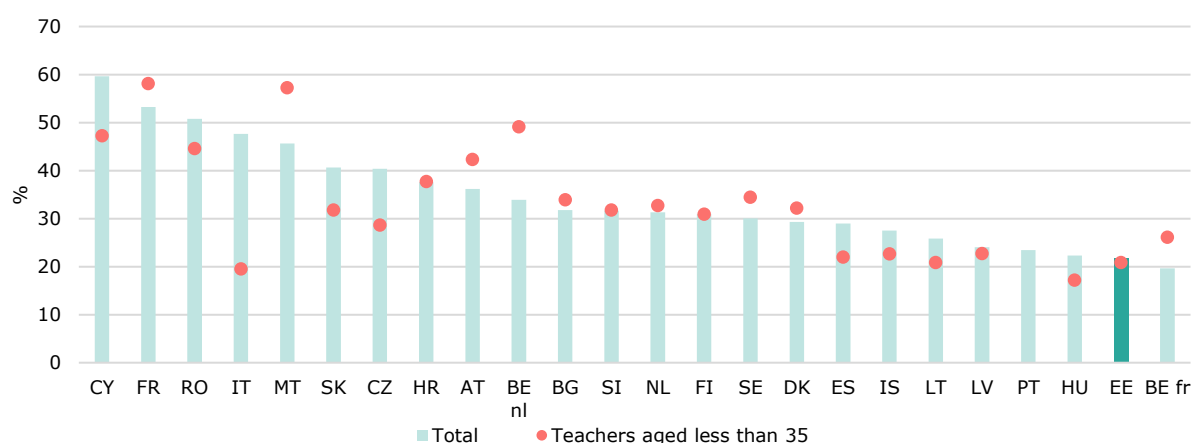
Early school leaving rates continue to fall slowly, but with significant disparities. Early leavers are people between 18 and 24 who have obtained no more than a lower secondary diploma and are not enrolled in further education and training. In 2020, the rate of early leavers from education and training fell to 7.5%, from 9.8% the year before; the rate is below the EU average of 9.9% and in line with the European target of below 9%. The figure, however, hides some regional disparities: at 10.1% in 2020, early school leaving was higher in rural areas. Moreover, young people with a disability (aged 18-24) had a school leaving rate of 16.2% (Sakkeus et al., 2021). Gender differences also persist: while 9.2% of men aged 18-24 left school early, only 5.8% of women did. The education strategy 2021-2035 attributes this gender gap to differences in attitudes towards learning (MoE, 2020a). Considering the skills shortage in Estonia and the shortage of higher education and VET graduates in certain fields, reducing early school leaving remains crucial. During the pandemic, and in an effort to reduce the risk of dropouts, career guidance services were provided online by the Estonian Unemployment Insurance Fund and were used extensively (OECD, 2020).

Estonian-language skills have not improved at the expected pace. The national goal remains for Estonian to be the main language of instruction by 2035, but this seems out of reach at this point. To achieve this target, the Ministry of Education is preparing measures to support Estonian-language learning. Since the level of teaching Estonian in Russian-medium schools is still insufficient, the ministry is considering the possibility that all Russian-medium schools should start learning and teaching in Estonian earlier and more intensively. Currently, only upper secondary schools are required to do at least 60% of their teaching in Estonian, but this could be applied to basic schools as well. In that case, legal changes might be required. An action plan to move towards a high-quality Estonian-language education system will be adopted in November 2021, and in August 2021 the Ministry announced additional funding for schools to support Estonian-language learning; 23 schools with more than 10% of students with a native language other than Estonian will benefit.

Salaries, dropout rates and ageing of teachers remain a challenge. Half of Estonia's teachers are older than 50 (EU average: 39%), making Estonian teaching staff among the oldest in the EU. The dropout rate from the teaching profession is high: in 2018, only 54% of teacher training graduates had worked as teachers for 5 consecutive years after graduation (MoE, 2020a; Eurydice, 2021). The lack of induction programmes and mentorship schemes could contribute to the high dropout rate: only 21.7% of teachers reported having participated in an induction programme, (Figure 3). Although school leaders consider mentoring important for teachers' work, only 19% of incoming teachers (with up to 5 years of experience) are appointed mentors; in some EU Member States, this figure is as high as 45% (OECD, 2019b). Skills shortages in other areas could furthermore contribute to pressure felt by teachers: The National Audit Office found that around 1 000 full-time support professionals would be needed to provide the additional assistance required in schools and pre-schools. However, the number of admissions for these professions at universities is not sufficient to

cover this need. Better organisation of support services could help to compensate for the lack of support professionals, and the Ministry of Education will prepare an action plan on educational support services in the autumn of 2021 (National Audit Office, 2020). In addition, one of the main aims of the education strategy 2021-2035 is to improve the working environment, pay and continued training of teachers and school leaders (MoE, 2020a). The state budget for 2022 plans a 7.3% increase in teachers' salaries compared to 2021 which is in line with the average wage growth in Estonia. In 2022, the projected average monthly salary will be EUR 1 653 and a total of around EUR 30 million will be set aside for the increase of teachers' salaries (Valitsus, 2021).

Figure 3 – Proportion of lower secondary teachers who participated in a formal or informal induction programme during their first job, TALIS 2018



Source: European Commission/EACEA/Eurydice, 2021. Teachers in Europe: Careers, Development and Well-being, Figure 2.5, on the basis of TALIS 2018.

6. Modernising vocational education and training and adult learning

Estonia has made progress in establishing work-based learning. Participation in apprenticeships increased to 9% of VET students in 2020/21, around 3 pps higher than the previous period, while around 15% of VET graduates have participated in work-based learning in 2019/20. Thus, efforts made since 2018 to attract young people into apprenticeships are slowly showing results. The quality of work-based learning in VET institutions was assessed for the first time in 2020 as a pilot project, and expert assistance and counselling are available to discuss the institutions' assessment results. During the COVID-19 crisis, VET providers reorganised work-based learning by postponing or suspending training in enterprises, or continuing training when possible. In 2020, 80% of recent VET graduates were in employment (compared to the EU average of 76.1%).

Alleviating teacher shortages in vocational education and training remains a national priority. One in three new teachers quit their job within a year. In autumn 2020, a working group was convened to prepare proposals to ensure a sufficient supply of teachers. In 2020, a new professional standard for VET teachers came into force, establishing a partial professional qualification for internship supervisors (EQF level 5⁷⁰). The partial qualification is not compulsory, but is recommended for those wanting to become an internship supervisor in a company. It can be obtained via in-service training or a professional exam; the awarding body is Tallinn University. In addition, the professional standard for vocational teachers at EQF level 8⁷¹ was approved as a way of recognising excellence among VET teachers and harmonising the career paths of general education

⁷⁰ Corresponding to a short-cycle tertiary education degree in the European Qualification Framework (EQF).

⁷¹ Corresponding to a PhD.

and VET teachers. During the COVID-19 crisis, VET teachers were trained via centralised webinars and best practices were shared through VET teachers' networks.

The high dropout rate from initial VET remains a challenge, especially in the first year of studies. To mitigate the dropout risk and facilitate the transition from compulsory education to VET and/or to the labour market, a transition year was introduced in 2017. In 2020, vocational orientation curricula were introduced in several VET institutions. In the context of the COVID-19 crisis, demand for in-service training and retraining increased and vocational orientation studies became increasingly important for preventing early school leaving from education and training.

In 2020, despite the crisis, participation in adult learning in Estonia remained well above the EU average. Estonian adults within the 25-64 age group continued to actively participate in learning at almost double the rate of the EU average (17.1% vs 9.2%) in 2020. Participation in learning schemes for the low-qualified, however, dropped to 6.6% in 2020, from 9.2% in 2019. In the same vein, participation of the unemployed also dropped slightly to 20.5%, compared to 22.3% in 2019, but still remained well above the EU average (10.6%).

Box 2: The European Social Fund supports work-based learning in Estonia

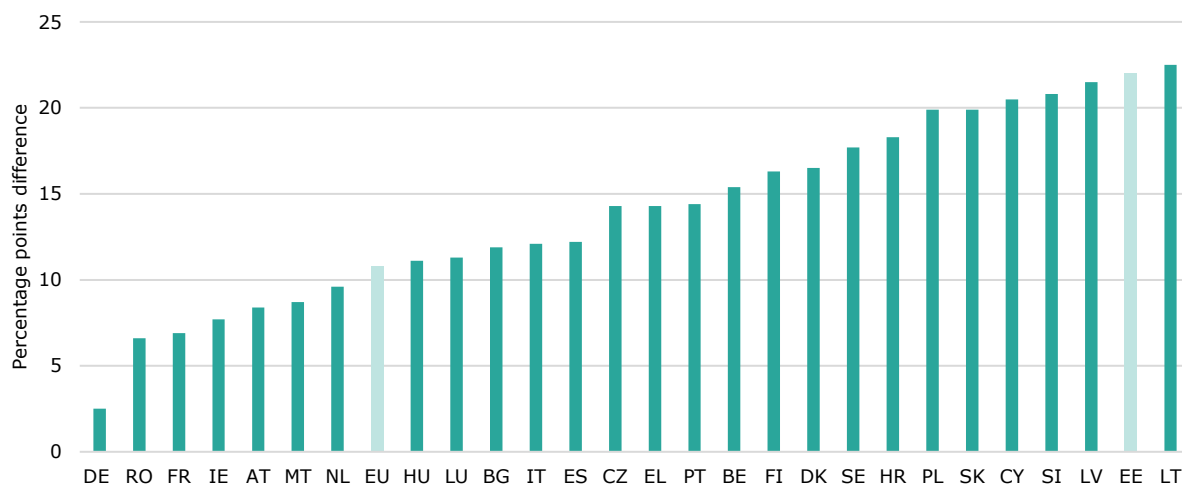
With close to EUR 27 million of funding from the European Social Fund, the PRÕM project brings vocational education and training (VET) and higher education closer to the needs of the labour market. One of its main aims is to improve the image of VET and to develop a comprehensive work-based learning system. PRÕM has already helped to improve the quality of work-based learning and expand apprenticeship programmes. During the project, which runs from 2015 to 2022, the share of graduates of work-based learning in VET has increased from 2% to 15%, while employers are now more aware of work-based learning. By 2020, 6 700 students had participated in the project, apprenticeships were offered by 1 300 companies and more than 6 000 apprenticeship supervisors had been trained in schools and companies. This approach was successfully extended to higher education: certain learning outcomes, as defined in the curricula, can be fulfilled by carrying out practical work. Whereas universities remain responsible for study, companies are involved in curriculum development and the evaluation process.

Another initiative, the 'Young Master' festival, celebrates vocational students' skills and achievements. Further information can be found at www.harno.ee/kutse-ja-korghariduse-arendamine; www.kutseharidus.ee provides information on vocational education and study possibilities.

7. Modernising higher education

Tertiary education attainment is increasing slowly and is highly unequal between men and women. In 2020, 43.1% of Estonians between 25 and 34 held a university degree. This is above the EU average of 40.5%, but below the EU-level target of 45%. This relatively high level of tertiary education attainment increased slowly over the past decade: between 2010 and 2020, Estonia made rather slow progress (+4.9 pps) compared to other EU countries in further increasing tertiary education attainment (EU average: +8.3 pps). Gender differences also persist, with women being much more likely to hold a university degree. While 54.7% of women aged 25-34 graduated from university, only 32.7% of men did; at 22 pps, the gender gap in tertiary education attainment was the second highest in the EU (EU average: 10.8 pps). Explanations for this gender gap require further research, but it could partly be linked to the gender gap in early school leaving, which is also high (see above).

Figure 4 – Gender gap in tertiary education (age groups 25-34), 2020



How many more women hold a university degree compared to men, source: LFS, [edat_lfse_03].

The number of tertiary graduates is insufficient to fill jobs in the future, especially in some professions. The absolute number of students in tertiary education fell by 24% between 2014 and 2019 compared to only 1% in the EU (around 60 000 students were enrolled in Estonian universities in 2014 and only 45 500 in 2019). The decline was strongest in engineering and social sciences and least pronounced in health and ICT. The Estonian skills forecasting agency, OSKA, found that the number of vocational and higher education graduates is insufficient to fill jobs in the future, especially in certain fields like technology, production and construction, science, education and agriculture. OSKA also predicted rising unemployment following the COVID-19 crisis, while the shortages in some professions will persist (OSKA, 2020a,b). Given the country's rising demand for high-skilled jobs in specific fields, falling numbers of enrolled students and a shrinking population, tackling the gender gap in tertiary education attainment and improving completion rates in higher education could become crucial. Finally, migration might play a role in addressing skills shortages; at 60.5%, the tertiary education attainment rate is considerably higher among non-EU born nationals living in Estonia than among the native population. The Estonian education system already attracts a high number of foreign students: in 2019/2020, 14.7% of all graduates were international degree students. A third of international students who remained in Estonia after their studies work in ICT (MoE, 2020b). Plans to restrict the possibility for foreign students to work while studying in Estonia have been put on hold by the government.

Faced with a shortage in certain professions, learning paths are becoming more flexible. One of the aims of the education strategy 2021-2035 is to allow smooth transitions between educational levels and types to address skills shortages. A recent report commissioned by the Ministry of Education and Research found that micro-credentials could play an important role as they allow people to acquire new knowledge and skills in a flexible and individualised way. However, a common understanding of micro-credentials and a quality assurance mechanism need to be developed (Balti, 2021). Under the Recovery and Resilience Facility, planned investments and reforms aim to provide flexible learning opportunities to respond to the needs of the green economy and the digital transformation. Upskilling and retraining programmes for adults will be introduced and study programmes in higher and vocational education will be modernised, including developing and piloting more flexible training programmes offering micro-credentials.

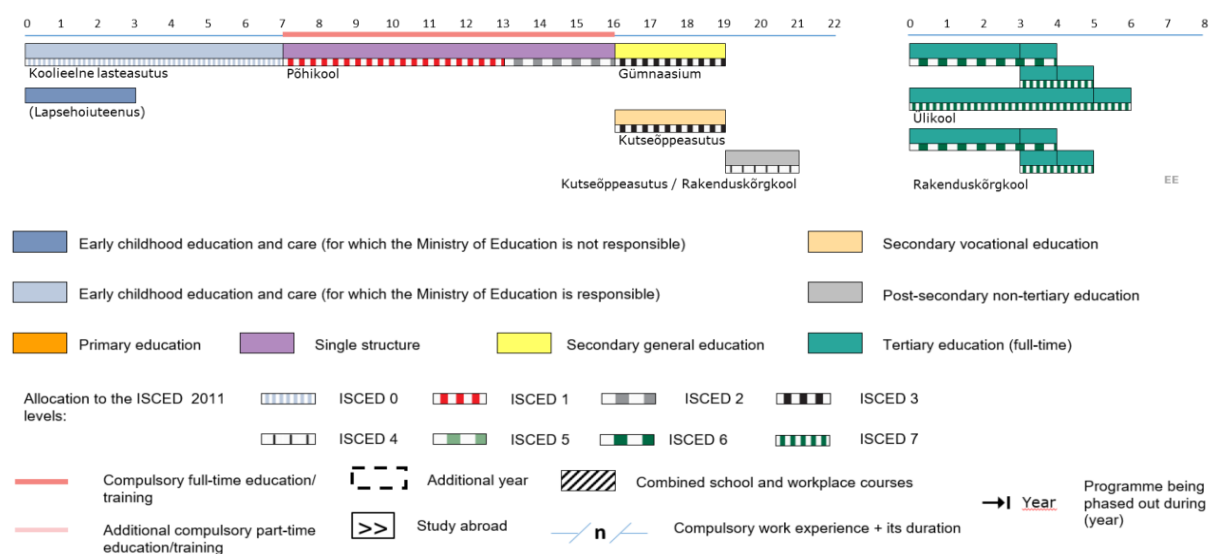
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Annex I: Key indicator sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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FINLAND

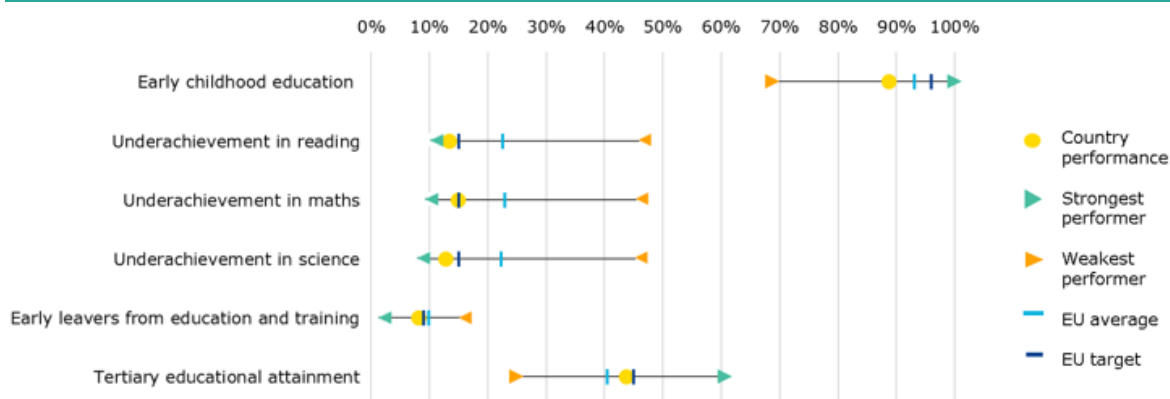
1. Key indicators

Figure 1 – Key indicators overview

			Finland		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		80.0% ¹³	88.8% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	27.3% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	8.1% ^{09, b}	13.5% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	7.9% ⁰⁹	15.0% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	6.0% ⁰⁹	12.9% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		10.3%	8.2%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		39.2%	43.8%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		6.5%	5.6% ¹⁹	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€7 557 ¹²	€8 316 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€6 563 ¹²	€5 969 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€13 634 ¹²	€12 553 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		9.7%	7.7%	12.4%	8.7%
	EU-born		: ^u	: ^u	26.9%	19.8%
	Non EU-born		21.0% ^u	20.3% ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			84.2%	89.1%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		40.2%	45.2%	33.4%	41.3%
	EU-born		23.0% ^u	31.7%	29.3%	40.4%
	Non EU-born		25.9%	32.2%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Students' well-being is embedded in the school curricula and well monitored. The pandemic particularly affected the well-being of secondary students.
- Finnish students perform well overall in basic skills, but results are deteriorating; challenges persist regarding the attractiveness of the teaching profession and learning foreign languages.
- The education budget is increasing; the ambitious reforms planned at all education levels will require additional funding; it will be supported by the National Recovery and Resilience Plan.
- Participation in VET and adult learning is one of the highest in the EU, but the latter requires modernisation to attract adults with low skills.

3. A focus on well-being in education and training

Students' well-being is monitored by regular nationwide surveys. They include questions with regard to physical and mental health, lifestyle, self-perceived well-being, social relationships, students' ability to study and related support needs. The main national survey of pupils' well-being is the biennial School Health Survey (SHS) (Saaristo, 2016) conducted by the Finnish Institute for Health and Welfare's (THL). It was launched in 1996 for students in lower secondary education, (8th and 9th grades), expanded to upper secondary in 1999, to upper VET students in 2008 and to pupils in primary education (4th and 5th grades) and their guardians in 2017⁷². The SHS reaches over 70% of the target population and covers living conditions, schoolwork, and health-related behaviour and services. Its results are disseminated to schools and to the public. The SHS offers schools a reliable source of information on the effectiveness of their policies to foster a safe and engaging learning environment. In addition, many education providers use additional monitoring tools. Although most students have few problems with well-being, the need for psychological help has been increasing over the past twenty years. The Trade Union of Education in Finland (OAJ) also monitors teachers' well-being (Salmela-Aro et al., 2020).

The national Student Health and Well-being Survey (KOTT) found that the pandemic negatively affected the well-being of tertiary students. In tertiary education, the monitoring tool is the KOTT⁷³. In 2021, the study gathered information on how the COVID-19 epidemic affected students. It found that remote studies and loneliness put a strain on higher education students. Half of the students felt that during the pandemic their workload increased. More than half of the students mentioned feelings of loneliness, and 40% of students stated that their financial situation deteriorated. The Ministry of Education and Culture (MINEDU) provided MEUR 6 for 40 initiatives to reinforce the well-being and guidance/counselling of students who have been following remote learning since the lockdown. MINEDU asked each university to present three actions to support students' well-being by mid-April 2021 (HS, 2021b).

Well-being is embedded in the curricula and in the daily activities of schools. Well-being is addressed in the Finnish National Core Curricula (NCC) for all levels of education. The subject of health education addresses physical and mental well-being. Each school has to plan prevention and remediation measures to protect pupils against violence, bullying and harassment. Multi-professional welfare teams, led by the principals, support schools in that endeavour (Thuneberg et al., 2013; Vainikainen et al., 2015). In tertiary education, the universities provide counselling and psychological services through their student health services (FSHS).

⁷² <https://thl.fi/fi/tutkimus-ja-kehittaminen/tutkimukset-ja-hankkeet/kouluterveyskysely>

⁷³ <https://thl.fi/en/web/thlfi-en/research-and-development/research-and-projects/the-finnish-student-health-and-wellbeing-survey-kott-?redirect=%2Fen%2Fweb%2Fthlfi-en%2Fresearch-and-expertwork%2Fprojects-and-programmes%2Fcurrent-research-and-projects>

Bullying is less frequent in Finnish schools and the school disciplinary climate is close to EU average. According to the 2018 PISA report (OECD, 2019a), 18% of students reported being bullied at least a few times a month (EU: 22%) and only 13% of students had skipped a day of school (EU 25%). Other indicators of the disciplinary climate correspond broadly to the EU average: 27% of pupils reported that their teachers have to wait a long time to quiet them down (EU 31%); 45% had arrived late for school in the 2 weeks prior to the PISA test (EU 41%). Boys and girls react differently to well-being issues. Substance abuse, absenteeism, and dropout during upper secondary education are more prevalent among boys, and they perform worse than girls in the school subject health education (Kupiainen, 2016, 2019).

Several programmes support well-being at school. The KiVa programme⁷⁴ is an anti-bullying programme developed by the University of Turku - with funding from MINEDU - that offers a wide range of tools and teaching materials for schools. The programme is also distributed by licence to several countries around the world. Mieli 2.0 (Mind 2.0.)⁷⁵ is a new mental health and anti-addiction programme. The Mannerheim League for Child Welfare⁷⁶ and local actors such as the Aseman Lapset⁷⁷ (Children of the Railway Station) in Helsinki offer peer tutoring for bullied pupils and students and their guardians.

The COVID-19 pandemic affected schools' well-being. To monitor the impact of the pandemic, several targeted surveys have been launched with the support of MINEDU. The largest one, conducted from spring 2020 until autumn 2021, is a follow-up study covering over 100 000 pupils, students, guardians, principals, teachers, and other school staff (Ahtiainen et al., 2020, Vainikainen et al., 2021). In another survey by the Union of General Upper Secondary School Students, conducted in spring 2020 during the school lockdown, 60% of the respondents felt that their studies were mentally stressful (as compared to 40% a year earlier). Half of the respondents also reported that their workload increased due to remote learning (HS 2020b; Yle, 2020). The reduced capacity of school health services during the pandemic, in spring 2020, may have aggravated students' well-being situation (Hietanen-Peltola et al., 2020; HS, 2020a). Another academic survey on the well-being of teachers and principals showed that half of the teachers felt exhausted, with 10% having burnout (Salmela-Aro et al, 2020).

The COVID-19 pandemic affected secondary education more than ECEC and primary education. There were no general closures in early childhood education and care (ECEC) and primary education during the pandemic (except for a nationwide school closure in spring 2020 for grades 4-6 of primary education), although there were differences between schools in the way instruction was organised. A large-scale survey (FNAE, 2020) with over 10 000 respondents reported that 29% of primary students followed the daily schedule exactly, 61% only partially and 10% not at all. Slightly over 50% of principals and teachers admitted that support for weak students has been less than usual. Secondary students were the most affected by the pandemic, with a nation-wide school closures in spring 2020 and another shorter one affecting many regions in winter 2020r/spring 2021. The Finnish Parents' League (2021) called on the government to take prompt action regarding young people's well-being. They argued that young people were not only burdened by uncertainty and lack of future perspective, but also with the economic and psychological stress put on families, the repercussions of remote education, and lack of sufficient support for learning.

Box 1: Digi-Winner - Strengthening digital well-being to promote social inclusion

The main objective of the 2018-2020 project, was to promote the digital well-being of young people, aged 15-29 and at risk of marginalisation, to prevent their social exclusion. The project involved around 450 participants and had a total budget of EUR 520 944 (ESF funding EUR 410 888).

⁷⁴ <https://www.kivaprogram.net>

⁷⁵ <https://mieli.fi/fi/suomi-mielenterveyden-mallimaaksi-mieli-20-%E2%80%93-uusi-kansallinen-mielenterveys-ja-p%C3%A4ihdeohjelma-vuoteenhe>

⁷⁶ <https://www.mll.fi/en/>

⁷⁷ <https://asemanlapset.fi/en/>

Among the key results of the project are:

1. Multidisciplinary working methods and operative environments were implemented in regional and online training pilots to support young people's digital welfare skills
2. A training programme on digital well-being was developed and embedded into the activities of the pilot organisations and partner organisations.
3. A digital well-being assessment toolkit was made available to everyone and disseminated regionally and nationally.
4. Improved competencies and multi-disciplinary cooperation skills of professionals working with young people (according to the feedback of participants).
5. Strengthened digital skills and competencies of the young people participating in digital well-being training pilots, thus enhancing their digital well-being, according to the feedback of participants.

4. Investing in education and training

Overall funding for education is increasing, reversing the investment decrease during the last decade. In 2010-2019, there was a decrease in general government expenditure on education (in deflated values) of 5.5% (EUR 0.7 billion less), notably in tertiary education (10.2%, EUR 0.4 billion less). This contrasts with an average EU spending increase of 6.4% (4.2% in tertiary education). The major real expenditure reduction during this period took place in compensation of employees (minus 10%), whilst there was a 22% increase in gross capital formation (29% and 46% at primary and secondary level respectively). In 2020, the budget for education increased from EUR 6.4 billion to 6.9 billion, and this trend will continue also in 2021 with a planned budget of EUR 7.3 billion. In 2019, spending in education was 5.6% of GDP, similar to 2018 and above EU average (4.7%): almost fifty-fifty between central and local governments. In pre-primary and primary education, spending was 1.2% of GDP (1.2% by local government), 2.3% in secondary education (1.2% by central and 2% by local governments) and 1.7% in tertiary education (1.6% by central government)⁷⁸.

Education funding in Finland is above the EU average, but lags behind that of its Nordic neighbours. In its opinion to the Parliamentary Education Committee on the 2021 Education Policy Report (MINEDU, 2021a), the Trade Union of Education in Finland (OAJ) calls on the Parliament to ensure an adequate level of funding for education, training and research. According to the OAJ, the report on education policy contains ambitious objectives, but the measures and the necessary funding are largely inadequate (OAJ, 2021a). It calls for a plan for a continuous increase in education investment to raise it up to the level of the other Nordic countries (6.9% in Sweden, 6.3% in Denmark, Iceland 7.1% and Norway 5.6%).

Box 2: The National Recovery and Resilience Plan

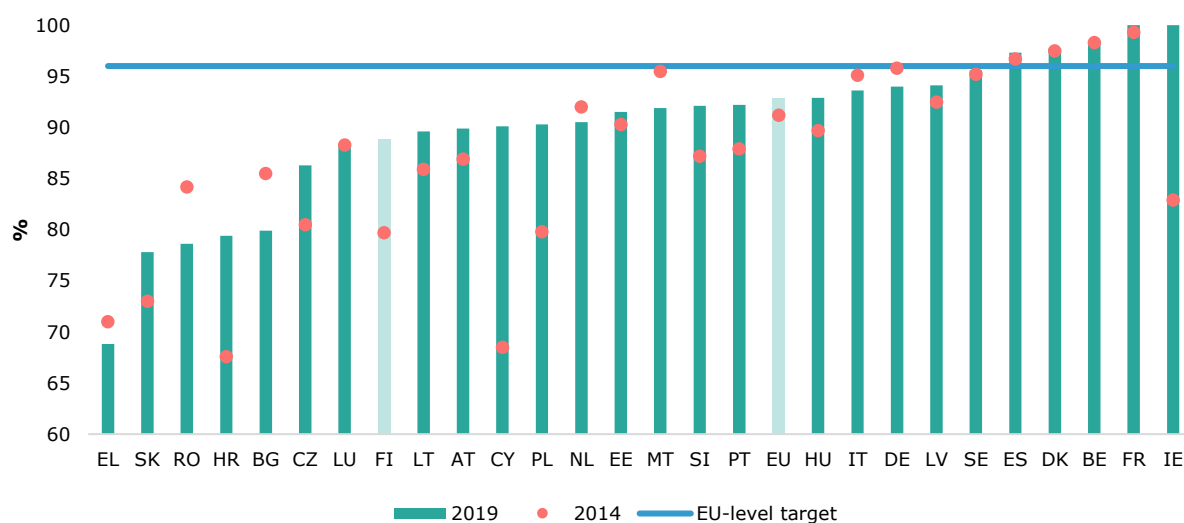
The EU will disburse EUR 2.1 billion in grants to Finland under the Recovery and Resilience Facility (RRF) to help the country emerge stronger from the COVID-19 pandemic. Investments related to education and skills represent about 7% of the total budget of the Finnish Recovery and Resilience Plan. The Plan aims to contribute to the implementation of the ongoing continuous learning reform to enhance skills for the labour market, especially in the context of the twin transitions, including for those in the under-represented groups with low skills. The Plan also proposes an increase of at least 600 new places in general universities and universities of applied sciences in sectors suffering labour shortages (e.g. engineering, ICT, social and healthcare professions).

⁷⁸ Eurostat: [gov_10a_exp].

5. Modernising early childhood and school education

Although ECEC participation keeps growing, challenges persist in further extending it. Following the trend of the last few years, ECE participation of children above 3 years old was much higher in 2019 than in 2014 (88.8% vs 79.7%), but still considerably below EU average (92.8%) and the EU-level target (96%)⁷⁹. ECEC participation is partly subsidised, and its fees depend upon family income. The Education Policy Report, presented to the Finnish Parliament in April 2021, stresses the need to increase attendance in ECEC and improve the availability of certified teaching staff especially for children with special educational needs (MINEDU, 2021a). The report lists the following key reasons for the relatively low ECEC attendance: the home care allowance and its possible municipal supplements, the fees charged for ECEC (even if subsidised and low compared to most other countries), and factors related to the quality of ECEC facilities. The Right to Learn 2020–2022 programme (MINEDU, 2020a) aims at increasing the ECEC participation rate by allowing smaller group sizes⁸⁰, promoting professional development⁸¹ and conducting research in ECEC. The Forum for Developing Education and Training Provision and Programmes in Early Childhood Education and Care recommends (MINEDU, 2021b): a) stronger professional competence in a fast-changing ECEC environment; b) foresight and flexible education and training paths to meet the needs of the ECEC workforce; c) developing ECEC education and training programmes ; and d) better quality and cooperation in education and training provision and work environments to make it a more attractive profession and retain talent.

Figure 3 - Participation in early childhood education of pupils from age 3 to the start of compulsory primary education, 2014 and 2019 (%)



Source: UOE, [educ_uoe_enra21]

Overall performance in basic skills is good, but maintaining good performance is a key challenge (MINEDU, 2021a). The 2018 OECD Programme for International Student Assessment (PISA) confirmed that levels of basic skills remain close to the top for participating countries (OECD, 2019b). Nevertheless, there has been a negative trend in average basic skills performance since 2006, the sharpest decrease among PISA-participating countries (OECD, 2019c).

The teaching profession is becoming less attractive. The numbers applying to become class teachers nearly halved between 2013 and 2019 (HS, 2019). This negative trend may contribute to reducing teaching quality. High workload and staff turnover have become issues for concern. A new Teacher Training Forum was established in 2019 with the objective of improving the attractiveness

⁷⁹ Eurostat: [educ_uoe_enra21].

⁸⁰ In all-day care currently, 4 children per adult for 0–3-year-olds with a group-size of max 12 children, 7 per adult for over 3-year-olds with a group size of max. 21 children.

⁸¹ Trade unions OAJ suggest raising the academic requirement for ECEC teachers from Bachelor to Master degree.

of teacher education programmes, developing the professional competences of teacher trainers and strengthening the research base (MINEDU, 2019). OAJ calls for the establishment of a teacher register to provide a sufficient database for the foresight needs of the sector (OAJ, 2021b)

Implementation of the new national core curriculum (NCC) for upper secondary education starts in the academic year 2021/2022. The NCC 2019 for general upper secondary education (EDUFI, 2019) came into effect in August 2021. The quality and attainability of the general upper secondary education programme (MINEDU, 2021c), providing MEUR 15 in funding for 2021–2022, supports upper secondary schools in the adoption of the new NCC and in quality enhancement.

Measures are being taken to strengthen the quality and inclusiveness of ECEC and compulsory education. The Right to Learn 2020–2022 Programme⁸² has three goals: 1) to create equal conditions for learning paths (MEUR 120); 2) to provide better support for children's learning, develop special needs support and effectively use nationwide measures to promote inclusion (MEUR 50); and 3) to strengthen the quality of teaching (MEUR 10). The programme provides for an equality fund aimed at reducing socio-economic, regional and gender gaps in learning (MINEDU, 2020b).

The extension of compulsory education until the students turn 18 will require further financial resources. Act 1214/2020 extended compulsory education to the end of secondary education (usually at age 18 or 19). MINEDU has calculated that the reform will cost MEUR 120 per year, while the Association of Finnish Municipalities estimates that the costs might be up to MEUR 150 (Aamulehti, 2021). Trade unions criticise the lack of concretely planned steps for action and sufficient financial resources to implement the education roadmap until 2040. They also note the lack of suitable indicators for monitoring it. They call for regular education policy reports, so that Parliament can monitor whether objectives are being met and, if necessary, need to be reoriented (OAJ, 2020).

Swedish-language education differs from education provided in Finnish⁸³. An evaluation of Swedish-language education in Finland (Oker-Blom, 2021), pointed out that educational provision in Swedish differs from that in Finnish in many respects. This concerns in particular the number of teaching hours allocated to the instruction of the other national language (Finnish) in the early grades, the poorer availability and quality of learning materials, and the limited availability of qualified teachers, notably in ECEC and special education (Svedlin et al., 2013).

Foreign language studies are becoming less attractive. Since 2016, teaching of the first foreign languages starts in grade 1 (formerly grade 3) and that of the other national language in grade 6 (formerly grade 7). Students can start learning other foreign languages in lower secondary (EDUFI, 2019). The Ministry considers multilingualism as a strength (MINEDU, 2017a), while many students quit the language courses as they find them too demanding or time-consuming (HS, 2021a). This results in fewer students studying a foreign language other than English in general upper secondary school (notably German and French).

6. Modernising vocational education and training and adult learning

VET continues to be a popular study path. In 2020, 73.3% of all learners at upper secondary level enrolled in VET, including adult students. Upper secondary general education is more popular among students after comprehensive school (54 % vs 40 % VET)⁸⁴. Due to the COVID-19 pandemic, the employment rate of recent VET graduates (aged 20–34) dropped from 80.4% in 2019 to 74.6% in 2020.

⁸² <https://minedu.fi/en/qualityprogramme>

⁸³ Education in Finland is provided in both Finnish and Swedish at all education levels. In 2020 the share of Swedish-speaking population was 5.2%.

⁸⁴ https://www.stat.fi/til/khak/index_en.html

Following the 2018 VET reform, over MEUR 270 have been allocated for the period 2020-2022. The funding supports implementation of a three-year Programme on Quality and Equality in VET, adopted in June 2020. It aims to improve learning opportunities and outcomes, increase well-being and the sense of community, and support education providers in reforming their practices and responding to the changes in their operating environment. In 2020, MEUR 80 was allocated to 109 VET providers across Finland for either recruiting new teachers or increasing their teaching time, to ensure that all students are given the support they need. (Cedefop; ReferNet, 2021).

The flexibility of the VET system with its modular qualification structure and individual learning pathways has enabled an adaptation to the COVID-19 pandemic. Nevertheless, it affected entry exams, guidance and validation of skills. The VET legislation was temporarily amended regarding the assessment of learner skills and competences in authentic work situations for the period from 1 July 2020 to 31 July 2021. (Cedefop; ReferNet, 2021). In October 2020, additional funding of almost MEUR 29 was allocated to VET providers to address the impact of the pandemic and for the organisation of tailor-made support and guidance for the most affected VET students.

The major reform to increase the minimum school leaving age from 16 to 18 adopted in 2020 came into effect in August 2021. It aims to increase competences, reduce learning gaps, boost equality and non-discrimination in education, improve the well-being of young people and raise the employment rate. The VET providers will have a clear guidance and supervisory role in ensuring that all learners find a suitable study place and acquire upper secondary level qualifications.

Participation in adult learning in Finland continues to be the second highest in Europe. In 2020, 27.3% of all adults aged 25-64 engaged in learning. However, the adult training system faces challenges due to a strong focus on formal education, limited alignment of training provision with labour market needs and suboptimal incentives to promote learning participation. Furthermore, Finland continues to have the largest gaps in learning participation between adults with low basic skills and adults with higher skills⁸⁵.

Finland is implementing a parliamentary reform of the continuous learning system to address the identified challenges. A parliamentary working group adopted the policy directions for the reform in December 2020. The priority is to ensure a close link between education and employment services, so that all working-aged people can develop their skills and competences in response to the changes in the world of work. While well-being is not a specific reform priority, it is addressed through various reform measures. The strategy aims to increase opportunities for retraining, continuing professional development and professional specialisation education throughout working life, developing apprenticeship training as a channel for reskilling, and providing flexible opportunities to study in higher education institutions. Study leave and financial aid for adult students will be developed, and the opportunities for people to study while looking for work will be improved. The Parliament will monitor the achievement of the reform objectives annually. A separate action plan will be prepared.

In June 2021, the Parliament adopted the Act on the Service Centre for Continuous Learning. The service centre, which will be an independent unit within the Finnish National Agency for Education, will coordinate and develop training services and guidance for working age people, analyse skill development needs, support regional networks, and finance training activities. It is expected to start its operations in 2021.

7. Modernising higher education

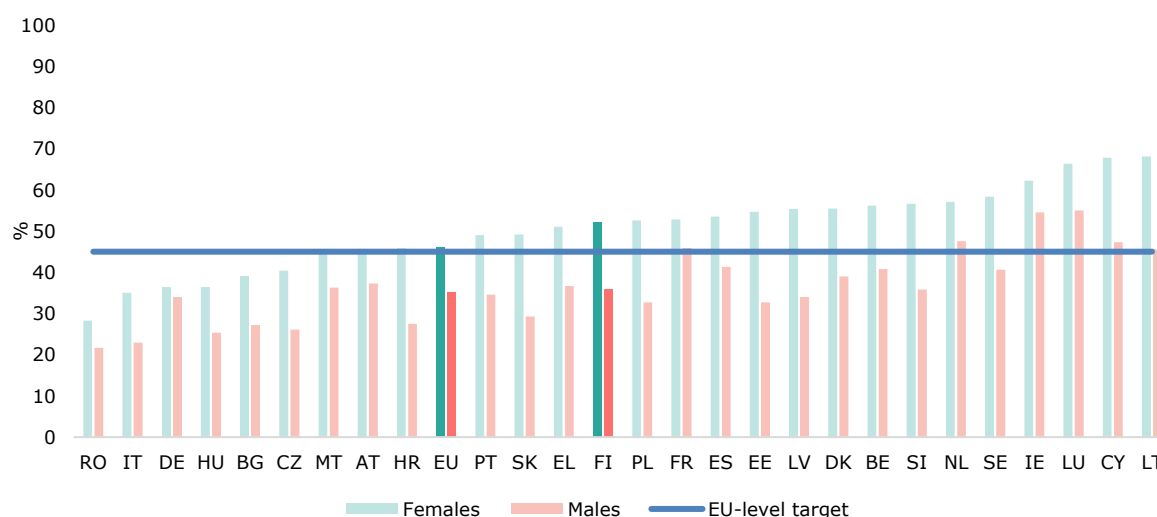
Finland has set an ambitious national target of 50% for tertiary educational attainment by 2030. The tertiary education attainment rate is high, at 43.8% in 2020 (1.8 pps more than in 2019⁸⁶). The strategic vision for higher education and research 2030 aims to increase it further to 50% by 2030, above the EU-level target of 45% (MINEDU, 2017b). Free tertiary education, study

⁸⁵ OECD (2020), Continuous learning and Working Life in Finland, Getting Skills Right, OECD Publishing, Paris

⁸⁶ Eurostat: [edat_ifse_03].

allowances (in 2020, EUR 253 per month), and social support (such as housing allowance, subsidised meals and healthcare, and state-backed loans) makes higher education easily accessible to all, irrespective of social background. This also means that a further increase in enrolments in higher education would have significant budgetary implications. The Universities of Finland Association (UNIFI) calls for an increase of 100 MEUR per year to finance the expected increase in student enrolment, to provide all students with guidance and support, and respond to the growing students' diversity (UNIFI, 2021).

Figure 4 -Tertiary educational attainment (25-34) by sex, 2020



Source: Labour Force Survey, [edat_lfse_03].

The higher education sector adapted well to the pandemic. Tertiary education functioned almost exclusively in remote mode from March 2020. Courses varied from traditional lectures with several hundred participants (always online) to smaller seminar groups or even individual counselling (mostly online).

The entry requirements to both general universities and universities of applied sciences have been reformed, raising concerns among students. The recent reform of the entry requirements for higher education is challenging upper secondary students. The reform gives more weight to the matriculation examination, based on the academic syllabus (see Pekkarinen & Sarvimäki, 2016; Kupiainen et al., 2016; Karhunen et al., 2021). However, an unexpected consequence of the reform has been the pressure put on students when choosing study subjects and the development of an unofficial 'ranking' of subjects according to the credit they yield in the application process (penalising foreign language learning). Another challenge is that results of the matriculation exams are published on a date close to the entrance exams (additional subject-specific tests are required for certain study fields), which leaves little time for preparation.

The expansion of study places cannot keep up with the increased demand, delaying entry to higher education for many students. There is a longstanding backlog of applicants (OECD, 2020a). In 2020, 85.5% of general upper secondary graduates applied for a place in higher education, but only 38.1% succeeded in being accepted in the same year (23% in general universities and 15.1% in universities of applied sciences). The rate were above 2019 figures (82% applicants, success rate 28%) (SVT, 2019). The change was mostly due to expansion of study places and reform to entry system. The figures for 2021 seems to be about same size. In spring 2021, of almost 157 000 applicants only 53 400 were accepted. For 2021-22, around 6 000 new study places were made available which amount up to 10 200 new places created in 2020-2022 (MINEDU, 2021d). An additional challenge is the students' low rate of progress throughout their studies. In 2019, two thirds of the students at universities of applied sciences, but only one third of the students in research universities, received their degree within the intended time frame.

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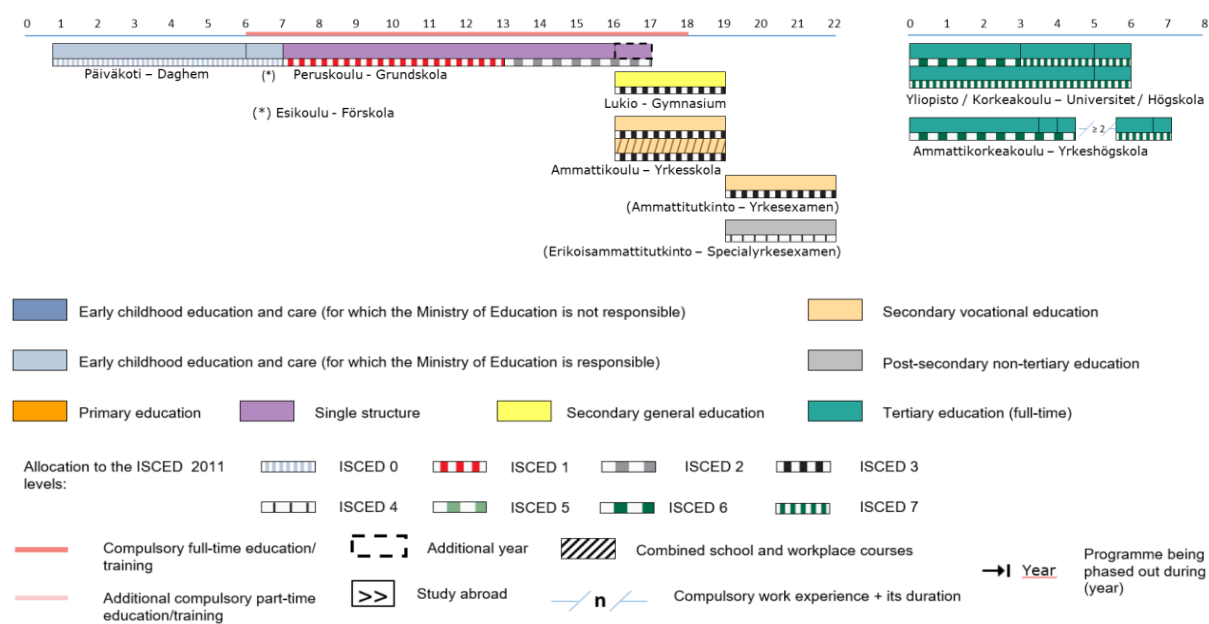
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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FRANCE

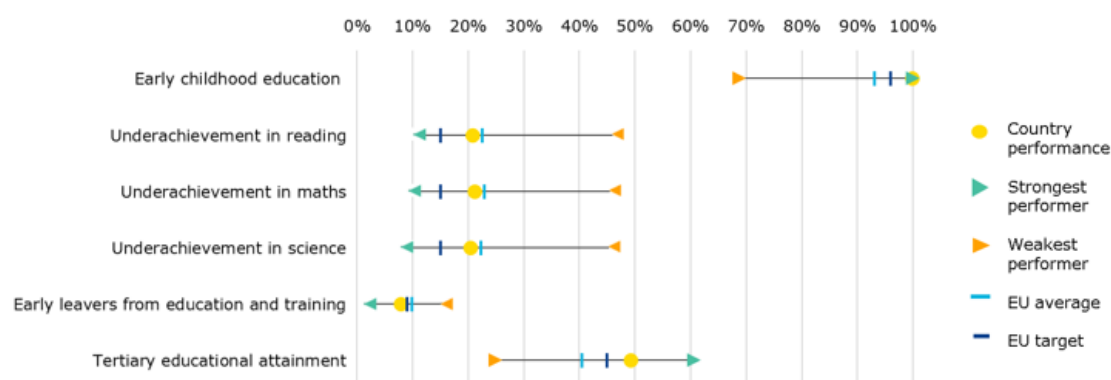
1. Key indicators

Figure 1 – Key indicators overview

			France		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		100.0% ¹³	100.0% ^{19, p}	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	43.5% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	19.8% ^{09, b}	20.9% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	22.5% ⁰⁹	21.3% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	19.3% ⁰⁹	20.5% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		12.7%	8.0%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		42.7%	49.4%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.6%	5.3% ^{19, p}	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€6 122 ¹²	€6 852 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€9 894 ^{12, d}	€10 336 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€11 556 ¹²	€12 092 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		11.9%	7.5%	12.4%	8.7%
	EU-born		25.5%	16.3%	26.9%	19.8%
	Non EU-born		24.6%	13.8%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			83.0%	89.7%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		44.0%	49.5%	33.4%	41.3%
	EU-born		34.2%	55.2%	29.3%	40.4%
	Non EU-born		33.2%	48.0%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, p = provisional, := not available, 09 = 2009, 12 = 2012; 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 – Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

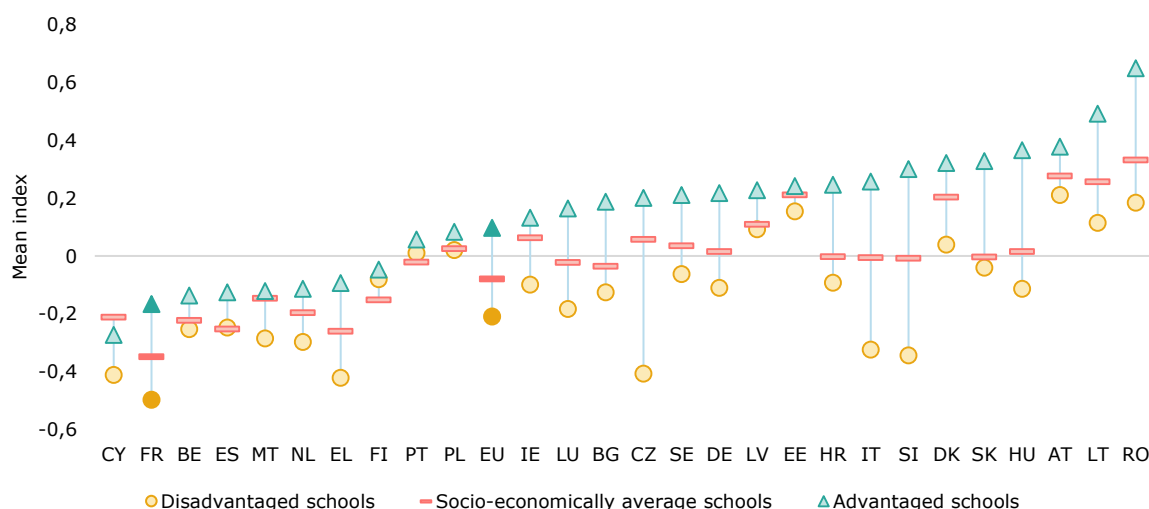
- During the pandemic, France kept schools open to mitigate an increase in inequalities in education and took measures to combat student poverty in higher education.
- Strengthening pre-primary and primary education, improving basic skills and reducing inequalities in education, as well as improving the school climate, remain the priorities in compulsory education.
- France is gradually transforming its education and training system for the digital and green transitions.
- Young people affected by the COVID-19 crisis are being provided with education, training, upskilling and reskilling opportunities in sync with skills needs.

3. A focus on well-being in education and training

Lack of discipline in classrooms, violence and bullying are the main obstacles to pupils' and teachers' well-being at school. French schools have the least positive disciplinary climate in the EU, according to the PISA 2018 disciplinary climate index (-0.34 vs -0.1 mean index⁸⁸) (OECD, 2019a). The situation is worse for disadvantaged students (-0.45 vs EU average of -0.16) and students in disadvantaged schools (-0.50 vs -0.21). The gap between disadvantaged and advantaged schools, however, is not significantly different from the EU average (-0.33 vs -0.31) (Figure 3). The majority of French teachers (58.4%) perceive monitoring classroom discipline as one of the important sources of stress, ranking third on average in the EU (41.7%) (Eurydice, 2021). They also reported being 'intimidated' or 'verbally abused by students quite a bit or a lot' (24.6% vs EU average of 14.1% – fourth in the EU). During the first half of 2019/2020, school heads reported that on average 7.9 serious incidents per 1 000 students occurred in secondary education, of which 39% were verbal and 31% involved physical violence (DEPP, 2021a). On a positive note, fewer French students than on average in the EU reported being bullied at least a few times a month (19.8% vs 22.1%). Reducing bullying and improving the disciplinary climate have the potential to significantly improve educational outcomes (European Commission, 2020).

Improving the school climate and preventing violence and bullying have become top priorities. The right to education without harassment has been included in the education code (Law on a School of Trust, 2019). France has a systemic policy approach to school climate which should contribute to improving educational outcomes, students' and teachers' well-being, safety and security and reducing inequalities in education. All schools need a violence prevention plan, including an action plan against all forms of harassment (MENJS, 2021a). These should focus on co-education with parents, a team strategy ensuring coherence between stakeholders, violence prevention, cooperation between students and motivation and commitment, quality of school life, partnership practices and justice at school (MENJS, 2021b). Mobile security teams are in place to help schools. School violence prevention programmes and school climate improvement pathways through a whole school approach are available. The long-running campaign against bullying ('*Non au harcèlement*') has regained momentum since 2020 (MENJS, 2020a). The national plan against racism and antisemitism (2018-2020) includes several measures to be implemented in compulsory and higher education, including against cyberbullying. School heads and inspectors are given training by a network of trainers from regional education academies. Regular surveys to monitor the mental health of students and evaluate bullying and violence at secondary school will be extended to primary schools and education staff between 2021 and 2023. A new observatory was set up in July 2021 to monitor the remuneration and well-being of education staff, and inform policies and decision-making.

⁸⁸ Table III.B1.3.1

Figure 3 - Index of disciplinary climate by school characteristics, PISA 2018


Source: OECD, PISA 2018. Note: Based on students' reports. Higher values in the index indicate a more positive disciplinary climate.

France took measures to improve the mental health of pupils and teachers during the pandemic. Schools remained mostly open in 2020/2021 (Section 5), but the pandemic has had a major impact on the mental health of young people. In early 2021, special guidelines were issued for schools on how to identify and guide students in distress and suffering from domestic violence, and how to improve information for pupils and parents (MENJS 2021c). The Ministry of Education published online toolkits for all educational staff, and strengthened the remit of the 119 hotline 'Childhood in danger' campaign to preventing sexual, physical and psychological violence and negligence. Since 2021, the provision of (mental) healthcare has also been stepped up for compulsory education staff, with hotline hours to give teachers psychological support extended.

The pandemic has affected higher education students the most. Higher education institutions shifted to remote teaching at the end of October 2020, allowing face-to-face teaching for small groups of vulnerable students from the end of January 2021. Half of the students reported having suffered from loneliness or isolation and 31% from psychological distress during the first lockdown. Despite their need for it being greater, 23% of students could not access healthcare during the pandemic because they lacked the financial means to do so, and 27% because it took too long to get an appointment (OVE, 2021). From early 2021, an additional 80 psychologists and 60 social assistants, student mentors in university residences and tutors were hired to direct students to the right support services. Students had access to free psychological consultations as part of a broader psychological support scheme through university health services or a platform bringing together a network of 1 740 psychologists, as well as the Nightline telephone service for listening to students. A report from the National Assembly recommends, in the wake of COVID-19, strengthening school healthcare services and the system of (mental) healthcare in universities, and providing students with accessible and affordable mental healthcare services (*Assemblée Nationale*, 2020).

4. Investing in education and training

Public expenditure on education increased in real terms by 8.4% between 2010 and 2019, above the average EU increase of 6.4%. In 2019, education expenditure accounted for 9.5% of total public expenditure (EU average 10.0%) and remained, as a proportion of GDP, at 5.3%, above the EU average of 4.7%. The population from 3 to 18 year olds increased by 3.8% from 2010 to 2019 (EU average -0.8%). The proportion of funding for pre-primary and primary education increased from 24.3% in 2010 to 26.6% in 2019 (EU average 33.4%). This corresponds to a real increase of 18.7% in total spending on pre-primary and primary education, while public expenditure on secondary and tertiary education has increased more moderately (6.6% and 4%). The overall increase in education expenditure is largely due to an 11% increase in compensation for employees.

Further strengthening pre-primary and primary education, tackling inequalities and investing in inclusive education are budget priorities for 2021. The EUR 1.6 billion 2021 budget increase (+2.6%) for compulsory education covers various wage premiums for school staff (+ EUR 400 million), of which EUR 100/month net is for novice teachers, improving the working conditions of primary school heads, providing additional support for pupils with a disability and digital equipment for schools, as well as the planned decreases in pre-primary and primary class sizes. To do the latter, an additional 2 039 teaching posts will be created, even though the pre-primary and primary pupil population is expected to fall by 65 000 in 2021 (MENJS, 2020b).

A multiannual investment plan will support the agenda for transforming higher education institutions (HEI) and education and training ecosystems, partly supported by the National Recovery and Resilience Plan (NRRP). Calls for projects for the Investment Plan for the Future ('PIA 4') will help HEI strengthen excellence in one or more areas, diversify sources of funding for higher education and research institutions, and transform school education by promoting innovation in teaching practices and in school organisation and management (EUR 750 million). The acceleration strategy 'Education and digital strategy' covers the digital transformation of education from kindergarten to university, and will support the development of Education Technology (EdTech) and performing digital education ecosystems (EUR 350 million) (Gouvernement, 2021).

Box 1: The NRRP

With EUR 39.368 billion in grants under the Recovery and Resilience Facility, the plan focuses on the green transition, competitiveness, and social and territorial cohesion. It fits into the broader EUR 100 billion recovery plan 'France Relance'. More than 20% will be invested in education, training and skills related measures, with a strong emphasis on upskilling and reskilling; hiring subsidies for apprenticeships; digital infrastructure, equipment and skills; and energy-saving renovations of education infrastructure (see also other Sections).

5. Modernising early childhood and school education

Schools closed in spring 2020, but remained largely open during the 2020/2021 school year. To limit early school leaving, learning loss and inequalities in education, primary schools closed for only 5 days and secondary schools for only 10 days in the first 5 months of 2021, except for local school closures. Secondary schools shifted to part-time remote teaching.

Measures were taken to limit learning loss and inequalities in education. In 2020/2021, primary and secondary students in their first year benefited from additional personalised and homework support ('*Devoirs faits*'). Personalised support or supervision in small groups ('*Je réussis au lycée*') was then extended to upper secondary students in 2021/2022. Summer camps ('learning Holidays') consolidated educational outcomes with sports, cultural and sustainable development activities (EUR 120 million). This enabled vocational secondary school students, relatively more affected by lockdown, to resume or deepen their learning. Digital resources and services were further developed and pooled to ensure teaching continuity (MENJS, 2021). In September 2020, 80% of secondary and 20% of primary students used digital work environments. The NRRP will support digital transformation projects in schools. A national digital action plan is gradually being implemented (EGNé, 2021).

Since September 2019, compulsory education starts at three (2019 Law on a School of Trust). France was the best performer in the EU regarding participation in ECE of children aged 3 to 6 in 2019 (100% vs the EU average of 92.8% and the new EU-level target of 96% by 2030). Since 2021/2022, French and maths have been strengthened in the third pre-primary year curriculum to improve outcomes in primary education.

The halving of class sizes in priority areas and reducing them to 24 pupils outside priority areas aim to improve basic skills from ages 5 to 7. The latter measure, concerning 26% of all classes, will be gradually rolled out between 2020/2021 and 2022/2023. By September 2019, 300000

pupils in disadvantaged (high) priority areas⁸⁹ (20% of the age group) in the first and second years of primary education were being taught in classes of maximum 12 pupils. By 2022/2023, an additional 150 000 children in the third year of pre-primary education will also be taught in similar conditions. A recent study showed that the halving of the classes provided positive results, with better outcomes for maths than for French, and better results in the first than in the second grade. Pupils also showed more positive learning attitudes, enjoyed more personalised support and a better class climate (DEPP, 2021b). However, 70% of disadvantaged pupils in schools outside priority areas do not benefit from this measure (MENJS, 2019).

Since September 2020, compulsory education and training has been extended from 16 to 18 years, supported by different measures to prevent early school leaving in the COVID-19 context. In 2016, France had already reached the new EU-level target for 2030 (less than 9%) for early leavers from education and training (European Commission, 2020). This figure continued to fall in 2020 (8.0% vs the EU average of 9.9%), only to be thrown into jeopardy by the pandemic. Compulsory training includes education, training, apprenticeships, employment, civic service or social or professional integration schemes (2019 Law on a School of Trust). To prevent disengagement from education and training during the pandemic, the programme '*one youngster, one job*' provided additional places in vocational and tertiary education and support for social and professional integration programmes. Mentoring programmes by university students to help disadvantaged young people aim to expand their horizons and define their professional ambitions ('*Working together for success*') and additional places in boarding schools of excellence are supported by the NRRP.

Comprehensive standardised tests in primary education showed that the spring 2020 school closures had a negative impact on educational outcomes mostly for disadvantaged pupils (in the 2020/2021 school year). At the beginning of the school year, pupils in grade 1 and 2 performed worse in French and maths than in the previous year, and the performance gap between pupils from priority and non-priority education areas was also higher. The mid-term evaluation of grade 1 in January 2021 showed better results overall in maths and French than in January 2020 (before COVID-19). However, the performance gap in French between priority and non-priority education areas had further increased. In contrast to the younger pupils at the beginning of the school year, pupils in year 6 performed better overall in French and maths, despite the school closures. But again, pupils in disadvantaged schools and in priority education areas made relatively less progress in maths, with their respective gaps remaining significant. While 71.5% of all pupils showed sufficient or very good mastery of maths, only 39.6% and 54% did so in high priority and priority education areas respectively (DEPP, 2021c, 2021d and 2021e).

Education for sustainable development and the green transition has been reinforced in school education. Since September 2020, sustainable development and the green transition have been integrated into all school curricula from pre-primary to upper secondary level (MENJS, 2020c) and complemented by practical projects. Eco-delegates from each secondary school class implement school projects, play an ambassador's role and keep their peers informed. Elected eco-delegates are part of the school steering committee, which aims to involve all stakeholders. The green transition is being integrated into both initial and continuous teacher training. About 10% of schools currently have an '*E3D*' label (school with a global approach to sustainable development). But for that to be the case, buildings and their maintenance, as well as the school environment, also need to match up to ecological standards.

The '*Grenelle de l'éducation*' plan should make the teaching profession more attractive by January 2022. France has a shortage of teachers and students in initial teacher training (Eurydice, 2021). Planned measures include better staff compensation, especially for young teachers (EUR 1.1 billion in 2021-2022) and more promotion possibilities; flexible career paths with mobility options for all staff; for secondary school heads, a financial premium and for primary school heads more teaching discharges to create room for management tasks; more autonomy in recruitment for secondary schools; and more modern and decentralised management (MENJS, 2021e).

⁸⁹ REP(+): Réseaux d'éducation prioritaire (renforcés).

Box 2: European Social Fund (ESF) project: 'ARPE' (Support for the reintegration of students expelled multiple times)

This project provided 930 young people with individual support to reintegrate into school. A whole school approach, involving mediators, an education support team at school, support for the student's family and outside partners for career guidance and apprenticeships, was developed. The project has provided valuable insights into the complex challenges faced by these young people and their families and significantly improved the reception and quality of intervention of the schools that reintegrate them. About half of the students concerned were reintegrated successfully without significant incidents in the first 3 months of the project.

The EUR 1.75 million project (35% from the ESF) ran from September 2017 to June 2020.

<https://projet-arpe.fr/>

6. Modernising vocational education and training and adult learning

At 39.3%, the proportion of upper secondary students in vocational education and training (VET) remained stable in 2019. This was 9.1 pps below the EU average. In 2020, 68.5% of VET graduates (ISCED 3-4, age 20-34) found employment between 1 and 3 years after graduating, representing a continuous decrease since 2018 (-3.7 pps).

Given the rising skills mismatch in the French labour market, access to initial and continuous VET is crucial. In the 2020/2021 school year, implementation of the 2018 reform of the vocational training and apprenticeship systems to improve their efficiency and adequacy in meeting skills needs continued. A new quality label, '*Qualiopi*', has been implemented for initial training. A new service, '*Inserjeunes*', has also been set up, to develop indicators for the purpose of monitoring the professional integration of initial VET students. The set-up of the revamped individual learning account and the associated career guidance (*conseil en évolution professionnelle*) offered made it easier for workers to access continuous VET. The Skills Investment Plan (PIC) (2018-2022), complemented by other sources of EU funding, further helps unemployed people and job seekers access continuous VET. A first evaluation of this plan identified positive results overall despite a lack of adequate guidance, during and after the completion of training courses, on labour market (re)integration.

COVID-19 has had a negative impact on the labour market integration of VET graduates. In July 2020, 65% of apprentices and 44% of school-based VET students were in employment, 12 months after graduation. This is respectively 3 and 6 pps less than the employment rates of students who graduated in 2018 (Dares, 2021a).

Measures were also taken to improve the VET system's ability to weather a crisis. To ensure continuity, teaching material and digital equipment was provided for learners from disadvantaged areas; teaching staff could make use of digital workspaces and final assessments were based on continuing assessment instead of final exams. Career guidance services were ensured thanks to the digital support and infrastructure already in place. Despite these efforts, students from a disadvantaged background were more deeply affected.

Education and training centres had to shift from on-site to online and hybrid training courses. Overall, jobseekers' access to training was affected by the crisis, with the courses of only one third of unemployed people fully maintained during the first lockdown. However, the system appears to have become more resilient, with this number growing up to 79% during the October 2020 lockdown (Dares, 2021b). The move towards online teaching has however highlighted existing social inequalities: people without IT equipment or a good quality internet connection at home and digitally illiterate people are, by force of circumstances, excluded from these training opportunities.

Access to upskilling and reskilling opportunities is particularly important for workers affected by the crisis, notably the less qualified, unemployed and people on short-term contracts. At 13.4% (on par with the EU average), unemployment of low-skilled people remained particularly high in 2020⁹⁰, with skills mismatches presenting a persistent challenge. Although France had the strongest drop in adult participation in learning in the EU between 2019 and 2020 (-6.5 pps vs the EU average of 1.6 pps), it still was the seventh best performer in the EU. Only 13.0% of adults participated in learning, compared to 19.5% in 2019, ending the continuous increase since 2015. While adult learning is still higher in France than the EU average (9.2%), it is comparatively lower for less skilled people, the unemployed and people on short-term contracts. In 2020, low-skilled adults (4.6%) participated 2 times less than medium-skilled adults (9.5%) in learning, and 4 times less than highly skilled adults (20.5%)⁹¹. The share of unemployed people participating in learning stood at 11.1% in 2020, 3.4 pps less than in 2019. However, the main Public Employment Service, *Pôle Emploi*, reported that more unemployed people started training courses in 2020 than in 2019 (+13%). This was also due to the rapid take-up of individual learning accounts (*CPF Autonome*).

To mitigate the negative impact of the COVID-19 crisis, significant investments were made to increase employment, through skills acquisition and VET, with a particular focus on young people. The recovery plan strongly supported the VET and apprenticeship systems by providing additional places in VET to meet current and future skills needs, and by hiring subsidies (EUR 3.15 billion). Upskilling and reskilling adults is a priority in the French NRRP. The plan will support EUR 1.6 billion worth of investments for the skills acquisition of workers and unemployed people. Workers in partial (un)employment are able to attend training courses and participate in professional reconversions (EUR 1.07 billion); top-ups are provided on individual learning accounts for those wishing to develop their digital skills (EUR 25 million); training materials are being digitalised (EUR 304 million); unemployed people will be provided with distance training courses (EUR 160 million); and organisations supporting professional transitions will be given more resources (EUR 100 million).

7. Modernising higher education

In 2020, 49.4% of adults between 25 and 34 held a tertiary education degree (vs the EU average of 40.5% and the new EU-level target of 45%) and this long-term increase is set to continue. France's gender gap (6.9%) is the lowest among the countries that have reached this target in the EU and both men (45.9%) and women (52.8%) have reached this target. However, the employment rate of recent graduates (81.1% in 2020⁹²) was the sixth lowest in the EU (EU average 83.7%). Here too, women perform better than men (83.5% vs 78.4% (EU average)). Between 2014 and 2019, 12.4% more students enrolled in higher education. The progress was stronger at Bachelor (+12.6%) and Master's levels (+16.5%) than at short-cycle tertiary level (+7.1%) and doctoral level (-3.0%) (Figure 4). French data show that more students enrolled again in 2020/2021 (+2.1%), as a result of higher success rates in the Baccalaureate (+ 7 pps) (DEPP, 2020), linked to the COVID-19 crisis (MESRI, 2020a). For 2021/2022, 34 000 new places will be funded in public higher education.

Several measures were taken to address student poverty, ensure teaching continuity and give access to employment. Several measures introduced in 2020/2021 will be continued, including different financial support schemes for students (food aid, access to healthcare, exceptional scholarship top-ups); the extension of the student loan scheme (an NRRP measure); EUR 1 meals for students in precarious situations and scholarship students, as well as the freezing of enrolment and student accommodation fees. The tutoring plan and the system of referent students in university cities will be continued. Higher education institutions used their learning management systems platforms and support services for digital teaching methods to roll out further remote teaching. Digital resources have been pooled together at national level for the benefit of all HEI. The NRRP will finance additional projects for the development of online modules, nationwide platforms to offer these

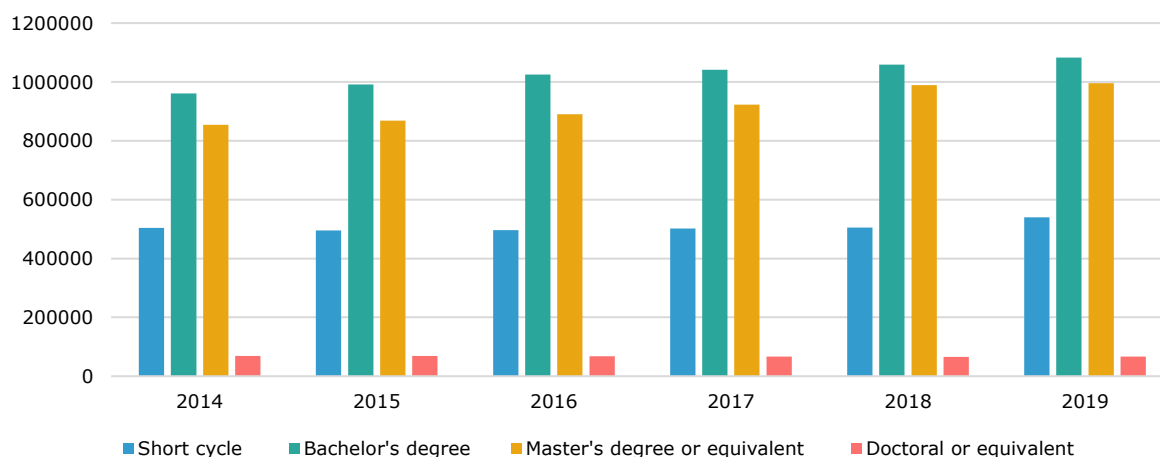
⁹⁰ Eurostat: [lfsa_urgaed] from 20 to 64 years, ISCED 0-2

⁹¹ Eurostat: [Trng_lfse_03].

⁹² Eurostat: [edat_lfse_24].

modules and digital infrastructure (EUR 35 million). Support for employers to recruit apprentices will also be continued until 30 June 2022. Dual learning in higher education has considerably increased in the past year.

Figure 4 - Students enrolled in tertiary education by ISCED level, 2014-2019



Source: UOE, [educ_uoe_enrt02].

Universities are relatively less well funded per student than other higher education institutions. In 2019, France spent around EUR 10 110 per year on a student at university compared to the average annual spending of EUR 11 530 for a higher education student (EESRI, 2021). The National Consultative Commission for Human Rights believes that the chronic underfinancing of universities should stop. It recommends strengthening public student guidance services, especially for disadvantaged students, and mentoring and tutoring schemes. In higher education, places on highly popular programmes and related resources should be increased, taking employment opportunities into account (CNC DH, 2021). Adults whose parents have completed tertiary education are 13.6 times (Programme for the International Assessment of Adult Competencies (PIAAC) average 11.1) more likely to complete tertiary education than those whose parents have not completed tertiary education (OECD, 2018).

Policies are being developed to integrate environmental sustainability into higher education. The Research Programming Law 2021-2030 (LPR) has included awareness of ecology and sustainable development in the missions of HEI (*Légifrance*, 2020). A 2020 interim report (MESRI, 2020b) recommended integrating the green transition into all higher education programmes, training all students on transition issues, and developing training programmes for higher and compulsory education staff. A working group was then mandated to develop further by September 2021 the recommendations on how to support and facilitate the implementation of these training and awareness actions within HEI (MESRI, 2021a). The NRRP will also finance energy-saving renovations of 1 054 higher education, research and student housing buildings (EUR 1.3 billion).

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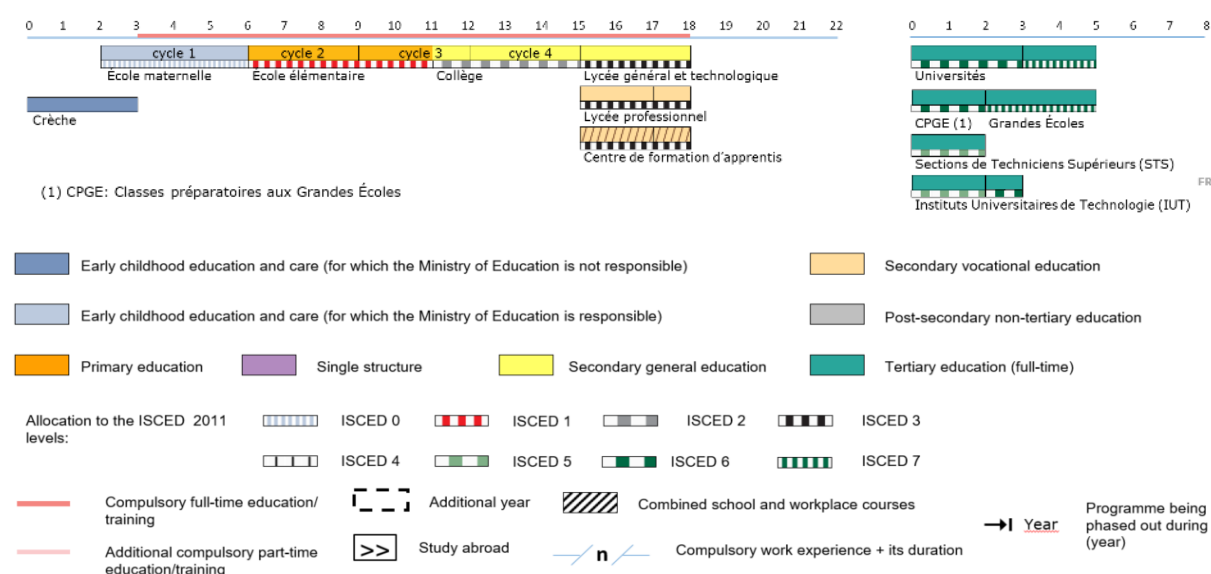
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022*: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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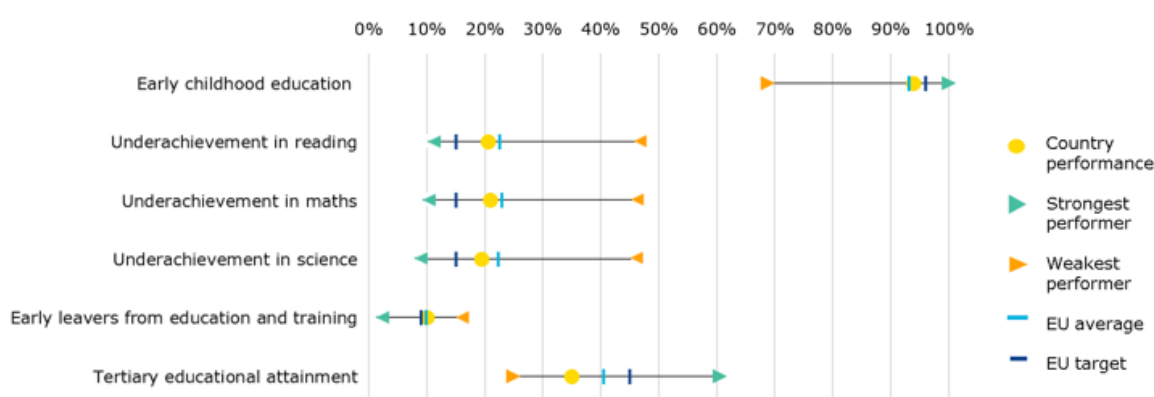
1. Key indicators

Figure 1 – Key indicators overview

			Germany		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		95.8% ¹³	94.0% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		29.2% ^{13, †}	33.2% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	18.5% ^{09, b}	20.7% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	18.7% ⁰⁹	21.1% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	14.8% ⁰⁹	19.6% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		11.8% ^b	10.1% ^{b, p}	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		26.0% ^b	35.1% ^{b, p}	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		4.4%	4.3% ¹⁹	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€6 664 ¹²	€7 986 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€9 058 ¹²	€10 686 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€12 956 ¹²	€13 350 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		10.2% ^b	7.8% ^{b, p}	12.4%	8.7%
	EU-born		:	24.0% ^{b, p}	26.9%	19.8%
	Non EU-born		:	26.0% ^{b, p}	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			74.6% ^b	79.2% ^{b, p}	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		27.0% ^b	35.1% ^{b, p}	33.4%	41.3%
	EU-born		:	38.9% ^{b, p}	29.3%	40.4%
	Non EU-born		:	33.3% ^{b, p}	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, p = provisional, := not available, 09 = 2009, 17 = 2017, 18 = 2018, 19 = 2019; † = Met guidelines for sampling participation rates only after replacement schools were included.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Germany is increasing education spending to invest in digitalisation, early childhood education and care, and all-day schooling but investment needs remain.
- Due to an increase in student numbers and an ageing teaching workforce, Germany faces an increasing shortage of teachers and needs to invest more in training and attracting enough teachers.
- German schools, students and teachers were not well prepared for distance learning during the COVID-19 pandemic, but Germany is investing in new teaching practices and teacher training.
- Available places for dual vocational education and training (VET) dropped significantly in 2020, but central and regional governments support stakeholders in increasing supply as well as strengthening reskilling and upskilling.

3. A focus on well-being in education and training

Well-being is important in Germany, but it is an implicit concept grounded in the notion of 'good education'. German education policies and measures aim to ensure 'good education', which is supposed to support the well-being of students. Improving the quality of education is monitored constantly. The Conference of Regional Education Ministers (KMK) already defined seven fields of intervention in 2002, ranging from improving language and reading skills to supporting disadvantaged students. Inclusion and well-being are strongly interlinked. While well-being is a precondition for successful inclusion, inclusive education in itself has been recognised as a key factor in the well-being of students⁹³.

Attention to well-being differs by education level and is mainly the responsibility of the regions. While youth welfare is managed at federal level, well-being in education is the responsibility of the regions. They run a number of programmes on mental health and design policies to tackle bullying, discrimination and radicalisation. At the level of early childhood education and care (ECEC), well-being has long been the centre of attention. Introducing more structured curricula into early education has strengthened the focus on the mental and emotional development of young children⁹⁴. In higher education, the student survey reports every four years on the social situation of students, including well-being, health impairments and study difficulties. In 2016, it found that 11% of students suffer health impairments that have a potentially negative effect on their studies⁹⁵. Compensation for disadvantaged students should improve their opportunities, but its scope remains limited (Ennuschat, 2019). Local student services offer students psychological counselling to help overcome a range of psychological.

An analysis of the OECD 2018 PISA shows well-being to be high in German schools, but disadvantaged students suffer. 22.7% of 15-year-old Germans reported that they were bullied at least a few times a month; just above the 22.1% EU average. However, bullying was reported much more often among disadvantaged students compared to their advantaged peers (25.6% against 19.3%). A migrant background as such had a negligible effect (0.7 pps). Three quarters of German students indicate a strong sense of belonging to school, compared to 65.2% in the EU. However, the sense of belonging in disadvantaged schools is considerably worse compared to more advantaged ones (0.31, EU 0.2). Socio-economic background has a strong negative impact on reading performance when students miss school. These observations underpin the need for additional support to disadvantaged schools and students.

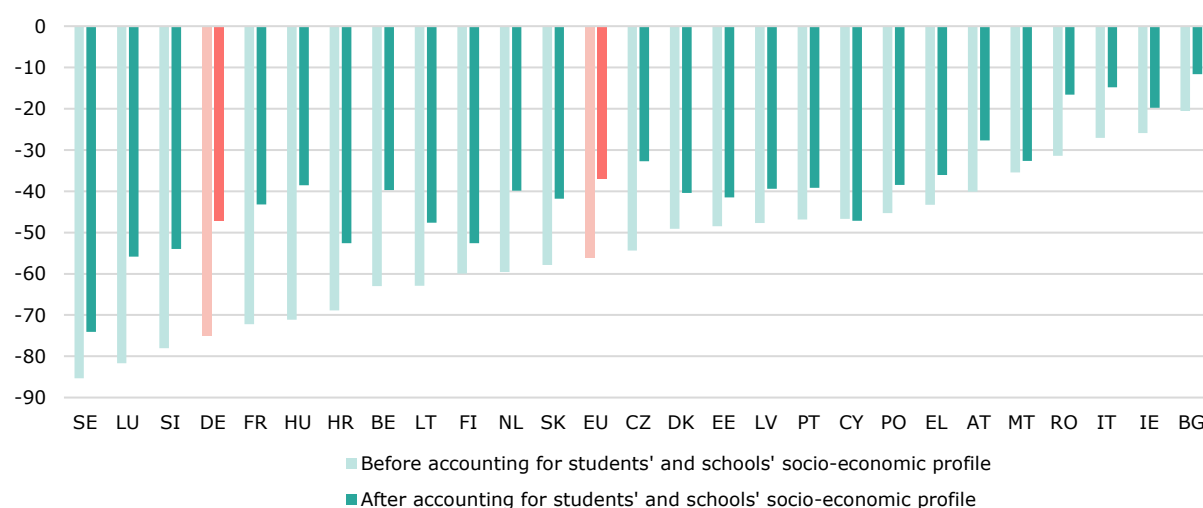
⁹³ The KMK laid the grounds for a reorientation of school pedagogy towards inclusion with its policy paper *Inklusive Bildung von Kindern und Jugendlichen mit Behinderungen in Schulen*, KMK 2011). The 2014 National Education Report (*Nationaler Bildungsbericht*) contained a special chapter on persons with disabilities in the education system, with a detailed analysis of their needs and how Germany is responding (*Nationaler Bildungsbericht* 2014).

⁹⁴ For example, the KOMPIK project, developed in Bavaria, is used to observe and document the development of children between the ages of 3.5 and 6 in daycare centres (IFP 2021).

⁹⁵ Studentenwerk, Sozialerhebung (social survey), Deutsches Studentenwerk 2017, p. 36.

Students with a migrant background skip classes more often than their native peers; missing classes has a negative impact on education outcomes. 87% of German students report that they never skip a whole day of school, above the EU average (75%). However, they often arrive to school late like their European peers. Truancy and lateness worsened slightly in Germany between 2015 and 2018 compared to the EU (4.4 pps, EU 3.0 pps). While the differences in Germany between boys and girls and between advantaged and disadvantaged students in playing truant are similar to the EU average, pupils with a migrant background tend to skip class more frequently; the gap between them and their native peers is above the EU average (8, EU 4.9). German students are less often late comparatively, with boys late more often than girls (+9.7 pps). But students with a migrant background are late much more often (+17.6 pps), registering one of the biggest gaps in the EU. Students in Germany, even when they feel they belong strongly to school, report one of the biggest changes in reading performance when skipping class or arriving late at school; this is also significantly above the EU average⁹⁶.

Figure 3 – Change in reading performance when students skipped class at least once a week, PISA 2018



Source: OECD, PISA 2018. NL and PT data did not meet the PISA technical standards but were accepted as largely comparable.

COVID-19 had a significant impact on teachers. Teachers at all levels of education have experienced lower well-being, and it has got worse as the pandemic drags on. In May 2021, teachers reported greater aggression caused by COVID measures (22% physical and 25% psychological, mostly from parents)⁹⁷. Teachers and school heads suffered especially due to inadequate preparation and lack of technical and pedagogical support for distance learning (European Commission, 2020). Teacher shortages have made the already high workload even worse⁹⁸.

COVID-19 has taken a toll on student well-being, causing even more problems over time. It also affected young people from disadvantaged and/or migrant backgrounds more. Up to now, there is only limited evidence available on the impact of COVID-19 on the mental health of young people. Preliminary results indicate lower well-being for the majority of young people, which has worsened over the course of the pandemic (second wave). While 17.6% of 7-17 year-olds reported mental health problems before the pandemic, their share increased to 30.4% during the

⁹⁶ Table III.B1.4.9, Student truancy and lateness, and reading performance, based on students' reports. For skipping school, DE -75, EU -56, SE-85, SI -78.

⁹⁷ Forsa, Gewalt gegen Lehrkräfte im Zusammenhang mit der Durchsetzung von Corona-Schutzmaßnahmen an der Schule, [Ergebnisse](#) einer bundesweiten Repräsentativbefragung von Lehrerinnen und Lehrern (6.05.2021).

⁹⁸ Deutsches Schulbarometer: Sind Lehrer jetzt besser auf den Fernunterricht vorbereitet? (13. Januar 2021), VBE-Umfrage zur Lage der Schulen vor und nach der Corona-Krise: Berufsunzufriedenheit im Sinkflug, technische Ausstattung miserabel (15.Mai 2020).

first wave and remained stable at 30.7% during the second one⁹⁹. According to the COPSy study¹⁰⁰, which is based on interviews of 7-17 year-olds across Germany, 70.7% felt burdened in the first wave. Their share increased to 82.6% in the second wave. Around two thirds (64.4%) reported that attending school and learning was difficult in the first wave, and there was no improvement in the second (63.9%) even with more experience in online learning. Young people reported fewer social contacts, but here the situation improved slightly from wave one to wave two (down from 82.8% to 76.1%). Similarly, arguments within families became slightly less frequent between waves (down from 27.6% to 23.8%). Children and adolescents reported more frequent psychosomatic complaints such as irritability, problems falling asleep and headaches. Socially disadvantaged children were particularly burdened. Good family cohesion had a protective effect and was able to mitigate the burden caused by the pandemic¹⁰¹. The propensity to develop anxiety issues also doubled from every eighth to every fourth child polled before and during COVID-19¹⁰². A study identified in the summer semester 2002 systematically higher stress among higher education students especially for vulnerable groups (Zimmer 2021).

4. Investing in education and training

General government expenditure on education as a proportion of GDP keeps slowly increasing in real terms. It was 4.3% in 2019, below the EU average of 4.7%. However, a real change of 2.8% between 2018 and 2019 (+1.5 pps on the previous year) hints at a potential increase but investment needs remain. Real investment increased in general much more than the EU average between 2010 and 2019 (+12.8%, EU 6.4%). It increased at all levels of education: pre-primary/primary (+33.0%), secondary (+4.1%), post-secondary (+13.4%) and higher education (+0.9%). The distribution of spending between the different education levels matched roughly the EU average in 2019, but differed on expenditure categories. Germany spent 7 pps less on employee compensation (57%), but more on intermediate consumption (+2 pps, 16%), investment (gross capital formation) (+1 pp., 8%) and other spending (+4 pps, 19 %). In 10 years, real investment dropped by 11% and intermediate consumption by 34%, whereas compensation increased by 12% and other expenditure by 22%. Due to its federal structure, the regions bear the highest share of expenditure with 3.3%, while local governments contribute 1.4% and the central government 0.4%. Compared to 2010, the share of GDP of regional governments remained stable (3.3%, -0.1 pps) in 2019, but doubled for the central government (0.4%, +0.2 pps) and strengthened for local governments (1.4%, +0.2 pps).

National statistics show a recent continuous increase in education spending at all governance levels. National public expenditure amounted to EUR 150.1 billion in 2019, a 6.3% increase compared to 2018. Expenditure growth accelerated compared to the previous year (+4.5% in 2018 over 2017). Around half of the 2019 increase (49.2%) went to schools, 22.4% to ECEC and 21.4% to higher education. While 2019 federal spending compared to 2018 remained stable, the regions increased their expenditure by 7.3% and municipalities by 5.3%. Several federal initiatives support in particular the contribution of education and science to a productive and innovative economy. This includes investing EUR 1 billion in 2021 through the 'Pact for the future' (*Zukunftspakt*) and creating an additional 90 000 ECEC places while improving overall ECEC quality. This is on top of the ongoing EUR 5.5 billion 'Good ECEC' (*Gute-KiTa*) initiative, which runs until 2022. Federal support of up to EUR 3.5 billion allows further expansion of all-day schooling at primary level, to which all children will gain a right by 2025. In addition, the federal government continues to help municipalities rehabilitate schools with EUR 3.5 billion. It has also expanded the EUR 5 billion 'Digital Pact for Schools' (*DigitalPakt Schule*) with EUR 1.5 billion in additional support due to COVID-19¹⁰³.

⁹⁹ Ravens-Sieberer U. et al., Quality of Life and Mental Health in Children and Adolescents during the First Year of the COVID-19 Pandemic: Results of a Two-Wave Nationwide Population-Based Study.

¹⁰⁰ COPSy study

¹⁰¹ Burden and mental health problems of children and adolescents in Hamburg during the COVID-19 pandemic

¹⁰² HAG COPSy Studie Hamburg

¹⁰³ National reform programme 2021, pp. 51-52.

Box 1: The National Recovery and Resilience Plan (RRP)

The plan contains grants to the tune of EUR 25.6 billion, around 9% of which is earmarked for investments related to education and training. This funding will support the 'Digitalisation of education' plan with expenditure on digital devices for teacher learning material and digital skills, a single digital educational platform for Germany. Under the heading 'Strengthening social inclusion,' 90 000 additional high-quality places in ECEC will be created, offer specific courses to close to narrow COVID-19 related learning gaps in schooling and support apprenticeships.

5. Modernising early childhood and school education

While participation in ECEC for older children is high, it has not progressed for under 3 year-olds. The participation rate in ECE was 94.0% for children between 3 and the start of compulsory primary education in 2019 (EU 92.8%). Regional values vary by 8.3 pps. However, only 31.3%¹⁰⁴ of children under 3 (EU SILC) were in formal childcare in 2019. Children with a migrant background are underrepresented in ECEC. In the under-3 age group, they attended only half as often in 2019, and in the 3- to 6-year-old age group they trailed 19 pps behind (Autorengruppe, 2020). At more than one third of ECEC centres, more than 11% of children speak another language at home (OECD 2019). Overall, the number of children keeps increasing, and the German Education Report identifies a need for more than 370 000 additional ECEC places for under-3s by 2025, with another 225 000 places for the 3 year-old-to school age by 2030.

COVID-19 related lockdowns had a severe impact on ECEC. Facilities had to close during the three nationwide lockdowns (spring 2020, autumn/winter 2020-21 and spring 2021). However, municipalities organised emergency child care for children of critical workers. This experience fuelled public debate about the importance of ECEC, its quality, and the need of having well trained and motivated staff (European Commission 2020).

The federal government is investing heavily in improving access, provision and quality of ECEC. The most important instrument for improving ECEC is a federal law (*Gute-KiTa-Gesetz*) providing EUR 5.5 billion until 2022 to expand the number of ECEC places and upgrade their quality. The 2020 Gute KiTa Report¹⁰⁵ highlighted uneven implementation in the regions. At the beginning of 2021, the government extended two programmes – 'Kita-Einstieg: Brücken bauen in frühe Bildung' (Day care entry: building bridges into early education) and 'Sprach-Kitas: Weil Sprache der Schlüssel zur Welt ist' (Language day care centres: because language is the key to the world) – making another EUR 420 million available until 2022 to improve quality. Parents increasingly see ECEC as an educational institution and demand quality institutions¹⁰⁶.

Performance on basic skills is above the EU average but has weakened over time, with disadvantaged students showing no improvement. Overall, performance in 2018 PISA is above the EU average, particularly in science (OECD, 2019 Vol. I). In 2018, Germany had persistently more top achievers than the EU average in science (10%, +3.7 pps), reading (11.3%, +2.8 pps) and mathematics (13.3%, +2.3 pps). The share of low achievers remained below the EU average in 2018 in all three areas tested. While PISA uses a standard questionnaire across countries, the Trends in International Mathematics and Science Study (TIMSS) approach compares the achievement of pupils in relation to the national curriculum. TIMSS 2019 confirms that German pupils meet their curriculum requirements to almost the same extent as other young people in the EU. Overall, they score better in mathematics than in science. Nevertheless, also according to TIMSS, German students fall 2 school years behind the best countries taking part. While the competences of German students remained

¹⁰⁴ Comparing 2016/2017/2018 and 2019 data reveals the following: 31.7%/30.3%/29.8% and 31.3%.

¹⁰⁵ Gute KiTa Bericht 2020, <https://www.bmfsfj.de/resource/blob/163400/2f655e00a1a5bbf84ee558a67a4db4ad/gute-kita-bericht-2020-data.pdf>

¹⁰⁶ Expert, Bertelsmann Stiftung 2021a and Bertelsmann Stiftung 2021b.

relatively stable compared with 2015, they weakened significantly compared to 2011¹⁰⁷. Results also confirm the continued importance of socio-economic background. Socially disadvantaged and/or migrant students trail 1 year in mathematics and even up to 2 years in science. There has been no improvement over the years¹⁰⁸. One fourth of students do not acquire more than basic knowledge in mathematics¹⁰⁹, although the share has increased in science to 27.6% (Schwippert, 2020). While the competence gap between boys and girls remains stable in mathematics, it decreased in natural sciences between 2007 and 2019, to 4 points only (-11) in 2019¹¹⁰. Many regions have reformed upper secondary education in recent years, also following financial considerations. However, early tracking continues to exist, combined with the limited ambition to reduce the impact of social disadvantage. Teachers and parents continue to influence school path preferences, perpetuating educational inequality¹¹¹. Digital competences are lagging behind and depend equally on social or migrant background and around one fifth of students leaving school do not achieve basic digital competence levels required in higher education (Autorengruppe, 2020).

The rate of early leavers from education and training has stagnated, with foreign-born people most affected, and the trend to aim for higher education levels has slowed. The rate has not evolved in recent years, and was 10.1% in 2020. This is close to the EU average, and below the new EU-level target of less than 9% by 2030. More worrying is that foreign-born people (18-24) are over three times more likely to leave education and training early (25.5%) than native-born people (7.8 %). Early school leaver rates vary by region in 2019 – from 7.6% in Baden-Württemberg to 16.0% in Bremen. The upper secondary completion rate (20-24 year old), 69.4%, is just above the EU average (66.8%)¹¹². The trend in Germany towards continuous higher qualification continues.

Demographic changes might affect the structure and distribution of schools in the future. While the overall school population remained fairly stable in 2015-2019, but is likely to grow in the future. While the number of pupils in primary school increased, student numbers in lower secondary schools and even more so in upper secondary schools fell. The KMK predicts that the total number of pupils will increase by 986 700 (9.2%), from 10.8 million in 2019 to 11.7 million by 2030. In the east part of the country, numbers will remain stable, whereas a significant increase is expected in western regions and in particular in regions formed by a single city – Bremen, Berlin and Hamburg (+15%).

Giving a right to all children to all-day primary schooling by 2025 will further increase the shortage of teachers; focus on quality of teacher education is continued. The KMK expects an additional 32 000 teachers will be needed each year until 2030. The share of teachers over 60 has increased from 8% in 2006 to 14% in 2016. Uneven teacher supply caused the share of career changers without regular teaching qualifications ('Quereinsteiger', see below) to quadruple from 3.2% in 2012 to 13.3% in 2018. Regional differences are substantial, ranging from 0% to 51% (Autorengruppe, 2020). The 2018 German Education Report suggests to expand teacher training capabilities, increasing the attractiveness of the profession and employing lateral entry more effectively to bridge gaps. (Autorengruppe, 2018). 13% of the 36 000 newly recruited teachers in 2018 had not completed initial teacher training (51% in Saxony, 40% in Berlin and one quarter in several other regions). Lateral entry is frequently allocated to schools or classes with particular challenging backgrounds, without the teachers necessarily being sufficiently trained for this. Since 2015, both regions and the federal level engage in 'quality offensive teacher training' to increase the quality and attractiveness of teacher training (Autorengruppe, 2020). Until 2023 140 projects in 131 universities will be supported¹¹³. The decision of the KMK adopted on 12 March 2020 on continued

¹⁰⁷ Schwippert et al, (2020), p. 84.

¹⁰⁸ Schwippert et al, p. 20.

¹⁰⁹ Das Deutsche Schulportal, <https://deutsches-schulportal.de/bildungswesen/timss-2019-wie-schneiden-viertklaessler-in-mathe-und-naturwissenschaften-ab/>

¹¹⁰ Schwippert et al., p. 19.

¹¹¹ Elter et al., p. 22.

¹¹² Population by educational attainment level, sex and age (%) – main indicators [edat_lfse_03].

¹¹³ Qualitätsoffensive Lehrerbildung, <https://www.qualitaetsoffensive-lehrerbildung.de/de/grundlagen-1695.html>

professional development partly responds to these challenges. It aims to create a 'good teaching' climate and help students meet educational outcomes.¹¹⁴

6. Modernising vocational education and training and adult learning

In 2020, the number of entrants to apprenticeships dropped by 5.6% and the number of new apprenticeship contracts by 11%¹¹⁵. Occupational imbalances continue to cause supply and demand bottlenecks for apprenticeships (late September 2020: 59 900 vacancies and 29 300 applicants without apprenticeships)¹¹⁶. There are many reasons for this, but they also relate to unattractive working conditions and pay as well as to regional differences.

Several measures have secured apprenticeships and improved the training capacity. The federal government funding programme 'Securing apprenticeship placements' from June 2020 allocates 500 million in 2021 and EUR 200 million in 2022 to support small businesses that are willing to keep or even extend their training levels of apprentices¹¹⁷¹¹⁸. The RRP will also support the provision of training opportunities in the context of COVID-19. COVID support for upper secondary education also covers VET in part¹¹⁹.

Guidance has been developed further and digitalised, including on the web. The German Association for Career Guidance Training and the National Guidance Forum Germany launched various offers for guidance counsellors and the regional qualification centres. Manuals and webinars cover subjects such as data protection, new skill requirements and guidelines for crisis counselling¹²⁰. The Federal Employment Agency created a user-friendly information section on its website to direct visitors to its online communication channels¹²¹.

Box 2: European structural and investment funds project – insights into sustainable careers

The 'Green view project' (*Grünblick Projekt*) helps young people with the transition from school to work in 2020-2021 by providing workshops on professional and personal development in renewable energy, food, agriculture, city and municipality, media, consumption, water, forestry, economic and financial affairs.

During the workshops, young people aged 16-25 work on their career aspirations in order to develop an understanding of which occupational fields fit their interests and are within reach. The focus is on raising awareness of the sustainability aspects of the relevant occupational fields to provide long-term career guidance for young people for a future-oriented and sustainable life. Participants will also better understand how occupations might change in view of global challenges

¹¹⁴ KMK, Ländergemeinsame Eckpunkte zur Fortbildung von Lehrkräften als ein Bestandteil ihrer Professionalisierung in der dritten Phase der Lehrerbildung (Beschluss der Kultusministerkonferenz vom 12.03.2020).

¹¹⁵ Bundesministerium für Bildung und Forschung (2021). *Vorläufiger Berufsbildungsbericht 2021*. <https://www.bmbf.de/files/21-04-28%20BBB%202021.pdf>

¹¹⁶ Ibid.

¹¹⁷ Bundesministerium für Arbeit und Soziales (2020). Erste Förderrichtlinie für das Bundesprogramm „Ausbildungsplätze sichern“. https://www.bmas.de/SharedDocs/Downloads/DE/Pressemitteilungen/2020/erste%20foerderrichtlinie-bundesprogramm-ausbildungsplaetze-sichern.pdf?__blob=publicationFile&v=1 (last access 04.06.2021).

¹¹⁸ Bundesministerium für Bildung und Forschung (2021a). *Bekanntmachung zur Änderung der Zweiten Förderrichtlinie für das Bundesprogramm „Ausbildungsplätze sichern“*. <https://www.bmbf.de/foerderungen/bekanntmachung-3217.html> (last access 04.06.2021).

¹¹⁹ Bundesministerium für Bildung und Forschung (2021c). *Corona-Hilfe I: Sofortausstattung, Corona-Hilfe II: Administration, Corona-Hilfe III: Ausstattung für Lehrkräfte*. <https://www.digitalpaktsschule.de/de/corona-hilfe-ii-sofortprogramm-endgeraete-1762.php>, <https://www.digitalpaktsschule.de/de/corona-hilfe-ii-administration-1768.php>, <https://www.digitalpaktsschule.de/de/corona-hilfe-iii-leihgeraete-fuer-lehrkraefte-1772.php> (last access 04.06.2021).

¹²⁰ Cedefop (2020). *Note on lifelong guidance and the COVID-19 pandemic: Responses from Cedefop's CareersNet*. https://www.cedefop.europa.eu/files/2020_05_27_llg_and_pandemic_cnet_b.pdf (last access 04.06.2021).

¹²¹ <https://www.arbeitsagentur.de/bildung> (last access 04.06.2021)

and to contribute to a green world of work. In addition, young people learn green skills required to contribute to a sustainable future as prospective employees or entrepreneurs.

Career guidance in the project is cliché-free and gender-sensitive and aims to provide young people with long-term access to sustainability issues.

Despite promising reforms to improve upskilling and reskilling in 2019, the participation rate in adult learning and education remains a challenge. In 2020, 7.7% of adults aged 25-64 participated in learning measures in the 4 weeks before being surveyed (Labour Force Survey). Although the EU average decreased to 9.2% in 2020, Germany remains below average. The participation of low-skilled adults in adult learning also remained slightly below the EU average in 2019. In contrast, the share of unemployed adults participating in adult learning increased sharply from 8.2% in 2019 to 12.1% in 2020¹²².

Together with the education sector as a whole, adult learning in general has suffered from the COVID-19 pandemic¹²³. While public as well as private adult learning centres received financial support in some federal states, the Federal Ministry of Education and Research announced in April 2021 to increase its support to adult learning centres¹²⁴. Increasing the number of educational staff through this short-term support should strengthen the digital learning portal to respond to the sudden increase in demand for online adult education. Resilience and well-being are not a major focus of adult learning in Germany¹²⁵ that continues to focus on input and teacher-oriented education¹²⁶. This leaves room for developing new innovative approaches that address individual motivation and learning interests.

7. Modernising higher education

The tertiary education attainment rate is increasing slowly, but remains below the EU average. Since 2010, the rate has increased by 9.1 pps to 35.1% in 2020. Germany trails 5.4 pps behind the EU average, and would need to further step up its efforts to meet the 45% EU-level target by 2030. It continues to have the smallest gender gap (2.5 pps), 8.3 pps below the EU average. Between 2014 and 2019, Germany increased the number of enrolled students by 13.2% while it decreased by 1% in the EU. 85% of them study in public higher education institutions and 15% in private ones. 5.6% of students finish their studies with a doctoral degree. While Germany has the highest share of doctoral degrees in Europe, numbers are declining. The share of foreign students starting at German universities continues to rise, reaching 24.4% in 2019. Foreign students coming from within the EU (less than 30%) outnumber those from outside the EU by 6.6 pps. The attainment levels of cities are almost twice as high (43%) compared to rural areas (25.4%). The participation of students from disadvantaged backgrounds has remained stable for over a decade at around 30% (Autorengruppe 2018).

A sizeable share of German students continue to choose science, technology, engineering and mathematics (STEM) courses, boosting innovation and competitiveness. More than a third of German students opt for STEM subjects (37.3%). Most of them aim for a Bachelor's degree (40.4%). At Master's level, figures are significantly lower (29.9%) and trail Sweden for instance (34.0%). 47.3% of graduates at doctoral level help keep science and industry competitive. The share of female STEM graduates, at 25.8%, is still below the EU average (32.3%). To boost digitalisation and innovation, university buildings and facilities have to be adapted or built. Experts have identified a EUR 35 billion backlog until 2025.

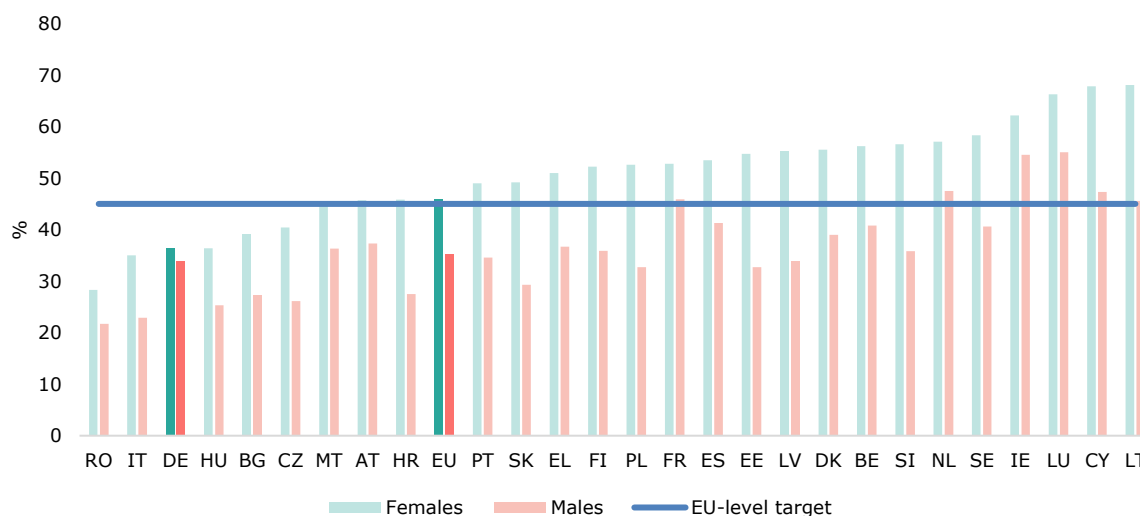
¹²² Eurostat (2021). European Training Monitor data 2020 – Adult Learning.

¹²³ Dieter Dohmen & Michael Cordes (2021). Adult Learning – Status Report (2021). Report on National Developments in Adult Learning.

¹²⁴ BMBF (2021). Pressemitteilung 02.04.2020 | Nr. 040/2020. Retrieved from: https://www.bmbf.de/files/2020-04-02_40%20PM%20vhs%20Online%20Tutoring.dotx_18.30.pdf (15.07.2021).

¹²⁵ Dieter Dohmen & Michael Cordes (2021). Adult Learning – Status Report (2021). Report on National Developments in Adult Learning.

¹²⁶ Ibid.

Figure 4- Tertiary educational attainment (25-34) by sex, 2020

Source: Labour Force Survey, [edat_lfse_03].

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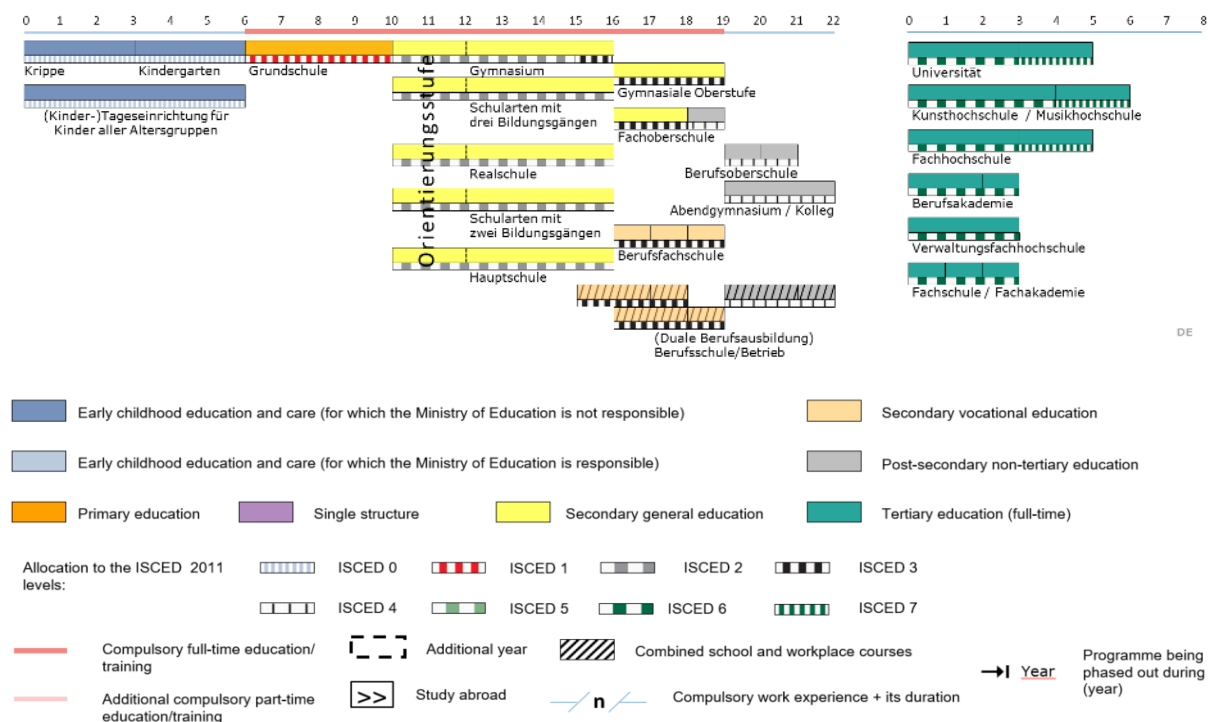
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. The Structure of the European Education Systems 2021/2022: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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GREECE

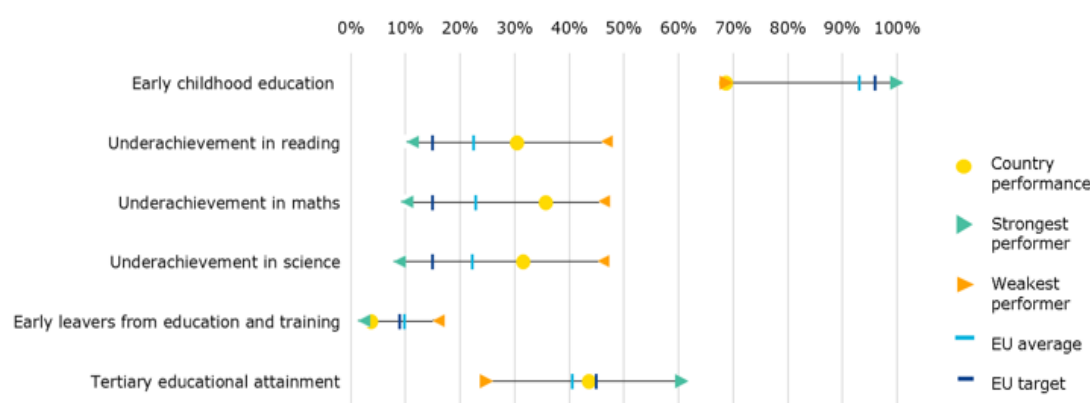
1. Key indicators

Figure 1 – Key indicators overview

			Greece		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		85.3% ^{13, d}	68.8% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	21.3% ^{09, b}	30.5% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	30.4% ⁰⁹	35.8% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	25.3% ⁰⁹	31.7% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		13.5%	3.8%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		30.6%	43.7%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		4.1%	4.0% ¹⁹	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€4 204 ¹²	€4 867 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	:	:	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€2 640 ¹²	€2 420 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		9.2%	2.9%	12.4%	8.7%
	EU-born		27.4%	: ^u	26.9%	19.8%
	Non EU-born		46.1%	28.0%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			83.6%	94.9%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		34.1%	46.2%	33.4%	41.3%
	EU-born		14.5%	25.1% ^u	29.3%	40.4%
	Non EU-born		9.2%	14.8%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, : = not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Spending on education is low, but the EU Recovery and Resilience Facility (RRF) provides for significant investments and reforms in the Greek education, training and skills system, including in digital infrastructure and skills.
- Greece is making considerable efforts to modernise all levels of education. Swift and effective reforms are key for improving educational outcomes.
- Greece needs to adopt comprehensive policies to ensure the well-being of pupils and teachers, who have been deeply affected by the pandemic.
- A substantial reform was introduced in 2020, aiming at improving the attractiveness and labour market relevance of vocational education and training, which remains a key issue in Greece.

3. A focus on well-being in education and training

Greece needs to take a comprehensive approach to improve well-being at school, but essential actions are already included in the school curriculum. There is so far no national strategy for well-being in education and no definition of well-being at school per se. However, the Greek Ministry of Education and Religious Affairs (Ministry of Education) places great emphasis on actions which promote 'quality of school life' and 'personal development' in schools. An innovative action called 'Skills Labs¹²⁷' was introduced in 2020 to support children in their skills development. It covers pre-primary, primary and lower secondary education, and promotes non-violent behaviour, mental and emotional health, mutual respect in diversity and preventing bullying and cyberbullying. Health education is also included in the primary curriculum. In Greece, 185 000 students in 1 230 schools benefit from hot meals – a scheme that helps strengthen solidarity and companionship in the school community. Since 2012, 16 million breakfasts were provided to 110 000 students in 688 primary and secondary schools in low socio-economic areas. The Greek #MeToo movement that was ignited this year mobilised schools' psychologists and social workers already present in schools to tackle this pressing issue. In higher education, individual counselling is provided to students and graduates to help them adapt to the new academic environment as well as cope with stress, decision-making difficulties, addictions, eating disorders, and other issues. However, during the lockdowns, students mainly contacted their university student-counselling primarily for difficulties related to their studies and less so for psychological support.

Many Greek students face bullying. According to the 2018 OECD Programme for International Student Assessment (PISA), 27% of Greek secondary students reported being bullied at least a few times a month (EU average 22%). Students with low academic achievement are much more exposed to bullying than high achievers (39.3% vs 19.9%), and this gap (19.5%) is larger than the EU average (15.9%). The share of students who report being bullied increased considerably between 2015 and 2018 by 10.2%, the second highest increase among EU countries. The proportion of cases where the child's experience of being bullied goes unrecognised by parents is very high in Greece¹²⁸ (79%). Half of the Greek students (49.6%) strongly agree that it is wrong to join in bullying. One of the anti-bullying measures introduced by the Ministry of Education is that bullying is being tackled in the classroom as part of the mandatory curriculum.

Even before the pandemic, many adolescents (14-17 year-olds) were bullied online. There are no targeted awareness-raising actions in the Greek schools on digital well-being. A school-based study among seven European countries¹²⁹ revealed that even before the COVID-19 pandemic Greece had the second highest rate of adolescents being bullied online (26.8%). During the pandemic and

¹²⁷ The Skills Labs were awarded in 2021 for quality and good practice in Global Education across Europe, by GENES Global Education award.

¹²⁸ Online survey of 9-16 year-olds and their parents in 25 countries.

¹²⁹ Germany, Greece, Iceland, the Netherlands, Poland, Romania and Spain.

with the increase of digital education, 64% of Greek parents were worried about the amount of time their children spend online. Many were concerned about the risk of addiction, while 14% did not know with whom their child was interacting online. While the Greek authorities have made considerable efforts to promote online safety, a large share of adolescents lack digital skills (ETM 2020) and awareness of online risks.

The Cybercrime Service of the Ministry of Civil Protection created an information platform for youngsters (6-18 year-olds). During lockdown periods, parents' associations and school principals organised information days on internet behaviour. Research organisations provided students with information and training, and developed communication platforms. Greece has a School Violence and Bullying Prevention Observatory and has launched a Panhellenic school day against violence at school (March 6).

The prevalence of depression increased significantly in Greece during the pandemic. Studies show that 9.3% of the sampled population (which included a strong presence of young people) suffered from clinical depression during the pandemic, 8.5% from severe distress and over 45% from increased anxiety (Fountoulakis et al., 2021). The pandemic created the largest disruption of the education and training system in history and revealed the need for digital upskilling of teachers as well as for upgrading of digital infrastructures. Greece developed online tools and participation platforms to allow students to follow distance learning and provided training to teachers. During this process, the needs of disadvantaged groups were also taken into consideration in order to prevent discrimination, violence and exclusion. The Ministry of Education took action to psychologically support students from pre-school through to upper secondary level, also including secondary vocational education, teachers and parents, mobilising psychologists and social workers¹³⁰. Various initiatives arose, mainly by health institutions and universities, to support children and adolescents coping with the pandemic conditions and the impact on their mental health. The actions planned by Greece for a smooth reopening of schools in September 2021 (IEP) included psychosocial support for students, reconnection paths, and mutual support of teachers.

The well-being of students in higher education was deeply affected by the pandemic. 67% of Greek students were concerned that they would not be able to successfully complete the academic year due to the pandemic, while 46.3% agreed or strongly agreed that their workload had increased significantly during the outbreak. The change in teaching methods also caused a high degree of stress to 43.3% of university students in Greece. The majority (71.2%) was satisfied with the proactive measures taken by their university, however many (45.9%) felt unable to talk to a member of the university staff about their pandemic-related concerns (Stathopoulou et al., 2020).

Box 1: EU support for training of teachers in skills through workshops

The Skills Labs is a flagship initiative of the Ministry of Education and Religious Affairs in collaboration with the Institute of Educational Policy. It aims at preparing teachers to foster the development of soft skills, life skills as well as technology and science skills among students of pre-primary, primary and lower secondary education. Through this innovative intervention, piloted in 218 schools during the school year 2020/2021 and extended to all schools throughout Greece from 2021/2022, students and teachers use knowledge gained in school in a creative way. More than 75 000 educators have either enrolled or completed the 32-hour Skills Labs training.

The Skills Labs are organised around 4 main cycles: (a) Better living – Well-being, (b) Environmental consciousness, (c) Interest and action – Social consciousness and responsibility, and (d) Creation and innovation – Creative thinking and initiative. The training material is in line with adult and distance learning methods, it includes video sessions, sources and scenarios for the application of good practices, and it is accompanied by exercises and self-assessment activities. The aim is to create a dynamic learning and practice community.

¹³⁰ Mainly the introduction of the « Counsellor of School Life » and the recruitment of 2 800 psychologists and social workers.

Public budget: EUR 398 550.20 - European Social Fund (ESF) contribution: EUR 311 977.12

The training platform for the skills' development through workshops is available at <http://iep.edu.gr/el/espa-2014-2020/epimorfosi-ton-ekpaideftikon-stis-deksiotites-meso-ergastirion-mis-5092064>

4. Investing in education and training

Public spending on education remains below the EU average. General government expenditure on education in 2019 remained below the EU average, both as a proportion of GDP (4.0% vs 4.7%) and of total general government expenditure (8.3% vs 10%), the latter being the second lowest ratio among Member States after Italy. Moreover, figures do not show any considerable increase (4.0% in 2019 vs 3.9% in 2018). Following the 2019 European Semester country-specific recommendation for Greece to invest in education and skills, Greece started investing in skills development, placing it high in the national policy agenda along with a strong legislative activity in education, promoting key reforms.

Tertiary education is largely underfunded. Tertiary education receives 1.9% of total general government expenditure (vs 2.7% for pre-primary and primary education, and 2.6% for secondary education). This situation may be set to improve, partly thanks to new legislation adopted in January 2020¹³¹ that introduces performance-based funding in higher education starting from the 2021/2022 academic year, related to objective criteria. The Recovery and Resilience Facility as well as the European Structural and Investment Funds will channel additional funding to support innovation and excellence in universities.

Some EUR 230 million are being spent for digital equipment for pupils and students and for interactive learning systems under the RRF. Under the RRF, more than 550 000 pupils and students aged 4-24 will be provided with a voucher worth EUR 200 to purchase the appropriate digital devices, taking into account income and social¹³² criteria. Moreover, some 36 000 interactive learning systems will be installed in primary and secondary schools throughout the country also financed under the RRF. Meanwhile, the Ministry of Education attempted to address shortages of computers in schools by buying more than 90 000 laptops and tablets at a value of EUR 24 million. This purchase was financed by the EU budget¹³³ and private donations (7:3). The equipment, which belongs to the school, can be rented by both teachers and students. It will be available at all education levels, from pre-school to upper secondary, to ensure that all students can participate in distance learning.

Box 2: The National Recovery and Resilience Plan

The Greek Recovery and Resilience Plan¹³⁴, named 'Greece 2.0', is worth a total of EUR 30.5 billion, of which EUR 17.8 billion are grants and EUR 12.7 billion are loans under the EU Recovery and Resilience Facility. It is structured around four pillars, encompassing 68 reforms and 106 investments to be implemented during the period 2021-2026. Investments related to education, training and skills represent more than 10% of the Greek plan. The RRF will support among others infrastructure development, improvement of the education system and skills, digitalisation of education, excellence in Greek universities, upgrading of vocational education and training (VET), supply for laboratory equipment for VET educational units. It will boost investments in human capital and it will contribute to the growth potential of the Greek economy.

¹³¹ Law 4653/2020.

¹³² Children with migrant background, refugees and Roma are included in the programme.

¹³³ By the European Regional Development Fund.

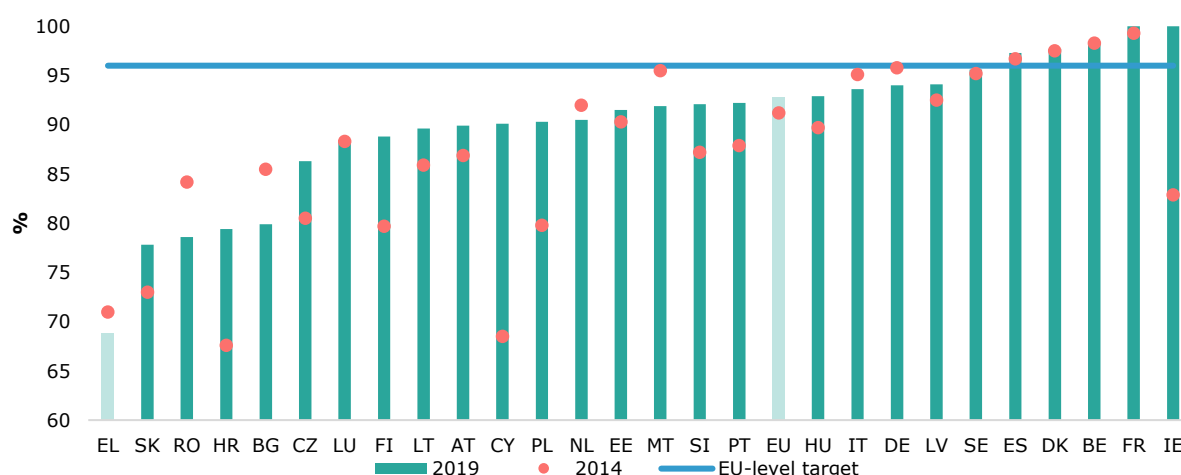
¹³⁴ https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3022

5. Modernising early childhood and school education

Greece ranks last in the EU in participation in early childhood education and care (ECEC).

68.8% of 3-6 year-olds participated in ECE in 2020, far below the EU average of 92.8%, and the EU-level target of 96% by 2030. However, the share of children under 3 years-old, enrolled in formal childcare services almost tripled between 2009 (11%) and 2019 (32.4%) but remains below both the EU average (35.5%) and the Barcelona target (33%). It is noted that Greece, Luxemburg, Austria, Cyprus and the Netherlands have much higher participation rates for the 4+ age bracket than for the 3+ age bracket¹³⁵. In Greece, ECEC is provided in two phases: childcare for children under 4 years-old and pre-primary education starting at the age of 4. Pre-primary education (ISCED 02) is part of primary education and free in public schools. Full implementation of the compulsory two-year attendance in pre-primary education will be reached during the 2021/2022 school year. Projects aiming at both raising participation in ECEC for children under 4 and developing a new curriculum are programmed to be funded by the RRF and the ESF+.

Figure 3 - Participation in early childhood education of pupils from age 3 to the starting age of compulsory primary education, 2014 and 2019 (%)



Source: UOE, [educ_uoe_enra21]

As of the 2021/2022 school year, all pre-primary school children will benefit from doing creative activities in the English language at school. As the pilot programme in 58 ECEC institutions during the last academic year was deemed a success by the Ministry of Education, its universal expansion has been decided. However, the evaluation of the pilot still needs to be finalised to identify challenges and lessons learnt. Specialized training on synchronous and asynchronous distance learning was carried out for the educational project coordinators and English language teachers. The particularity was that teachers of different levels and specialities, i.e. kindergarten teachers and foreign language teachers not necessarily specialised for this age group, were trained together.

A large number (123) of new curricula have been developed. These new curricula, covering pre-primary to upper secondary general education, will be piloted from September 2021. They will emphasise acquiring key competences, inclusive education, and the use of multiple sources - including digital ones. The pilot is planned to take place in model and experimental schools, both in primary and secondary education, during the 2021/2022 and 2022/2023 school years. In addition, 330 curricula for vocational education will be completed by early 2022. The aim is to modernise and digitalise textbooks, enrich digital content, introduce experience-based learning and foster inclusive education. Teachers will be trained to effectively apply the new curricula and to integrate new textbooks into their teaching practice.

¹³⁵ Education and Training Monitor 2021 (Vol.I)

The external evaluation of schools has not yet started. However, the relevant planning has been set by the Ministry of Education for the school year 2021/2022. The annual internal evaluation was carried in all types of primary and secondary schools in June 2021 and looked at schools' operation and the quality of their pedagogy. An external evaluation was planned for the first time for the previous school year. It was to be carried out at three levels: (a) by the educational coordinator per school; (b) by the educational coordinator for all schools under his/her responsibility; and (c) by the regional centres for educational planning (PEKES) for all the schools under their responsibility. However, the timing was not ideal as schools were closed because of the pandemic.

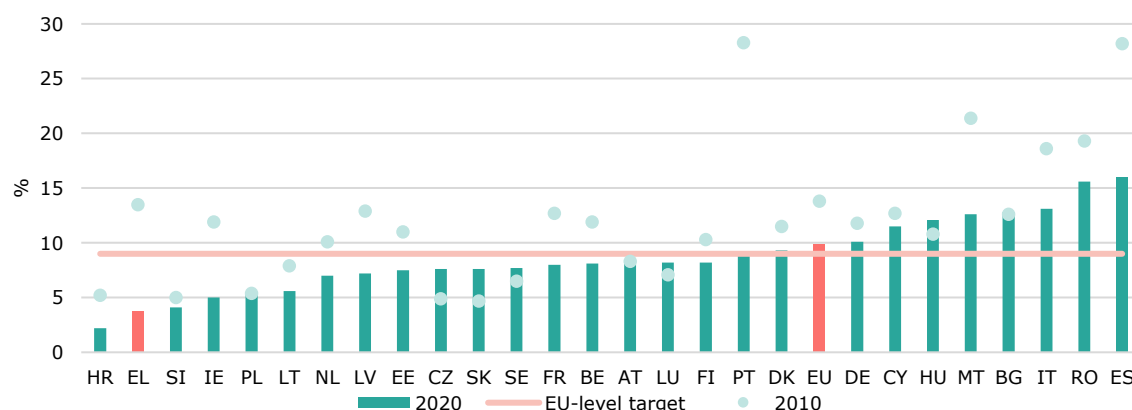
Teachers up to upper secondary level were trained to deliver distance learning. The objective was to gain knowledge, skills and practical experience to make distance learning more effective. Around 800 teachers became trainers and trained more than 82000 others. Multimedia training material was created for both synchronous and asynchronous distance teaching. The programme was co-financed under the ESF with a budget of EUR 1.5 million.

Through its Technical Support Instrument (TSI), the Commission provides Greece with expertise to promote inclusive education and rebuild its educational support structures. National legislation¹³⁶ seeks to decentralise the educational system by making planning and self-reflection of schools' educational work a regional responsibility. In line with this legislation, all primary and secondary education support structures are being reorganised. The TSI helps Greece clarify the roles of support structures¹³⁷, strengthen qualifications of the professionals involved in them and build collaboration among support structures and mainstream education.

A new law¹³⁸ on school improvement and strengthening the competences of teachers was voted by the Greek Parliament in the summer. The law consists of three strands: (a) strengthening the autonomy of all schools; (b) establishing a mechanism to improve teachers' competences through the evaluation of their work; and (c) strengthening educational structures. The aim is to ensure an effective pedagogical support of autonomous schools.

The rate of early leavers from education and training decreased markedly during the last decade. Greece recorded a rate of early leavers of 3.8% in 2020 (EU average 9.9%), a 9.7 percentage point (pps) improvement compared to 2010, one of the highest in the EU. The proportion of men (4.4%) is moderately higher than that of women (3%). Differences between regions persist with a low rural-urban gap of 3.6 pps in 2020. In 2020 the country reported the highest proportion of early leavers in rural areas (6.6%). During the last decade, early school leaving in rural areas decreased by 13.4 pps.

Figure 4 - Early leavers from education and training, 2010 and 2020 (%)



Source: LFS, [edat_lfse_14]. 2020 data for HR are low reliable.

¹³⁶ Law 4547/2018.

¹³⁷ Regional Centres for Educational Planning (PEKES) and Educational and Counselling Centres (KESY).

¹³⁸ Law 4823/2021.

6. Modernising vocational education and training and adult learning

The law of December 2020¹³⁹ substantially reformed vocational education and training (VET). The attractiveness of VET in Greece and the country's ability to respond to future demands in the labour market, need to be improved. The proportion of upper secondary students enrolled in VET is far below the EU average (29.1% vs 49% in 2019), although unemployment rates of recent non-tertiary education graduates are lower than those of tertiary education (26.8% vs 27.3% in 2020). The law attempts a holistic reform of VET and Lifelong Learning (LLL), including a new VET governance scheme based on three principles: the common planning of VET and LLL, the link of VET and LLL with the real needs of the labour market, and the upgrading of their quality. It is expected that the new framework will improve the adaptability, flexibility, quality, inclusiveness and permeability of training pathways and, thus, the attractiveness of the VET system.

Further important reforms introduced by the law, include the establishment of Model Vocational Upper-Secondary schools (model EPAL), Experimental and Thematic Vocational Training Institutes (IEKs), as well as the upgrade of the institutions of internship and apprenticeships.

The education and labour market intelligence systems need to be adapted to include skills analysis and development. As an example, young (20-29 year-olds) tertiary graduates in STEM, construction and manufacturing accounted only for 17.2% in 2019, although strong employment growth is forecasted in related sectors of economic activity until 2030 (Skills Forecast, CEDEFOP, 2020), including the impact of investments in twin transitions. Shifting from input-based to innovative, data-driven education and training systems and integrating entrepreneurial, green, soft and transversal skills in training and education, will be crucial to improve competitiveness and stimulate economic growth for a robust post-crisis recovery. The Skills Labs are heading in the right direction.

The COVID-19 pandemic has accelerated digitalisation and increased basic digital skills across VET education levels and age groups, although the proportion of ICT graduates fell from 4.9% in 2016 to 2.9% in 2020 (DESI 2020). The supply of basic and the development of more advanced digital infrastructure in VET, including robotics and Artificial Intelligence (AI) and Virtual Reality (VR) technologies, also in remote and rural areas, is crucial to address the impact of lack of digital skills to employment prospects of Greek graduates (ET Monitor, 2020).

Raising participation in adult learning remains a key challenge in Greece. The proportion of adults aged 25-64 participating in education and training in the 4 weeks preceding the Labour Force Survey increased only slightly from 3.9% in 2019 to 4.1% in 2020, and remains far below the EU average (9.2% in 2020). Educational attainment is a significant factor for participation in learning activities, with only 0.8% of low-qualified adults (ISCED level 0-2) participating in adult learning compared to 6.4% of high-qualified adults (ISCED level 5-8). A significant part of the adult population states that they lack some technical skills (47% vs EU average 28%) or some general skills (38% vs EU average 22%) to perform their work at the required level, while 92% of the adult population believes that investing in adult learning should be a priority.

The law¹⁴⁰ of 2020 regulates LLL Centres (KDVM). It defines the role of LLL Centres as service providers in the context of non-formal learning (reskilling, upskilling, general education, counselling and career guidance for adults). In addition, the law contains provisions concerning their establishment, licensing and certification, the framework for trainers and certified programs, the validation of learning results, as well as their supervision and control structure.

A new 'Lifelong Skilling' Strategy will be supported by the EU Recovery and Resilience Facility (RRF) to improve training provision. The strategy includes setting up 'lifelong skilling accounts' as the main tool for ongoing training; a national 'eligible training provider' list based on

¹³⁹ Law 4763/2020.

¹⁴⁰ Law 4763/2020.

minimum quality criteria for trainers; and a National Skills Council that will be responsible for designing the national skills strategy. Greece's Recovery and Resilience Plan also includes the reform of the Account for Employment and Vocational Training (LAEK), which funds vocational training programmes for employees through compulsory employer contributions.

The COVID-19 pandemic has highlighted the need to better monitor adult learning. It is crucial to have reliable data on the impact of the pandemic on the participation and well-being of adult learners in non-formal general adult education or continuing vocational training and their trainers. Similarly to the formal education system, measures for the digitalisation of the learning materials in non-formal adult education is key.

7. Modernising higher education

The rate of adults aged 25-34 holding a degree from tertiary education increased considerably during the last decade by 13.1 percentage points. Currently, this rate stands at 43.7%, above the EU average (40.5%) and the national target (32%), but below the EU-level target of 45% by 2030. At 51%, women's tertiary educational attainment is 14.3 pps higher than men's. Non EU-born students are much less likely to obtain higher education degrees than native-born students (14.8% vs 46.2%). Within the country, regional differences in tertiary education attainment persist with an urban-rural gap of 20.9 pps (a 2.3 pps decrease compared to 2019). The small but steady increase in the employment rate of recent tertiary graduates observed in recent years was reversed in 2020 (60.8% in 2020 vs 64.2% in 2019), positioning Greece last in the EU. In 2020, Greece was one of the three¹⁴¹ EU Member States where the employment rate of recent graduates was lower than the overall employment rate, suggesting that new graduates faced particular challenges to enter the labour market, including mismatches between education outcomes and labour market needs.

A minimum threshold was set for this year's university entry exams. The law on higher education of February 2021 reformed the selection and entry system by setting a minimum mark for the university admissions exams from the 2021/2022 academic year. It also set a time limit for completing university degrees in order to limit the number of 'eternal', i.e. only nominal students¹⁴², and introduced a new option for tertiary VET.

Greek universities are becoming more international. The law of June 2020 opened the door to English-taught Bachelor's programmes (ETM 2019). The first English-speaking undergraduate medicine programme at the National Kapodistrian University of Athens¹⁴³, scheduled to operate in the 2022/2023 academic year, has been approved by the Hellenic Authority for Higher Education. The Aristotle University of Thessaloniki also developed an undergraduate medicine programme in English. The law allows joint or dual degrees with foreign or co-national universities. An ambitious financing plan¹⁴⁴ was developed by the Ministry of Education to support universities' internationalisation, which includes ESF funding. Seven Greek higher education institutes (HEIs) have joined forces with foreign HEIs under the European University Initiative which aims to strengthen their internationalisation. The internationalisation of Greek HEIs will also be enhanced through RRF funding.

Greece acknowledges the key role HEIs play in contributing to sustainable development. Academic programmes on sustainable development are organised by different Greek universities. A network of HEIs for sustainable development aims to promote effective policy making at local, regional and national level, following the 2030 United Nations' Agenda for Sustainable Development and the initiatives to integrate the Sustainable Development Goals into the higher education sector.

¹⁴¹ Greece, Italy and Lithuania.

¹⁴² Greece has the highest enrolment rates in the 30-39 age bracket in the EU (Eurostat 2018 data).

¹⁴³ Bachelor's in the Archaeology, History and Literature of Ancient Greece.

¹⁴⁴ 'Support of actions for internationalisation of the higher education'.

COVID-19 impacted strongly on HEIs in Greece. They remained closed from March 2020 until the end of the 2020/2021 academic year and they were forced, based on the preventive measures, to change their teaching methods by moving to an online learning environment. Only performing on site laboratory and clinical exercises were allowed on the premises, while the semester exams took place remotely at most of the institutions.

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Ελληνική Δημοκρατία, Υπουργείο Παιδείας και Θρησκευμάτων, Ειδήσεις – 28-05-21 Άνοιξε η πλατφόρμα υποβολής για αιτήσεις για τα Πρότυπα και Πειραματικά Σχολεία.

Ελληνική Δημοκρατία, Υπουργείο Παιδείας και Θρησκευμάτων, Υπουργικές Αποφάσεις, Εγκύκλιοι – Ανακοινώσεις – 12-02-21 Διευκρινιστικές οδηγίες για την υποστήριξη μαθητών/τριών, γονέων και εκπαιδευτικών από το Ειδικό Εκπαιδευτικό Προσωπικό (Ε.Ε.Π.) των κλάδων ΠΕ23 Ψυχολόγων και ΠΕ30 Κοινωνικών Λειτουργών για το σχολικό έτος 2020-2021 στο πλαίσιο της Πράξης: «Υποστήριξη σχολικών Μονάδων Πρωτοβάθμιας και Δευτεροβάθμιας Γενικής Εκπαίδευσης από Ψυχολόγους και Κοινωνικούς Λειτουργούς για την αντιμετώπιση των συνεπειών του Covid-19».

Ελληνική Δημοκρατία, Υπουργείο Παιδείας και Θρησκευμάτων – 14-04-21 Οι μεταρρυθμίσεις στην εκπαίδευση στο επίκεντρο διαδικτυακής συνάντησης εργασίας της ΥΠΑΙΘ Νίκης Κεραμέως, της Υφυπ. Ζέττας Μακρή και του Γεν. Γραμματέα, Αλέξ. Κόπτη, με τον Πρόεδρο κύριο Γιάννη Αντωνίου & τα Μέλη του Διοικητικού Συμβουλίου του Ινστιτούτου Εκπαιδευτικής Πολιτικής.

Ελληνική Δημοκρατία, Υπουργείο Παιδείας και Θρησκευμάτων – 30-06-21 17 Ερωτήσεις και απαντήσεις για το νέο νομοσχέδιο του Υπουργείου Παιδείας και Θρησκευμάτων «ΑΝΑΒΑΘΜΙΣΗ ΤΟΥ ΣΧΟΛΕΙΟΥ ΚΑΙ ΕΝΔΥΝΑΜΩΣΗ ΤΩΝ ΕΚΠΑΙΔΕΥΤΙΚΩΝ».

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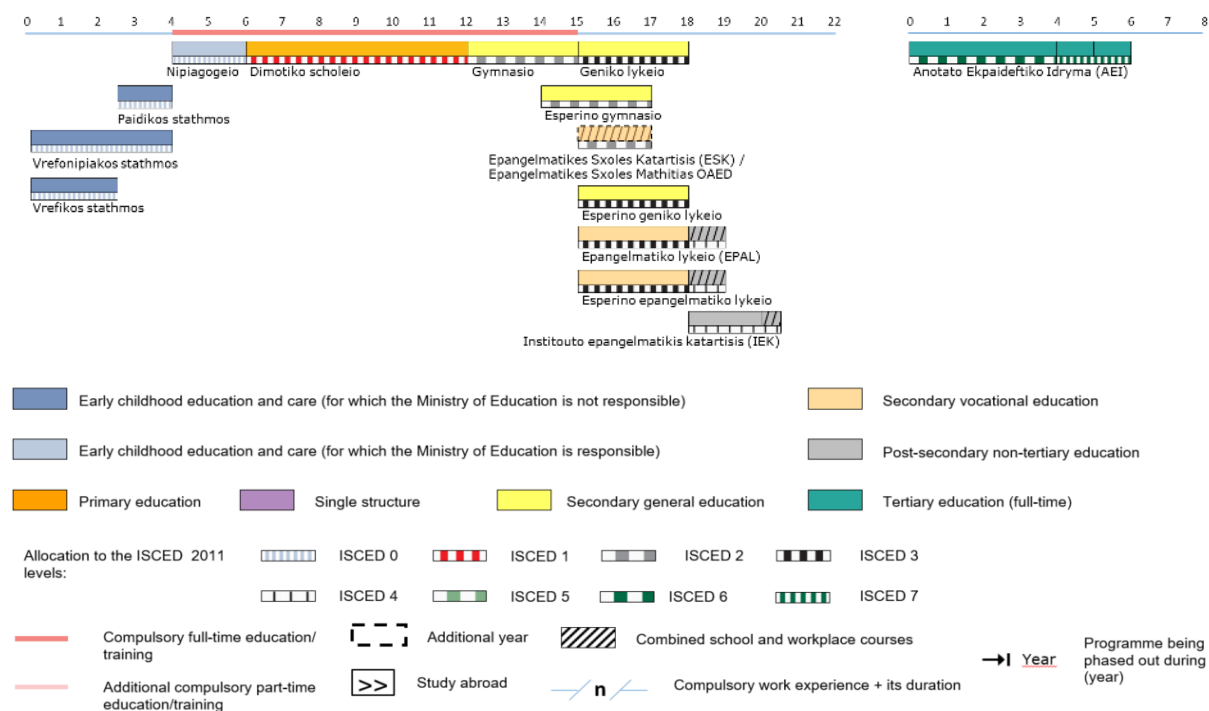
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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HUNGARY

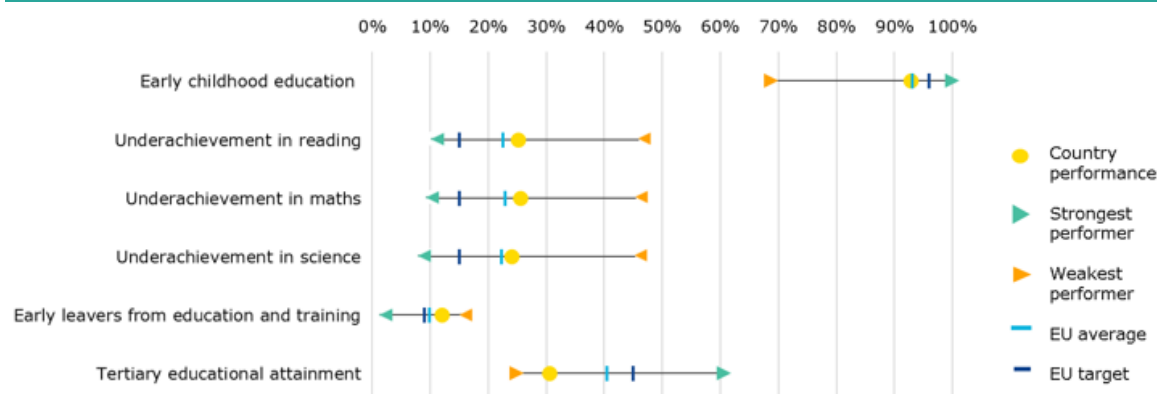
1. Key indicators

Figure 1 – Key indicators overview

			Hungary		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	88.3% ¹³	92.9% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.6% ^{09, b}	25.3% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	22.3% ⁰⁹	25.6% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	14.1% ⁰⁹	24.1% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	10.8%	12.1%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	26.1%	30.7%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.5%	4.7% ¹⁹	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€3 397 ¹²	€3 883 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€3 316 ¹²	€6 650 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€6 830 ¹²	€9 208 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		10.7%	12.1%	12.4%	8.7%
	EU-born		: ^u	: ^u	26.9%	19.8%
	Non EU-born		: ^u	: ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			83.5%	85.7%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		25.9%	30.2%	33.4%	41.3%
	EU-born		42.6%	46.2%	29.3%	40.4%
	Non EU-born		: ^u	48.6%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Both pupils' life satisfaction and the frequency of bullying exceed the EU average.
- Hungary plans to create some 21 000 new kindergarten places.
- The shortage of teachers and support staff at school is increasingly pressing.
- A new financing and governance model has been introduced at most universities.

3. A focus on well-being in education and training

On international comparisons, Hungarian pupils' life satisfaction is slightly above average; however, the frequency of bullying is also slightly higher. The school climate has a stronger effect on pupils' average performance in grade 8 than in grade 4, in line with international data (OH, 2020). Less than half of pupils (45%) attend a primary school that teachers say is safe and disciplined, against the international average of 61%. There is a clear correlation between a disciplined and safe school climate and learning achievement. Based on the analysis of PISA 2018 data, on a scale of 1 to 10, the average value of the index measuring Hungarian pupils' satisfaction with their lives (7.12) is slightly above the EU average (6.8). Compared to other EU countries, the percentage of pupils who reported being bullied at least a few times a month is 22.6%, also slightly above the EU average of 22.1% (OECD, 2019). At national level, school health promotion is defined by law (Governmental Decree 20/2012), with the aim of achieving children's full physical, mental and social well-being. Pupils' well-being is not monitored, nor were there any specific support measures taken in the context of the pandemic.

More than half of Hungarian parents consider that their children's mental health has been impacted by the pandemic. According to a representative survey conducted by UNICEF in May 2021, 54% of parents reported attention disorders, sleep problems, loneliness, restlessness or anxiety among their children (UNICEF, 2021). Around half of parents fear that the lockdowns and the pandemic situation will have a long-lasting adverse impact on their children: their emotional, social and motoric development has slowed down and they have accumulated learning deficits. Children in single-parent households suffered much more frequently from the adverse effects of the pandemic than those living with both parents, and children from lower-income families were also found to be more exposed to mental health risks.

The National Strategy for Crime Prevention (2013-2023) gives childcare and education staff an important role in protecting children, while legislative amendments put forward in 2020 aim to reduce violence at school. The Crime Prevention Strategy was adopted by the Hungarian Government in 2013 to define legislative, organisational, developmental, training, attitudinal and awareness-raising tasks for the following decade. The strategy emphasises the prominent role of teachers in preventing crime and protecting children, and one of its aims is to strengthen preparedness for crime prevention in initial teacher education. In July 2020, a law was adopted establishing special police forces to ensure security in educational institutions.

National programme assesses pupils' fitness level. The National Unified Student Fitness Test (NETFIT®) was introduced in 2014/2015. Since then, physical education teachers need to assess pupils' fitness in a uniform way at all schools. NETFIT® is a diagnostic and pedagogical assessment and feedback tool that distinguishes and measures four different fitness profiles: body composition and nutrition profile; aerobic fitness profile; musculoskeletal fitness profile; and flexibility profile. The 2021-2030 Public Education Strategy sets the target of reducing the share of pupils with the poorest fitness status from the current 28% to 15%.

The 'Tanoda' after-school programme aims to support disadvantaged pupils. 'Tanodas' are after-school child welfare services offered to pupils whose families and schools alone cannot provide adequate conditions for successful learning and achievement. The Tanoda programme supports pupils' school performance and development through personalised support and non-formal and informal ways of learning. Through extracurricular activities, these after-schools contribute to the

successful progress of pupils from different social, cultural and educational backgrounds in primary and secondary education. Their role is therefore particularly important for pupils who are disadvantaged, those with multiple disadvantages, including Roma, or those living in residential care. The first after-school houses were created in the 1990s as civil initiatives and were financed from the European Social Fund from 2004 onwards. As of 2019, Tanoda has been integrated into the Child Protection Law as a basic child welfare service, supported by a national grant system of HUF 2.4 billion a year (~EUR 6.9 million). This supports the financing of 183 after-school houses for around 5 000 disadvantaged pupils.

Higher education institutions are responsible for student welfare services. The Higher Education Act deals with social and welfare provision for students in general, prescribing the provision of adequate sports and accommodation infrastructure, the operation of student welfare and support services, the principles and means of support for students with disabilities, and the means of ensuring equal opportunities and equal access. Through higher education institutions, the State provides financial support to students for the operation of sports, cultural, housing and other social and welfare services, as well as cash grants. Most higher education institutions offer mental health and other support services to students, and many have peer support services, but the availability and quality of these services are not standardised.

4. Investing in education and training

Public expenditure is around the EU average. General government expenditure on education as a proportion of GDP corresponded to the EU average (4.7%) in 2019. Measured as a percentage of the total public budget, Hungary spent 10.3% on education in 2019, against an EU average of 10.0%. Education spending in real terms increased by 11% since 2010, but the distribution between sectors changed significantly. While financing for secondary and tertiary education increased (by 29.7% and 25.5%, respectively), it dropped by 12.6% for pre-primary education.

Financing for higher education declined in 2021. The amount earmarked for higher education decreased by 5% from HUF 624 billion (~EUR 1.73 billion) in 2020 to HUF 593 billion (~EUR 1.69 billion) in 2021, of which HUF 322 billion (~EUR 0.9 billion) has been allocated to operating expenses. In recent years, even with EU funds, support for higher education has decreased not only in nominal terms but also in terms of GDP and per student.

5. Modernising early childhood and school education

Participation in early childhood education and care (ECEC) corresponds to the EU average. From the age of 3, 92.9% of children participate in ECE (EU average: 92.8%), below the new EU-level target of 96% set for 2030. In 2016, Roma participation was at 91%, close to the national average and by far the highest among Member States in the region (FRA, 2016). However, regional coverage of kindergartens remains unbalanced: in 2020, 31% of settlements had no kindergartens (KSH, 2020). Participation of children under the age 3 is low: in 2019, only 16.9% attended childcare (EU average: 35.5%). This is partly linked to the availability of family allowance for a parent staying at home with their child until age three and partly to the scarcity of crèche places. In 2020, there were slightly more than 50 000 crèche places available for some 280 000 children below the age of 3. Some 76% of settlements had no crèches, and for almost 60 000 children no place could be provided in their own settlements (KSH, 2021a). Back in 2018, the prime minister announced that some 70 000 places in kindergarten would be created by 2022.

Decision on children's school maturity remains with the central authority. A 2019 amendment to the Act on National Public Education changed the rule for enrolling children in primary school. Where previously kindergarten heads could allow a one-year extension of pre-school attendance instead of proceeding to primary school in case of immaturity, the new regulations request an application by parents 8 months before the start of the school year, followed by an expert decision issued by the Education Authority. The Commissioner for Fundamental Rights of Hungary considered the process to be unlawful, arguing, among other things, that the deadline is too early and the electronic application process discriminates against disadvantaged families. In March 2021,

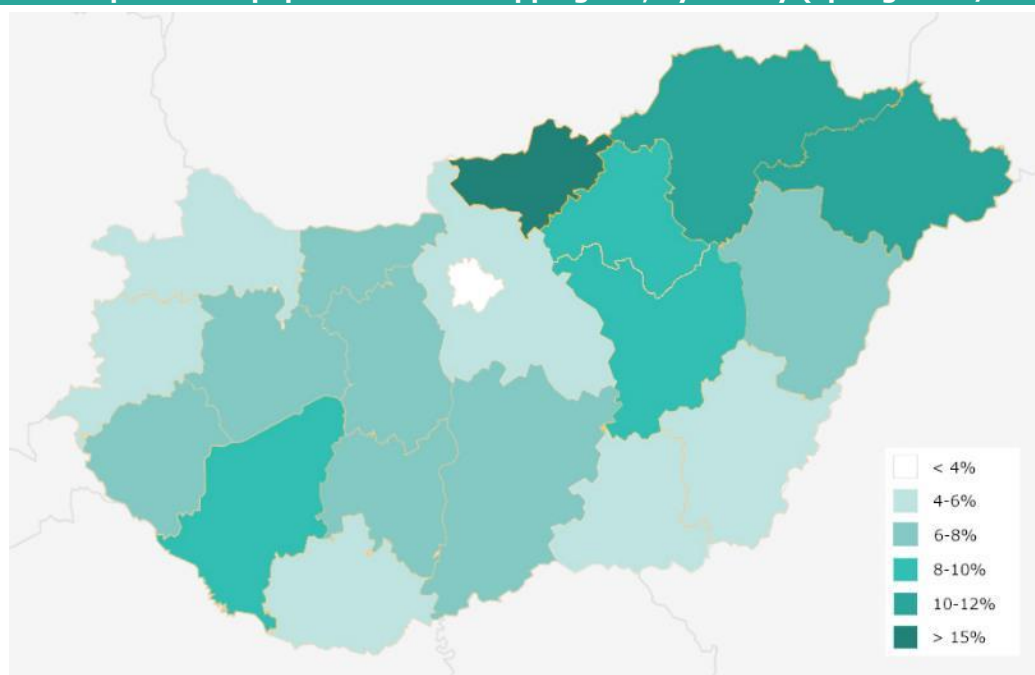
the Constitutional Court declared the regulation unconstitutional; following that, an amendment was adopted, also in March 2021. Parents may now attach the opinion of the pre-school teacher to the request for deferral, and the child protection authority can also initiate the deferral in the absence of a parental request. However, the amendment leaves the decision over the maturity of the child with the central authority.

In the face of increasing pre-school teacher shortages, the Government amended the employment conditions in kindergartens by a decree in August 2020. While, according to the previous requirement, a kindergarten teacher had to be present in each child group during the entire opening time of the facility, the new decree requires the presence of a kindergarten teacher only from 8 a.m. to 12 a.m. The previous requirement could only be met with two kindergarten teachers per group, while in the new context a kindergarten teacher will be replaced by nannies and/or assistants in the afternoon and before 8 a.m. These regulations reversed the decades-long practice and quality requirement of allowing only qualified kindergarten teachers to deal with children during their entire stay at kindergarten.

Educational outcomes are below the EU average in the latest survey of the OECD Programme for International Student Assessment (PISA 2018). At the age of 15, mean levels of basic skills are significantly below the EU averages and have decreased since 2009, with the sharpest decline in science. The share of low achievers is well above the EU average in all three areas tested: 25.6% in mathematics, 25.3% in reading and 24.1% in science, compared to 22.4%, 21.7% and 21.6% respectively at EU level. The revised National Core Curriculum of 2020 and its centrally developed framework curricula remain heavily content-oriented, leaving little room for teachers to develop pupils' key competences.

In 2020, the early school leaving rate increased slightly. In 2020, the rate of early leavers from education and training increased to 12.1% (against an EU average of 9.9% and the EU-level target of 9%). The rate is higher in the least developed districts and among Roma (65.3%) (KSH, 2019). The concentration of disadvantaged pupils in certain schools and school types – especially vocational training schools – and pressing teacher shortages makes it difficult to retain pupils in school and give them the personalised support they would need. The distribution of pupils at risk of dropping out varies greatly by school type and region. In the three most affected counties, 10-15% of pupils are concerned (Figure 3).

Figure 3 - Proportion of pupils at risk of dropping out, by county (spring 2020/2021)



Source: Educational Authority

The school system is highly selective, leading to the early separation of pupils by socio-economic status. The rate of disadvantaged pupils in secondary education is extremely unequal by school type; according to available data, it is very high in vocational training schools (*szakképző iskola*) (12.96%), lower in vocational secondary schools (*technikum és szakgimnázium*) (2.86%) and very low in general upper secondary schools (*gimnázium*) (1.35%) (OH, 2021). Hungary also has the largest urban/rural gap in education outcomes, before accounting for socio-economic status, of all OECD countries (OECD, 2019). A 2020 July amendment of the Act on Public Education exempts the maintainer of the school from paying compensation to pupils in cases where the court found that they were barred from inclusive education. Instead, the school maintainer is now obliged to compensate them in the form of education and training services – whose quality and inclusiveness is, however, not specified in the law.

Restrictions linked to sexual education and homosexuality in the child protection law (Act LXXIX of 2021) raised controversy. In June 2021, the Parliament adopted a bill which prohibits sharing with minors any content that is pornographic, depicts sexuality as a goal in itself, and content that portrays or promotes homosexuality or sex reassignment in the realm of child protection. The law also includes a provision according to which schools may only involve external organisations or individuals that are registered by the Education Authority in educational activities on 'sexual culture, sexual life, sexual orientation, sexual development, drug abuse, dangers of the internet and other physical and mental health development'. In July 2021, the European Commission launched an infringement procedure against Hungary for violations of fundamental rights of LGBTIQ people.

The shortage of teachers is increasingly challenging. Despite the economic uncertainty linked to the pandemic, the number of teachers in general education and vocational education and training dropped by almost 3 000 in one year, where the total number of full-time teachers was 164 438 in 2020/2021 (KSH, 2021b). The teaching workforce is ageing: in 2017, 41% of teachers were aged 50 or over. Initial teacher education cannot meet the demand for teachers: dropout rates are high and less than half of teacher graduates actually enter the profession. In primary education, the proportion of small schools (with less than 150 pupils) is particularly high (49.5%) (Lannert et al., 2021). Small schools need to maintain a full teaching staff regardless of the number of children, resulting in uneven distribution of teachers across the country. Teacher shortages are most significant in disadvantaged areas, for mathematics, science subjects and foreign languages, and in vocational education and training. Low salaries are one factor: these are equivalent to only 58%-66% of the salaries of other tertiary graduates (OECD, 2021). In addition, the number of teaching hours is the highest in Europe (European Commission, 2021a).

The distribution of special education teachers and other non-teaching support staff is uneven. Data from the 2019/2020 school year shows wide regional variations in the supply of special education teachers, conductors, developmental teachers and school psychologists (European Commission, 2021b). Wealthier regions tend to have better-equipped schools, with more professionals, while poorer regions suffer from the lack of human resources. This weakens the ability of the education system to counterbalance the impact of students' family background and create equal opportunities for children with special educational needs (SEN). Although most pupils with SEN attend vocational training schools (*szakképző iskola*), the supply of specialists in these schools is especially scarce.

The Government is investing in the language skills of pupils and language teachers. A scheme of two-week summer language courses abroad for secondary school students was planned to be launched in 2020 but had to be cancelled because of the pandemic. Meanwhile, the Government announced it would spend HUF 1.5 billion (EUR 4.29 million) a year on improving foreign language teachers' language skills through stays in the target language country. It also announced the further development of modern infrastructure for foreign language teaching; this would enable students to learn at least one foreign language at school at an appropriate level without having to take private lessons.

Box 1: ESF project 'Methodological renewal of public education with the aim of reducing early school leaving'

Measure 3.1.2 of the human resources development operational programme

The project aims to develop and spread pedagogical methods that can prevent early school leaving and the related renewal of the content of initial and continuing teacher training. The project is being implemented by the Education Authority and seven universities that provide initial teacher training. The aim is to prepare teachers for differentiated development of pupils in diverse groups, focus on competences, and integrate playful, experiential methods into education.

By September 2021, the project will have involved 35 000 teachers in 1 500 schools.

Budget: HUF 9.86 billion (EUR 28.2 million)

Duration: 2017-2021

<https://www.komplexalapprogram.hu>

6. Modernising vocational education and training and adult learning

Participation in vocational education and training (VET) is increasing and graduates fare well on the labour market. As in most EU countries, the employment rate among recent VET graduates dropped in 2020, to 80.0% in Hungary, but this still exceeds the EU average (76.1%). This corresponds to the overall high share of employment among the population aged 25-55 (86.2%) (KSH, 2021c). There are however, territorial differences in the employment rate of recent VET graduates, hitting the North Great Plain most (68.9%). A regular graduate tracking system could be helpful to identify the extent to which training meets labour market needs.

Retaining students and preventing early school leaving in VET remains a challenge. As of 2020/21, two programmes have been piloted in nine VET institutions and two church organisations to help students complete lower secondary education. The renewed 'Springboard' (*Dobbantó*) is a basic competences development programme for learners who have been unable to complete lower secondary education by the age of 16. The 'Workshop-based School' programme (*Műhelyiskolai program*) is accessible to secondary school dropouts over 16 or those who have completed lower secondary education in the 'Springboard' programme. It leads to a school leaving certificate attesting completion of lower secondary and/or a partial vocational qualification (EQF2-3), giving direct access to the labour market (Cedefop, 2021).

Participation in adult learning is low and shrank further during the lockdowns. The share of adults participating in lifelong learning dropped to 5.1% in 2020. Recent reforms in vocational education and training and adult education are expected to make an impact on participation. The introduction of student loans in adult training is expected to increase participation. In 2021, a support programme for corporate training to be funded from ESF+ was launched to train more than 100 000 employees from an overall budget of HUF 70 billion (~EUR 200 million). Employers can apply for a grant to cover the training costs and contribution to the salaries of their employees during the training. In March 2021 the system of labour market trainings was restructured, replacing the previous scheme within the Public Employment System.

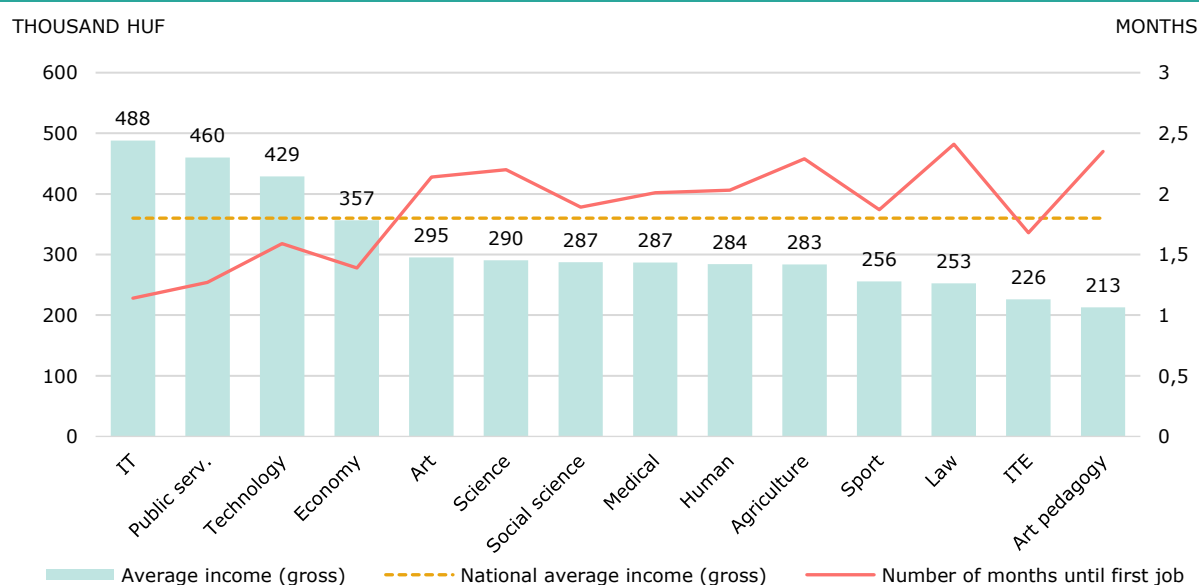
Policy developments in adult learning are increasingly focusing on needs related to the labour market and to employers' productivity. Respondents to an adult education survey (CEDEFOP, 2020) consider personal development more important (67%) than improving skills to look for another job (53%) or to develop skills that can be used in any job (41%). However, the recent reform of active labour market support for training seems to have limited individuals' guidance and access to needs-based training and favours supporting employers' training needs instead.

7. Modernising higher education

The growing demand for a highly skilled workforce is not being met by a sufficient number of tertiary graduates. At 30.7%, Hungary has one of the lowest rates of the population aged 25-34 holding a tertiary degree (against an EU average of 40.5% and the EU-level target of 45%). The share of highly skilled women in this age group exceeds that of men by 11.1 percentage points, slightly above the EU average. The employment rate of recent tertiary graduates (88.1%) exceeds the EU average (83.7%). In the 2020/2021 academic year, a total of 204 819 students studied full-time in higher education, almost the same number as in the previous year; of all students, 28.8% study part-time. Around a third of full-time students pay a fee for their education; this proportion is higher among part-time students (European Commission, 2020). The share of international students is growing (35 635 students, or 17.4% of the total), while around 15 000 Hungarian students studied at higher education institutions abroad in 2019/2020; the main target countries are Austria, Germany and the UK (Engame Academy, 2021).

Graduate tracking data show good employment prospects for graduates but high dropout rates in higher education. The Education Authority has published the results of the 2020 Graduate Tracking System Administrative Databases Integration survey (DPR, 2021), which processed data on graduates and dropouts between the academic years 2011/12 and 2017/18; altogether, this covered 599 805 students and 765 567 courses. The data show that graduates from some Bachelor's programmes earned on average nearly a third more, and graduates from single-tier Master's programmes earned up to 38% more, than the national average salary. Moreover, they were able to find a job in less than 2-2.5 months (Fig. 4). Dropouts remain frequent: more than a third of Bachelor's students do not graduate, with dropout rates being especially high in IT, engineering and science programmes. To help students complete their studies, those with poor results in their Bachelor's programmes are allowed to transfer to short-cycle higher education vocational training from 1 January 2021.

Figure 4 - Average income of and time needed to find employment among career starters that graduated from Bachelor's programmes in 2018



Source: Educational Authority, graduate tracking database. Note: The left axis indicates the gross average income (in thousand HUF) and the right axis expresses the time needed to find employment (in months).

The governance and financing of most universities have been handed over to trust funds. By 2021, the Government transferred the governance and financial management of all but six previously state-run higher education institutions to trust funds established for this purpose. While these trusts have received substantial assets from the State and will continue to receive funds from

state budget for their operation every year, they operate as private entities. All important decisions are made by the board of trustees, whose members are appointed by the Government for their lifetime. This is different from the practice of other countries where, in the case of foundation-based universities, about half the membership of the trust funds are elected by and from the senate of the university; the members of the board are appointed by transparent criteria for a fixed term and the decision-making power of the board is limited to overall budgetary matters and strategic planning. In the Hungarian model, it is left to the discretion of the board as to whether they grant the right of consent to the senate and they can repeal this right at any time. The new law can only be changed by a two-thirds majority in Parliament. In April 2021, a law on trust funds was adopted, stipulating that 'the senate needs to be granted the right of opinion or consent in the foundation document' of the university. The Constitutional Court found in June 2021 that university autonomy is thereby guaranteed and the legislation does not violate the Fundamental Law. According to the Hungary chapter of the 2021 Rule of Law Report, some stakeholders have expressed concerns about the newly established private trusts receiving significant public funding, managed by board members close to the current government (European Commission, 2021c).

The Government signed a strategic agreement with China's Fudan University. In April 2021, the Government signed a strategic agreement with China's Fudan University, in which the Government undertakes to build a 520 000 m² campus for the university on 26 hectares in Budapest. In June 2021, the Parliament adopted a law on creating the governing trust foundation of the Fudan Campus. The university will offer courses in economics, humanities, social sciences, natural sciences, engineering and medicine to 5 000-6 000 students.

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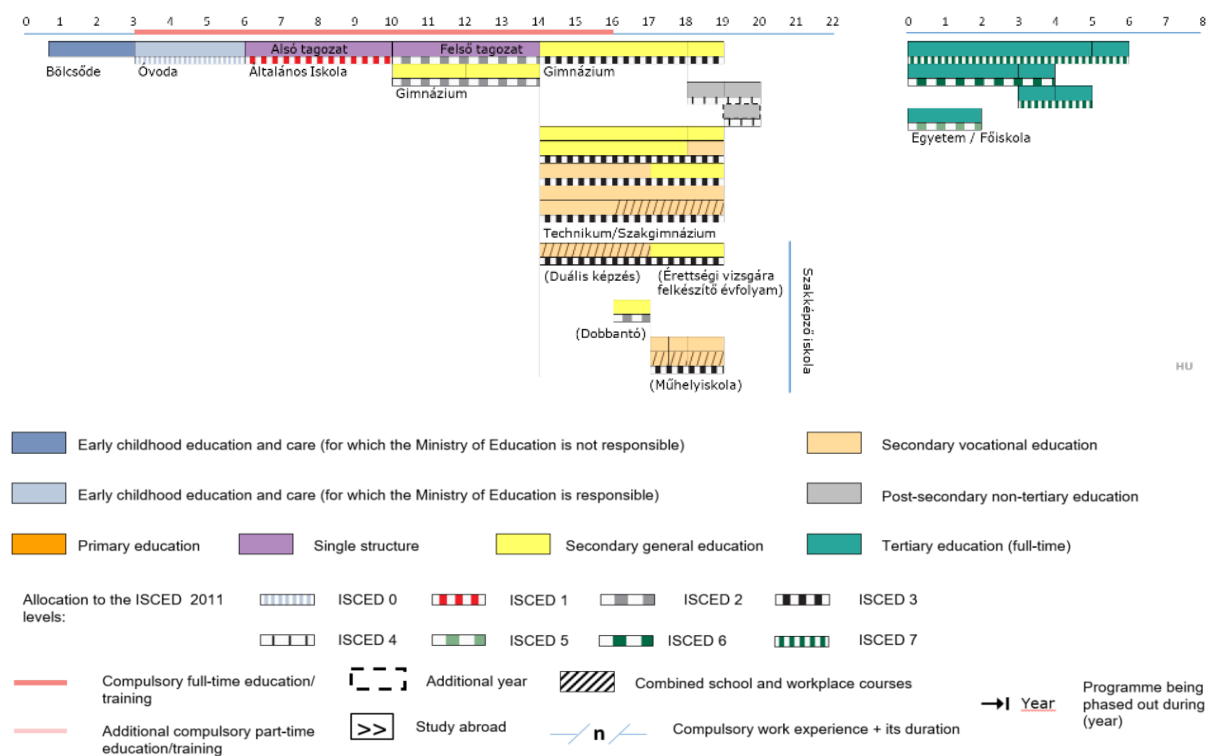
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14. Data by country of birth: edat_ifse_02.
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03. Data by country of birth: edat_ifse_9912.
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.

Indicator	Eurostat online data code
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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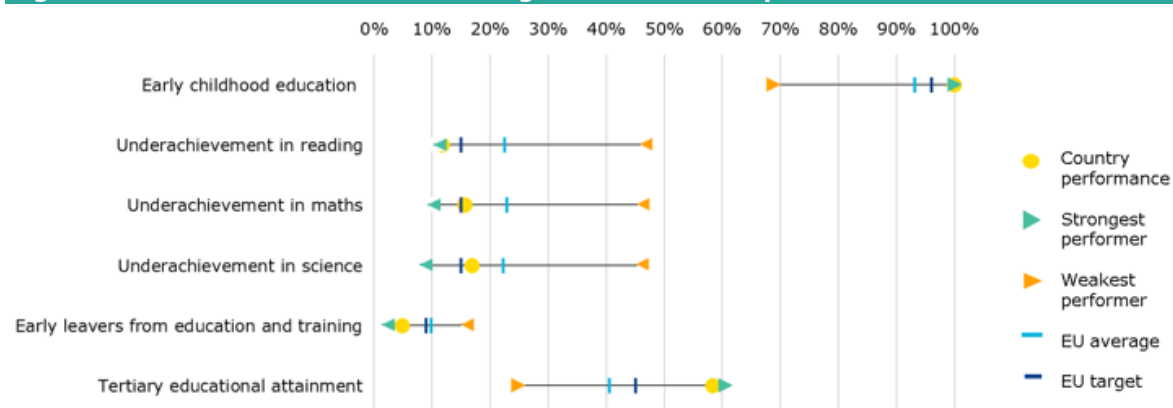
1. Key indicators

Figure 1 – Key indicators overview

			Ireland		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	82.4% ¹³	100.0% ^{19, e}	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.2% ^{09, b}	11.8% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	20.9% ⁰⁹	15.7% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	15.2% ⁰⁹	17.0% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	11.9%	5.0%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	49.6%	58.4%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		4.6%	3.1%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€7 147 ¹²	:	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€9 095 ¹²	:	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€11 500 ¹²	:	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		11.0%	5.2%	12.4%	8.7%
	EU-born		22.8% ^u	:	26.9%	19.8%
	Non EU-born		11.5%	:	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			86.7%	94.9%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		48.7%	56.0%	33.4%	41.3%
	EU-born		43.6% ^u	47.7%	29.3%	40.4%
	Non EU-born		64.4% ^u	73.6%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; for Ireland, the ECE rate includes participation in ECEC centres, and also in primary schools, which are attended by many 4-5 year olds; FTE = full-time equivalent; b = break in time series, d = definition differs, e = estimated, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Ireland has established a strong framework for well-being and resilience at all educational levels. During COVID-19, Ireland has invested extensively in special measures in education.
- Reforms continue to improve affordability and quality of early childhood education and care, and to further modernise school education.
- Tertiary educational attainment is growing. Concerns over the decreased public spending persist, aggravated by the COVID-19 impact on university revenues.
- Ireland continues strengthening its apprenticeships system, green and digital upskilling, and adopted a new strategy for adult learning, including digital literacy.

3. A focus on well-being in education and training

Ireland has implemented a strong policy framework on the well-being of students and staff. The 2018-2023 Well-being Policy Statement and Framework for Practice¹⁴⁵ defines well-being and provides an overarching structure for well-being in education. By 2025, Ireland aims to ensure that well-being will be central to every school and educational centre, all schools and educational centres will provide evidence-informed approaches and support, and the well-being of all children and young people will be promoted. Ireland aims to be recognised as a leader in this area. Furthermore, the framework defines the key areas of well-being in education on which schools should focus, the indicators of success and statements of effective practice. Every school and education centre is required by 2023 to use the school self-evaluation process to initiate a well-being promotion review and development cycle. Schools and education centres are supported in this process by the framework, online well-being resources and by the Department of Education and its agencies. At tertiary level, in 2020, the government launched national frameworks to address student mental health and suicide prevention¹⁴⁶, and the problem of sexual violence and harassment¹⁴⁷.

Well-being and mental health measures of students and educators are integrated across education levels. Aistear, the Early Childhood Curriculum Framework, places a strong emphasis on the relationship between education and care. It promotes a 'nurturing pedagogy', emphasising children's feelings and dispositions like motivation, confidence, perseverance, and how they see themselves as learners (NCCA, 2021a). In primary education, the social personal and health education (SPHE) programme supports the development of strong and positive mental health and well-being among children (NCCA, 2021b). One of the 8 key principles of the junior cycle well-being programme is that the student experience contributes directly to their physical, mental, emotional, and social well-being and resilience (NCCA, 2015, 2017). The upper secondary SPHE programme aims to support learners in making choices for health and well-being. The relationships and sexuality programme (RSP) is a key component of the SPHE programme (Government, 1999), and a single, integrated curriculum for RSP and SPHE spanning both primary and secondary is planned. The Professional Development Service for Teachers (PDST) provides resources for all primary and secondary teachers and schools, including professional and personal development for SPHE teachers. Higher education institutions (HEIs) have developed individual actions plans to combat sexual harassment, and a 'Connecting for Life' group supports the implementation of the national framework on student mental health.

Teacher support contributes to students' better educational outcomes and well-being. According to OECD (PISA), the proportion of students who are in schools where students agreed that 'in every or most lessons teachers provide extra help when students need it' is higher than the EU average (74.8% v 70.7%). Those students have scored significantly better in reading

¹⁴⁵ <https://assets.gov.ie/24725/07cc07626f6a426eb6eab4c523fb2ee2.pdf>

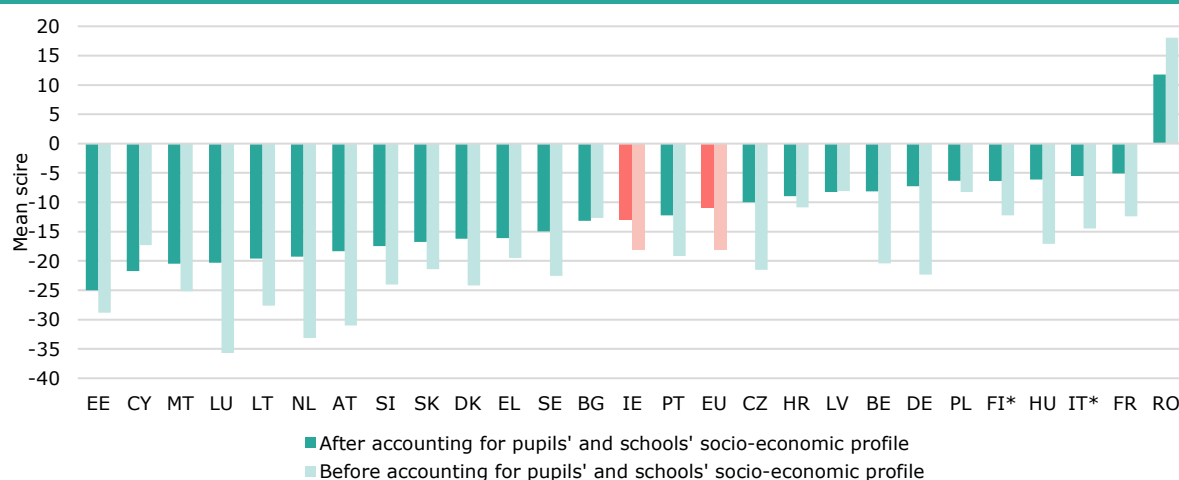
¹⁴⁶ <https://hea.ie/assets/uploads/2020/10/HEA-NSMHS-Framework.pdf>

¹⁴⁷ <https://www.gov.ie/en/publication/678fee-framework-for-consent-in-higher-education-institutions-safe-respectf/>

performance¹⁴⁸. Despite the existing training opportunities, in 2018, more than half of maths and science teachers (58% and 54%) declared a need for further professional development in addressing students' needs¹⁴⁹. According to the national 'Growing Up in Ireland' study, the quality of relationships with teachers is an important factor in students' well-being. Higher levels of achievement among children and students are linked to fewer internalising difficulties and greater life satisfaction (Nolan and Smyth (forthcoming), 2021). Most 13-year-olds (88%) in Ireland were overall faring well in terms of emotional well-being, however less well than their peers in Sweden and Denmark (Nixon, 2021).

Despite numerous policy and practical efforts, bullying and cyberbullying remain an ongoing challenge. The 2013 Action Plan on Bullying¹⁵⁰ contains comprehensive anti-bullying measures including initiatives promoting internet safety ('Webwise'), preventing racist bullying, homophobia and transphobia ('Being LGBT in School')¹⁵¹. Nevertheless, in 2018, more than 1 in 5 15-year-old students (22.7%) reported being bullied a few times a month, an increase of 8 pps compared to 2015, now at EU average level (22.1%). Around a quarter of students who were high or heavy internet users reported being bullied (23.5% and 28.4%), more than the EU average (15.1% and 19.4%). In Ireland, bullied students reported lack of life satisfaction more often than in other countries (25.8% vs EU 15.1%). This goes alongside a drop in the reported sense of belonging at school, which fell by 6.6 pps between 2015 and 2018. This aspect is particularly important since students who reported a sense of belonging at school scored higher in reading by 13 points (EU 11 points) (Figure 3) (OECD, 2019). According to research by the National Anti-Bullying Research and Resource Centre at Dublin City University, 49% of males experienced significantly more frequent cyberbullying since the COVID-19 lockdown, and it was more prevalent among younger boys (Milosevic, T. et al., 2021).

Figure 3 – Change in reading performance when pupils do not feel they belong at school, PISA 2018



Source: OECD, (2019). Data for IT and FI after accounting for pupils' and schools' socio-economic profile are not statistically significant.

While support measures helped alleviate some COVID-19 related stress, students and teachers experienced a decline in their well-being. National authorities provided parents, students and school staff with numerous resources and guidance in relation to COVID-19. This

¹⁴⁸ See Table III.B1.6.7 in OECD, 2019

¹⁴⁹ <https://timssandpirls.bc.edu/timss2019/>

¹⁵⁰ <https://www.education.ie/en/Publications/Education-Reports/Action-Plan-On-Bullying-2013.pdf>

¹⁵¹ <https://www.education.ie/en/publications/education-reports/being-lgbt-in-school.pdf>

included a well-being advice and resources website¹⁵², well-being guidance for parents from National Educational Psychological Service, including the online 'minding your well-being' programme¹⁵³, as well as supports for children with special educational needs and their parents¹⁵⁴. However, at the end of 2020, 70% of primary and secondary teachers reported feeling more stressed compared to the same time the previous year. Reasons given were due to issues with students who found it difficult to settle back into a classroom environment and a perception that remote teaching impacts their work-life balance (Dempsey and Burke, 2021). Further research (CSO, 2021; Murray et al., 2021) shows the negative impact of COVID-19 on children's and young adults' well-being, reflected in worse moods or feeling depressed. At tertiary level, many students struggled to integrate back into college life, in particular socio-economically disadvantaged and migrant students (Fitzmaurice and Ni Fhloinn, 2021). The complex impact of the COVID-19 pandemic on the mental health and well-being of children and youth¹⁵⁵ calls for further monitoring.

4. Investing in education and training

Overall, Ireland continues to increase expenditure on education; however public expenditure on higher education has decreased. In 2019, Ireland spent 5.52% of the GNI* specifically adapted to Ireland on education¹⁵⁶. Measured as a percentage of the total public budget, Ireland spent 12.8% on education in 2019 (EU 10%), showing a steady increase in recent years (12.6% in 2018 and 11.6% in 2015)¹⁵⁷. Ireland spent 42% of its education budget on pre-primary and primary education, one of the highest shares in the EU (EU 33%). Spending on tertiary education was 13%, a drop of 3 pps compared to 2018 and remaining below the EU average (16%). Overall, between 2011 and 2019, general government expenditure on education increased by 20% in real terms; however, higher education expenditure dropped by 14% (COFOG).

In response to COVID-19, large-scale emergency funding was provided for all levels of education. The funds were intended to address public health compliance measures, boost teacher supply, increase higher education places and mitigate against revenue losses. The funds were also to ensure the safe reopening of schools, early childhood education and care (ECEC) facilities, and further and higher education campuses. The 2021 education budget of EUR 8.9 billion will include 1 065 additional teachers in 2021 over 2020. In total 23 000 new school places and additional student capacity in schools will be provided by more than 200 large-scale projects currently under construction. Funding provided specifically to support schools in their response to COVID-19 from January to July/August 2021 amounts to EUR 226 million. At tertiary level, the socio-economic inequalities were addressed by doubling the student assistance fund, funding to support Traveller students' access to universities, a laptop loan scheme and funding for HEI access services. Connectivity issues were addressed through the HEAnet eduroam network¹⁵⁸. The amount of EUR 47 million was allocated to HEIs to support the provision of costed extensions to research activities disrupted by the pandemic, including for postgraduate research students¹⁵⁹. A further EUR 21 million was provided for student supports, including for student well-being and mental health supports, and EUR 84 million was allocated to support the reopening of on-site learning in September¹⁶⁰.

¹⁵² <https://www.gov.ie/en/publication/af24b-wellbeing-guidance-documents-for-parents-students-and-schools/#parents-primary-schools>

¹⁵³ <https://www.hse.ie/eng/about/who/healthwellbeing/about-us/minding-your-wellbeing.html>

¹⁵⁴ <https://ncse.ie/remote-teaching-and-learning-support-for-teachers-january-2021>

¹⁵⁵ https://www.esri.ie/system/files/publications/SUSTAT94_3.pdf

¹⁵⁶ DG EAC own calculations based on Eurostat, UOE, 2019. As a share of GDP it would be 3.1% (EU 4.7%). However, given its specific structure, public expenditure on education as a proportion of GDP for Ireland is not a fully reliable indicator.

¹⁵⁷ General government expenditure by function (COFOG) [gov_10a_exp].

¹⁵⁸ <https://www.heanet.ie/services/connectivity/eduroam>

¹⁵⁹ <https://www.gov.ie/en/press-release/24c29-minister-harris-announces-targeted-funding-of-47-million-for-researchers-affected-by-covid-19/>

¹⁶⁰ <https://www.iaa.ie/press-releases/iaa-welcomes-announcement-of-e105-million-in-funding-for-third-level-to-reopen-on-site-in-september/#>

Provision for students with special educational needs has been a prominent policy focus.

Additional funding for the Access and Inclusion Model (AIM) was announced in the budget for 2021 and made available from January¹⁶¹. The AIM payments, which enable ECEC (free pre-school) providers to support the inclusion of children by reducing the adult-child ratio within the pre-school room, rose by 7% from EUR 195 to EUR 210 per week. Following the publication of the in-school and early years therapy support demonstration project¹⁶² review, the pilot School Inclusion Model at primary and secondary level will be continued in 2020/2021 and 2021/2022 (European Commission, 2020).

Ireland is preparing a new digital strategy for schools and investing in digital infrastructure, supported also by the Recovery and Resilience Facility. The final tranche of EUR 50 million was provided to schools for ICT equipment under the 2015-2020 digital strategy in December 2020. Under the Irish National Recovery and Resilience Plan, EUR 64 million is allocated to improve the broadband connectivity of at least 990 primary schools, and for digital infrastructure in at least 3 415 primary and post-primary schools to support learners at risk of educational disadvantage through the digital divide. The new 2021-2027 Digital Strategy for Schools will build on the current one, taking into account the progress made, new developments in digital technologies and emerging priorities.

Box 1: The National Recovery and Resilience Plan (NRRP)

The Irish plan¹⁶³ is worth EUR 989 million in grants. Investments in education and skills related measures represent over 20% of the plan's allocation. Ireland is committed to mainstreaming digital skills across education and training settings, investing in better connectivity of schools, ICT equipment for disadvantaged students, supporting the development of technological universities, ensuring sufficient supply of graduates with high-level ICT skills, intensive upskilling/reskilling and apprenticeships programmes, and enhancing green skills.

5. Modernising early childhood and school education

Participation in early childhood education and care (ECEC) remains high and services adjusted effectively to the new COVID-19 norms. In 2019, the participation rate for children aged 3 and over continued to be at estimated 100%. However, Irish children spend less time in formal ECEC than those in other EU countries. The average number of weekly hours spent in formal ECEC for children above 3 is 25.5 hours v EU 29.5 hours. For children below 3, it is 22.6 hours, while the EU average is 27.4. (European Commission/EACEA/Eurydice, 2019). For children below 3, the participation rate in formal childcare increased by 20.8 pps between 2010 and 2019, reaching 40.8%, above the EU average of 35.5%¹⁶⁴. The ECEC rate among Irish Travellers is 75%, the highest among the surveyed countries¹⁶⁵ (FRA, 2020). Following the first lockdown, early learning and care services reopened on 29 June 2020 and have remained open throughout 2021. The ECEC pre-primary programme was paused between January and March 2021, with services open only for children of essential and vulnerable workers. The support measures allowed services to remain sustainable, including through the employment wage subsidy scheme¹⁶⁶. Online continuing professional development programmes saw a significant take-up, and Ireland is evaluating the scope for permanently expanding the online offer.

Quality and affordable ECEC remains at the fore in policy and programme reform. *First 5* (2019-2028) remains the key strategy to improving the quality, accessibility and affordability of ECEC (Government, 2020). The first progress report assessed if the key milestones were achieved. The

¹⁶¹ <https://www.gov.ie/en/press-release/74c5f-minister-ogorman-announces-additional-investment-to-support-children-with-disabilities-in-pre-school-care/>

¹⁶² <https://ncse.ie/wp-content/uploads/2020/11/Demo-project-evaluation-fInal-for-web-upload.pdf>

¹⁶³ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

¹⁶⁴ EU-SILC [ilc_caindformal].

¹⁶⁵ Belgium, France, Sweden, the Netherlands, the United Kingdom.

¹⁶⁶ <https://www.revenue.ie/en/employing-people/ewss/index.aspx>

national childcare scheme provides financial support towards the cost of ECEC and school-age childcare during the hours spent outside of pre-school or school. The 2021-2028 National Action Plan for Childminding aims to improve regulation and support to home-based childminders. The Workforce Development Plan for ECEC (to be published in 2021) aims to raise the profile of careers in ECEC, and to move to a graduate-led workforce by 2028. Work has started on increasing the participation of disadvantaged children in ECEC. In April, the Citizens Assembly on Gender Equality published its recommendations, calling for establishing a publicly funded and regulated childcare model, and increasing the State share of GDP spent on childcare from the current 0.37% to at least 1% by 2030 (national statistics)¹⁶⁷.

Irish primary and lower-secondary students' performance in maths is the highest in the EU, and above the EU average in science. According to the 2018 Trends in International Mathematics and Science Study (TIMSS)¹⁶⁸, Ireland is the top performing EU country in maths at both fourth class in primary and second year in secondary level. In science, Irish students perform better than the EU average, and their performance in both subjects has been stable over the last four years. Students' performance from less well-off families in maths was the second highest in the EU, and in science above the EU average. However, there is room for addressing the needs of high performers in Ireland, whose scores were below their peers' in other countries (DE, 2020).

Ireland prepares for reorganising the curriculum for primary education and considers further reforms at secondary level. In 2021/2022, a consultation on the draft framework for restructuring the primary curriculum will be carried out with teachers, school leaders, parents and children. Particular focus will be put on curriculum structure, allocated time and on teaching foreign languages. The draft framework envisages giving more autonomy and flexibility to teachers in providing learning experiences to children and in taking decisions about children's learning and development (NCCA, 2020). The reform specifications are to be finalised by 2024. At secondary level, the framework for lower-secondary 'junior' cycle is in the final stages of implementation. The evaluation of the junior cycle programme will provide evidence whether similar reforms should be implemented at upper secondary senior level.

The rate of early leavers from education and training (ELET) remains low, at 5% in 2020. This is substantially below the new EU-level target of 8% and the EU average (9.9%)¹⁶⁹. Since 2010, the overall rate decreased by 6.9 pps, including in the rural areas by 8.9 pps, which is one of the biggest improvements in the EU. However, certain groups still have high ELET rates, in particular Irish Travellers and Roma at 70%, which leads to a very low employment rate in this group at 15% (FRA, 2020).

Ireland has taken numerous measures to minimise educational inequalities due to COVID-19. Between January and March, primary and secondary schools switched to remote learning due to COVID-19. While it was easier to adapt than in 2020, not all teachers and students had equal access to digital pedagogical modalities due to the difference in broadband connectivity, access to technological devices and digital literacy. Student also felt less motivated to learn and disengagement increased. Students from socio-economically disadvantaged backgrounds, the Traveller community and those with complex special needs were particularly affected (Mohan, G. et al., 2021; Murray et al., 2021). To remedy the situation, Tusla Education Support Service worked with students and families identified by schools, and in March 2021¹⁷⁰, further support was allocated to schools catering for students experiencing the highest levels of educational disadvantage in order to, *inter alia*, reduce class-sizes in DEIS¹⁷¹ Urban Band 1 primary schools, extend the school completion programme to cover more schools, and to facilitate the participation of vulnerable and disadvantaged students in the completion programme. In February 2021, a supplementary programme was made available to

¹⁶⁷ <https://www.citizensassembly.ie/en/about-the-citizens-assembly/report-of-the-citizens-assembly-on-gender-equality.pdf>

¹⁶⁸ <https://timssandpirls.bc.edu/timss2019/>

¹⁶⁹ Eurostat, UOE, [edat_ifse_30].

¹⁷⁰ <https://www.gov.ie/en/press-release/d7406-minister-foley-announces-new-measures-to-tackle-educational-disadvantage/>

¹⁷¹ The national scheme supporting disadvantaged schools.

pupils with special educational needs. The 2021 summer programme, which was made available to all schools, also provided additional hours of in-school or home support for children with special educational needs. The Youthreach programme supports vulnerable groups. A new programme for primary and post primary schools for 2021/2022 addresses learning loss and student well-being affected by COVID-19¹⁷². The Inspectorate of the Department of Education monitors the COVID-19 impact on schools since the 2020 lockdown, including also digital learning and well-being¹⁷³.

6. Modernising vocational education and training and adult learning

Ireland continues to strengthen its apprenticeships system. According to the 2021-2025¹⁷⁴ action plan for apprenticeship, Ireland aims to reform its apprenticeship system, making it more flexible and responsive. To mitigate the problem of the sluggish growth in the number of employers, which was further worsened by the pandemic, the government launched as part of the 2020 jobs stimulus package the apprenticeship incentivisation scheme offering support worth EUR 3 000 for each new apprentice that was registered and retained on their apprenticeship. These measures are highly pertinent as the employment rate of recent VET graduates has been dropping, down to 73.5% in 2020¹⁷⁵, in line with the EU trend

Several measures were put in place to support training centres during COVID-19. 'ECollege', an online learning service funded by the Further Education and Training Authority (SOLAS), has been made available free of charge to support learners affected by lockdown measures. The Mitigating against Educational Disadvantage Fund aims to increase the participation of disadvantaged learners in education. To increase fairness and inclusiveness of the further education and training (FET) system, guidance was published for FET professionals to enable the implementation of the universal design for learning, a set of principles for curriculum development to ensure equal opportunities to all learners.

Several measures are being implemented to support the digital and green transition. To address the 2020 country-specific recommendation on 'digital divide', Ireland has created the 'Explore' and 'DigiECO' programmes, which provide digital training to employees, with special focus on people with below-average basic digital skills and older employees. The 'skills to compete' scheme, also supported by the RRF, supports those who have lost their jobs due to the COVID-19 pandemic. It combines three strands of the FET provision: transversal skills development to help employability, building digital capabilities, and specific courses targeting growth sectors and occupations.

In the NRRP, Ireland plans intense activation and reskilling/upskilling opportunities to help jobseekers find employment, and takes a strategic approach to adult learning. The Work Placement Experience programme will offer at least 10 000 places for upskilling and work experience to people who are unemployed for more than 6 months. The recovery skills response programme run by the Further Education and Training Authority (SOLAS) will provide training in green and specific sector skills in growth sectors. In September, Ireland published a 10-year adult literacy, numeracy and digital literacy strategy¹⁷⁶, also to support the post COVID-19 economic recovery.

The Irish government has adopted a new 2021-2025 pathways to work strategy. It aims to help the unemployed get back to employment through intense activation, upskilling and reskilling opportunities while engaging with employers. The national adult learning organisation (AONTAS) reported that despite additional funding and providers' and learners' efforts, adult learning

¹⁷² <https://www.gov.ie/en/circular/aec0a-covid-learning-and-support-scheme/>

¹⁷³ <https://www.gov.ie/en/publication/78605-return-to-school-summary-of-research-september-december-2020/>

¹⁷⁴ <https://www.gov.ie/en/organisation-information/3f066-statement-of-strategy-2021-2023/>

¹⁷⁵ Eurostat, UOE, [edat_lfse_24].

¹⁷⁶ <https://www.solas.ie/alnd-strategy/>

participation for some groups has dropped since the pandemic (e.g. Travellers and Roma, refugees and asylum seekers, people over 50 and people with disabilities)¹⁷⁷.

7. Modernising higher education

The tertiary educational attainment rate continues to grow; however, the employment rate of recent graduates dropped in 2020, in line with the EU trend. In 2020, the tertiary attainment rate grew sharply by 3 pps compared to 2019, reaching 58.4%, the second highest rate in the EU (average: 40.5%). This is significantly above the new EU-level target of 45%. The attainment rate among men at 54.5% is the second highest in the EU also, with a decreasing gender gap at 7.7 pps (EU 10.8 pps). The attainment rate among foreign-born people is 63.2%, among the highest in the EU. After a period of steady growth, in 2020, the employment rate of recent graduates was 87.4%, dropping by 3.6 pps compared to 2019 (EU 83.7%, a drop of 1.3 pps). Enrolments in HEIs rose again in 2020 in response to demographic trends and the additional places created in relation to the 2020 leaving certificate circumstances of calculated grading. The participation of international students (over 10%) has been affected by the travel restrictions, indicating a significant income loss for the sector. The Irish Universities Association has calculated a loss in revenue of EUR 374 million for Irish universities in the 2020 and 2021 financial years¹⁷⁸.

Ireland prepares a new plan to improve inclusiveness in higher education. In 2018/2019, only 10% of the student population came from disadvantaged areas compared to 20% from affluent areas (HEA, 2021). The 2021 report on higher education completion rates also shows major inequalities in higher education, particularly in terms of access to prestigious courses¹⁷⁹. Overall, institutes of technology were more likely to represent the local community in their student intake, while there was a more affluent student profile in the university sector. The new 2022-2026 National Access Plan (under preparation) aims to also address the long-term impact of COVID-19¹⁸⁰. Early in 2021, EUR 5.4 million was allocated to initiatives aimed at supporting students with disabilities to access higher education¹⁸¹.

Ireland continues upgrading the applied sciences sector. In 2019, the proportion of STEM graduates continued to increase, reaching 25.3% (EU 26%). While the proportions of science and ICT students are high compared to other EU countries, the proportion of engineering and technology students at 10% is among the lowest (Figure 4). In 2018¹⁸², Ireland established a new form of HEI, the technological university (TU). TUs aim to increase STEM graduate numbers, enhance research-informed teaching and learning, and support enterprise and regional development. In 2020, EUR 34.33 million was allocated to HEIs through the Technological Universities Transformation Fund (TUTF) to help them in their progression towards TU status¹⁸³. The NRRP aims to complement the TUTF to reform or develop the education and training programmes, which should benefit at least 9 600 students and 4 000 staff from 5 TUs, 3 already established (in Dublin, Munster, and the Midlands and Midwest region) and 2 in development.

¹⁷⁷ <https://www.aontas.com/assets/resources/Policy/What%20is%20Happening%20in%20ALE%20-%20FINAL.pdf>

¹⁷⁸ <https://www.researchprofessionalnews.com/rr-news-europe-ireland-2020-5-study-identifies-covid-19-funding-gap/>

¹⁷⁹ <https://hea.ie/2021/03/29/new-completion-data-shows-that-three-out-of-every-four-undergraduate-entrants-completed-and-graduated-from-higher-education/>

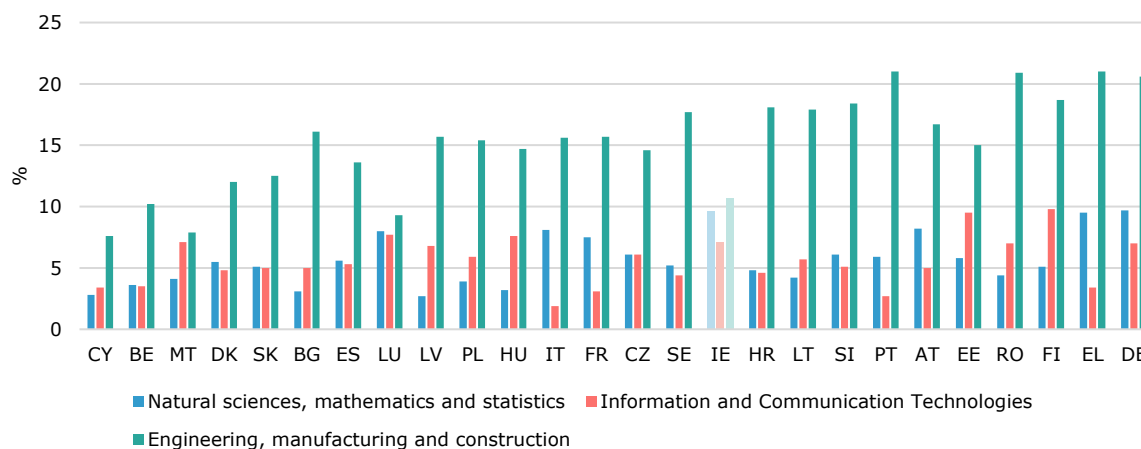
¹⁸⁰ <https://hea.ie/2021/04/16/invitation-to-make-a-submission-on-the-next-national-plan-for-equity-of-access-to-higher-education-2022-2026/>

¹⁸¹ <https://hea.ie/2021/01/22/minister-harris-approves-e5-4-million-to-help-students-with-disabilities-in-higher-education-institutions/>

¹⁸² <https://www.irishstatutebook.ie/eli/2018/act/3/enacted/en/html>

¹⁸³ <https://hea.ie/2020/10/07/minister-harris-announces-allocation-of-e34-33m-in-transformation-funding-for-technological-universities/>

Figure 4 - Distribution of students enrolled at tertiary education levels in STEM, 2019 (%)



Source: UOE, [educ_uoe_enrt04]. Note: Data for NL not available. MS are ordered from the lowest to the highest total share of students enrolled in STEM subjects.

Ireland adopts a new law to reform governance and accountability of higher education.

The Higher Education Authority Bill 2021 published on 6 May will replace the Higher Education Authority Act of 1971¹⁸⁴. The new bill aims to advance equality, diversity and inclusion at HEIs, while ensuring they provide accountability and transparency, as well as value-for-money for public funding. The changes constitute the biggest reform in higher education in 50 years and will:

- significantly slim down university governing bodies;
- empower the minister to appoint a majority of external members; and
- provide a legal footing for carrying out reviews into the performance of colleges.

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¹⁸⁴ <https://www.gov.ie/en/publication/70ed2-general-scheme-of-the-higher-education-authority-bill/>

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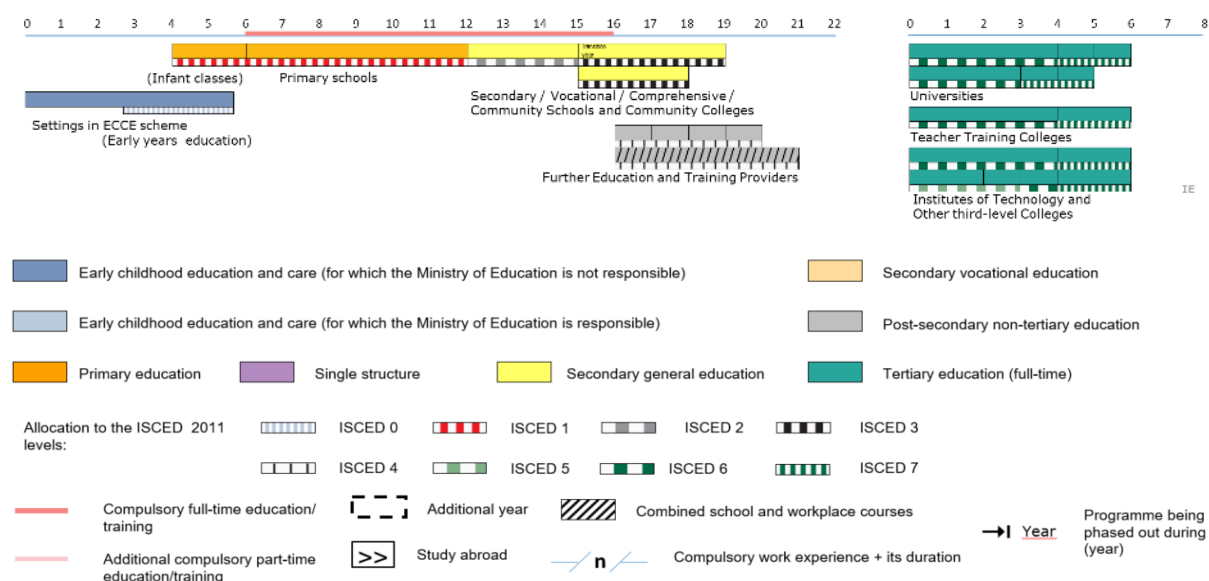
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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ITALY

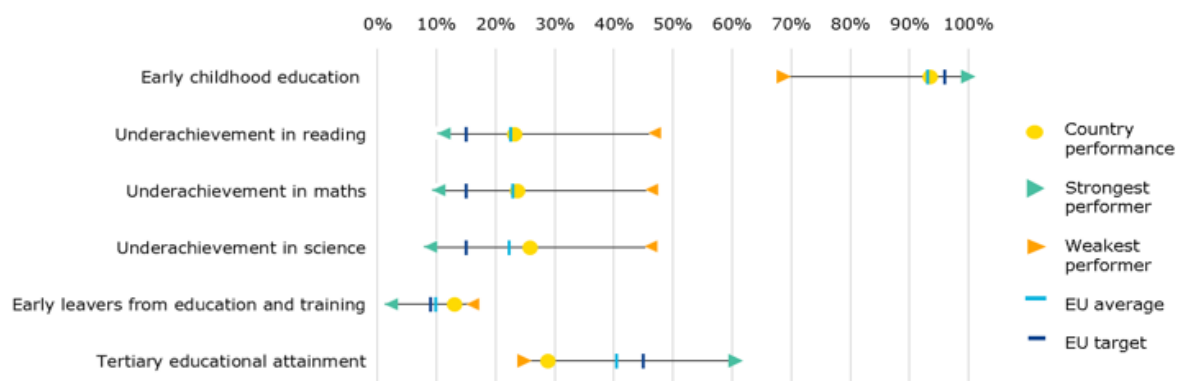
1. Key indicators

Figure 1 – Key indicators overview

				Italy		EU-27	
				2010	2020	2010	2020
EU-level targets				2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%		97.3% ¹³	93.6% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%		21.0% ^{09, b}	23.3% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%		25.0% ⁰⁹	23.8% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%		20.6% ⁰⁹	25.9% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %		18.6%	13.1%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)		20.8%	28.9%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)		:	:	:	:
Other contextual indicators							
Education investment	Public expenditure on education as a percentage of GDP			4.3%	3.9%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2		€6 141 ¹²	€7 023 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4		: ¹²	€7 786 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8		€7 771 ^{12, d}	€8 501 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native			16.3%	11.0%	12.4%	8.7%
	EU-born			31.6%	22.1%	26.9%	19.8%
	Non EU-born			44.4%	35.2%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)				76.5%	83.3%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native			22.5%	32.2%	33.4%	41.3%
	EU-born			12.2%	12.3%	29.3%	40.4%
	Non EU-born			11.4%	14.0%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, : = not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

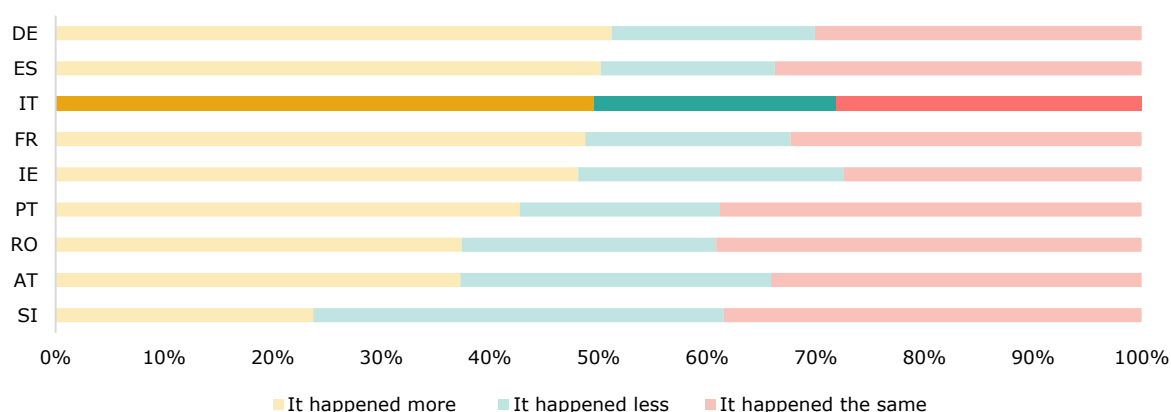
- Substantial reforms and investments under the National Recovery and resilience plan could help to bring about quantitative and qualitative improvements at all levels of education.
- The COVID-19 pandemic has shifted the focus from physical to psychological well-being.
- Early school leaving has steadily decreased over the last 10 years, but the gap with the EU average is proving hard to close.
- The government is expanding the offer of tertiary vocational education and simplifying graduates' access to a range of professions.

3. A focus on well-being in education and training

On average, Italian pupils report a relatively high exposure to bullying, an indicator associated with a reduced sense of well-being and lower student performance. According to the Programme for international student assessment (PISA) 2018, 23.7% of Italian 15-year-olds reported being bullied at least a few times a month as compared to an EU average of 22%. Boys, disadvantaged students and low-achieving students tend to be bullied more than girls, advantaged students and high-achieving students, with the biggest difference reported between low- and high-achieving students: 37.9% and 14.3% as compared to EU averages of 31.8% and 15.9% respectively. Exposure to bullying appears to have a higher than average negative impact on reading performance in Italy¹⁸⁵. On a more positive note, the proportion of students who feel they do not belong in school is at 33.7% slightly lower than the EU average of 34.8%, an indicator positively correlated to competence achievement.

Exposure to cyberbullying increased during lockdown. According to the survey 'Kids' Digital Lives in Covid-19 Times' (KiDiCoTi), 50% of Italian 10-18 year-olds were more exposed to at least one form of cyberbullying during the lockdown than before – one of the highest shares among the countries surveyed (Figure 3).

Figure 3 - Share of students who have been victims of cyberbullying during the lockdown (compared to the pre-lockdown period)



Source: KiDiCoTi consortium calculations.

No definition of well-being in education exists, explicit or implicit, nor does any associated national policy. So far, notions of student well-being have generally been linked to healthy lifestyles. In 2019, an initiative by the Ministry of Education (MIUR) and the Ministry of Public Health enabled schools to introduce actions promoting pupils' well-being, focused on healthy eating and

¹⁸⁵ The change in reading performance for Italian students is estimated at -18 points per one-unit increase in the index of exposure to bullying, against an EU average of -11.6 points. Source: OECD PISA 2018 Results (Volume III).

physical activity. Other discussions of well-being in the education sector have largely focused on the working conditions of staff (mostly non-teaching staff)¹⁸⁶.

Since the start of the pandemic the focus has shifted to psychological well-being. The *Manifesto della scuola che non si ferma*, published in March 2020 by the 'Teaching Avant-garde' network of schools, links well-being with cognitive development, creativity and social interaction. In October 2020 the Ministry of Education (MI) and the professional association of psychologists updated their existing agreement on promoting healthy lifestyles in schools to include psychological well-being. The focus is on strengthening communication and cooperation between schools and families and providing school-based psychological support for pupils, teachers, educators, school staff and families to help them cope with pandemic-related feelings of stress, anxiety, fear and isolation.

School closures and distance learning have negatively affected pupils' well-being. According to a survey conducted for Save the Children Italy, distance learning was a negative experience for 38% of upper secondary school pupils. The main complaints were about difficulty in concentrating and technical issues caused by their own or their teachers' poor internet connection. 18% of respondents only had access to a shared computer or tablet, and 8% had to share a room with others. 35% felt their education had suffered, and one in four needed to repeat several subjects. In addition, respondents said they felt tired (31%), insecure (17%), worried (17%), anxious (15%), nervous (14%) and disoriented (14%). More than one in five did not share their feelings with anyone (IPSOS/STC 2021). The government allocated over EUR 500 million for schools to open during the summer holidays, in order to reduce the damages created by school closures¹⁸⁷. School participation in the initiative was voluntary, as was student participation within adhering schools. In total, 32 558 projects were carried out, focusing on recuperating basic competences as well as social interaction through the practice of sport, artistic, and recreational activities, for a total of over 1.6 million school hours recovered.

Teachers reported an increased workload and reduced well-being because of school closures. An early qualitative analysis of Italian schools (M. Ranieri in Carretero et al 2021) indicates that teachers and school leaders were overloaded with multiple urgent responsibilities, had to adapt quickly to remote schooling and experienced difficulties in assessing students. Moreover, according to the national statistical office¹⁸⁸, between April and June 2020, 8% of all pupils¹⁸⁹ as well as some teachers were not involved in any distance learning activity. The figure was particularly high for pupils with disabilities (23%). A significant proportion of teachers reported low levels of psychological well-being during the pandemic, as well as a higher workload due to distance learning and less quality interaction with students and parents (Matteucci et al., 2020; Lucisano 2020).

4. Investing in education and training

Italy's investment in education is among the lowest in the EU. In 2019, Italy's expenditure on education remained well below the EU average, both as a proportion of GDP (3.9% vs EU 4.7%) and as a proportion of total general government expenditure (8% vs EU 10%). Government expenditure on tertiary education (8% of total expenditure) is half the EU average (16%) and remains the lowest in the EU, while the share of expenditure allocated to pre-primary and primary (36%) and to secondary education (47%) is above the EU average of 33% and 39% respectively.

Staff salaries make up the lion's share of education expenditure. Over three quarters of the education budget (76%) was spent on employee¹⁹⁰ compensation in 2019, (EU average 64%), while expenditure on intermediate consumption and gross capital formation (10% and 3% respectively) remained well below the EU average of 14% and 7%.

¹⁸⁶ <https://www.miur.gov.it/web/guest/benessere-organizzativo>

¹⁸⁷ 'La scuola d'estate – Un ponte verso il nuovo anno scolastico'

¹⁸⁸ Istat, *Rapporto annuale 2021 – la situazione del paese*.

¹⁸⁹ 12% of pupils in primary schools, 5 % in lower secondary and 6% in upper secondary (Istat).

¹⁹⁰ Teachers and technical and administrative staff.

The 2021 budget law allocates additional resources to support schools and universities in the pandemic. The extra EUR 3.7 billion investment is mostly earmarked for renovating school buildings and hiring new teachers.

Italy's National Recovery and Resilience plan (NRRP) envisages a sizeable investment in the development of human capital. The NRRP allocates almost EUR 20 billion to strengthening the education system at all levels, from early childhood education and care to higher education. If adequately implemented, the plan could help improve learning outcomes and reduce regional disparities. (See Box 1).

Box 1: The National Recovery and Resilience Plan

Italy's National recovery and resilience plan (NRPP) is structured around 6 areas of intervention ('Missions'), representing a total investment of EUR 191.5 billion (EUR 68.9 billion in non-repayable financial support and EUR 122.6 billion in loans).

Mission 4, 'Education and research', is worth almost EUR 31 billion. Of this amount, more than EUR 19 billion (around 10% of the total NRRP) will be invested in measures related to strengthening the education and training offer and improving its quality at all levels, from early childhood education and care (ECEC) to higher education. Further measures for the reskilling and upskilling of the workforce are planned in other parts of the NRRP.

To this end, the plan envisages interventions in the following areas:

- strengthening and improving the education offer
- improving teachers' recruitment and training
- extending competences and improving infrastructure
- reforming and enhancing the PhD system.

If implemented swiftly and effectively, the plan has the potential to bring enduring structural changes with a lasting impact on the Italian economy and society. Planned reforms and investments in the education, skills development and research sectors could help enhance human capital and research capacities in the long term.

Italy's NRRP has the potential to increase real GDP by between 1.5% and 2.5% by 2026. Reforms and investments in education are expected to result in 0.5% growth by 2026.

5. Modernising early childhood and school education

Participation in early childhood education and care (ECEC) for children aged between 3 and 6 has decreased in recent years but remains above the EU average. Participation in ECEC stood at 93.6% in 2019 for 3-6 year-olds, above the EU average (93.1%) but below the new EU-level target of 96% by 2030. It should be noted that ECEC participation in Italy fell by 1.5 pps between 2014 and 2019, while the EU average rose by 1.9 pps over the same period. At 26.3%, participation of children under 3 in formal childcare remained well below both the EU average of 35.3% and the Barcelona target of 33%, and has not significantly improved in the past 10 years (it was 25% in 2009).

The government is taking steps to expand the ECEC offer, with support from the Recovery and Resilience Facility (RRF). Italy's NRRP envisages the creation of 264 480 additional ECEC places for children between the ages of 0 and 6 by 2025, backed by an investment of EUR 4.6 billion - the largest single investment in the plan. 152 000¹⁹¹ of the new places should be for the 0-3 age group, where most progress is needed.

Despite continued improvements over the past 10 years, the proportion of early leavers from education and training (ELET) remains well above the EU average. In 2020 the ELET rate among 18-24 year-olds was 13.1%, down 0.4 pp compared to the previous year¹⁹² but still well above both the EU average of 10.1% and the new EU-level target of 9% or less by 2030. Despite a

¹⁹¹ Figure provided by the Ministry of education.

¹⁹² The decrease appears to be driven by a fall in the ELET rate in the south (-1.2 pps.) and islands (- 3.5 pps.), which remains substantially higher than in the rest of the country.

significant improvement over the past 10 years (5.5 pps), the gap with the EU average is proving difficult to close (from 4.8 pps in 2010 to 3.2 pps in 2020). As part of its strategy for reducing early school leaving, the government plans to extend school time. EUR 1.26 billion from the RRF will be invested in building school canteens and sport infrastructure¹⁹³.

While it is too early to quantify the impact of school closures on early school leaving, early indications are not encouraging. In January, a report by Save the Children Italy found that 28% percent of 14-18 year-olds had at least one classmate who had dropped out of online lessons completely. A survey of school principals confirmed that students dropped out of distance learning (estimated at 5% at national level, and twice that in the south), and estimated that between 2% and 5% of teachers were not yet involved in remote teaching. In addition, over half the respondents believed that remote teaching did not involve students with special educational needs (CENSIS 2020).

Almost a fifth of Italian 15-24 year-olds are not in education, employment or training, well above the EU average. After falling steadily in recent years, the share of young people aged 15-24 not in education, employment or training (NEET) has grown in the current crisis, from 18.1% in 2019 to 19% in 2020 (EU average: 11.1%). Of particular concern is the 25-29 age group, where the proportion of NEETs in 2020 was 31.5%, significantly higher than the EU average of 18.6%¹⁹⁴. The COVID-19 pandemic has also increased the average duration of the transition from school to work for people in the 20-24 age group: from 8.63 to 11.15 years for a permanent job and from 3.72 to 4.16 years for a temporary one. Southern regions, women and non-Italian citizens were disproportionately affected. (Fiaschi and Tealdi 2021).

Prolonged school closures¹⁹⁵ have taken a heavy toll on learning achievement, especially at secondary level. The 2021 round of INVALSI standardised national student testing, the first since the start of the pandemic¹⁹⁶, shows a generalised learning loss compared to 2019, with the only exception being fifth-graders, whose performance remained substantially stable¹⁹⁷. In lower and upper secondary schools (grades 8 and 13) results worsened significantly. The average drop in performance among thirteenth-grade students was 10 pps in Italian and maths¹⁹⁸. In addition, the proportion of thirteenth-graders who completed upper secondary education with below-grade-ten competences (*dispersione implicita*, or 'implicit' early school leaving) has grown from 7.5% in 2019 to 9.5% in 2021, with peaks of between 15% and 22.4% in southern regions.

The gaps in student achievement between regions and socio-economic groups have widened. The learning loss among disadvantaged students was almost twice as large compared to their more advantaged peers. In many regions, over half the students do not reach the minimum competence level in Italian¹⁹⁹ and maths²⁰⁰. Italy's NRRP contains EUR 1.5 million in investment measures aimed at reducing territorial disparities in the level of basic skills (Italian, mathematics and English) of secondary school pupils, particularly in the south.

Italy reports both teacher shortages and oversupply²⁰¹, pointing to inefficient selection and recruitment mechanisms. Bottlenecks in recruitment result in an ageing teacher workforce with a particularly low share of teachers under 35 and a high share of teachers on temporary, short-

¹⁹³ 17.1% of primary schools in the first cycle alone do not have gyms or sports facilities - This figure rises to 23.4% in the south. The figure rises to 38.4% if secondary schools are also taken into account (National school buildings register).

¹⁹⁴ Source: Eurostat, online data code [edat_lfse_20].

¹⁹⁵ Schools in Italy were closed for 38 weeks on average, longer in some southern regions. Source: Unesco (<https://en.unesco.org/covid19/educationresponse#durationschoolclosures>).

¹⁹⁶ The INVALSI tests were cancelled in 2020.

¹⁹⁷ While secondary school students were experiencing at best rotating shifts of school attendance when schools were open, primary schools managed to keep teaching on site, with limited recourse to online teaching.

¹⁹⁸ At national level, the share of low achievers is 44% in Italian (+9 pps. compared to 2019), 51% in maths (+9 pps.), 51% in English reading comprehension (+3 pps.) and 63% in English listening comprehension (+2 pps.).

¹⁹⁹ Campania 64%, Calabria 64%, Apulia 59%, Sicily 57%, Sardinia 53%.

²⁰⁰ Campania 73%, Calabria and Sicily 70%, Apulia 69%, Sardinia 63%, Abruzzo 61%, Basilicata 59%, Lazio 56%, Umbria 52%, Marche 51%.

²⁰¹ Depending on subject and geographical area.

term contracts (European Commission/EACEA/Eurydice 2021)²⁰². In July 2021 the Ministry of Finance authorised the hiring of over 112 000 teachers on permanent posts in an effort to stem the recourse to temporary contracts in the school year 2021/2022. The government plans to adapt teachers' selection and recruitment mechanisms by redesigning competition procedures (open to all graduates with a five-year tertiary degree and 24 credits in pedagogy-, psychology- or anthropology-related subjects) and strengthening the initial one-year on-the job training. It also plans to strengthen teachers' continuing professional development, with a special focus on digital education, building on the experience acquired during the pandemic.

6. Modernising vocational education and training and adult learning

2020 saw a focus on improving the apprenticeship system. Several meetings of the National Technical Board, an ad hoc working group gathering all relevant stakeholders²⁰³, focused on 'type 1' apprenticeships²⁰⁴ with the aim of simplifying their implementation. In January 2021, the Ministry of Labour, in agreement with the Ministry of Education and the Ministry for University and Research issued a Decree implementing the 'Guidelines for the interoperability of entitling bodies of the National system of certification of competences'²⁰⁵. The guidelines were prepared in accordance with the regions and autonomous Provinces, following an agreement between competent authorities in 2020. The Decree provides a common reference framework for the 'National system of certification of competences' on minimum systemic standards, essential performance levels, criteria for the implementation and regular updating of the national repertory of educational and training qualifications and vocational qualifications, progressive interoperability of central and territorial databases for the workers' electronic booklet.

The government plans to modernise and improve the VET education offer. Italy's NRRP includes plans to review the curricula taught in technical and vocational institutes (ISCED 3) in order to align them with labour market needs and with the innovations introduced by the *Industria 4.0* strategy. The reform could help reduce skill shortages and improve VET graduates' employment prospects²⁰⁶. EUR 600 million from the RRF are to be invested in strengthening the dual system so that it better reflects labour market needs.

A National Strategic Plan for adult competences was announced in 2020 to tackle the high rate of low-skilled people in Italy. The plan aims to improve coordination between the different players and processes involved in lifelong learning, to jointly establish national training strategies for 2020-2022 to ensure integration and return to the labour market. The national repertory of education, training and vocational qualifications has been updated following an agreement in the State-Regions Conference. Covering qualifications from general education, higher education and VET, the framework fosters validation, permeability and guidance practices.

The level of digital skills differs significantly between those employed in different economic sectors. Digital skills are more widespread in the services sector, followed by public administration, and lowest in the industrial and primary sectors. This might hamper innovation and inclusion in society and the labour market. In 2020 the government launched Italy's first national strategy for digital competences, aimed at the population at large (European Commission 2020).

A 'New Skills Fund' (NSF) was introduced in 2020. The NSF combines the need to mitigate the impact of COVID-19 on employment with the need to train workers. It plans to fund the hours not worked by workers (due for instance to difficulties of the company), provided they use those hours to attend training courses.

²⁰² 25.3% of teachers were on one-year contracts in 2018 (Eurydice based on PISA 2018).

²⁰³ Regions and public administrations, labour inspectorates, economic and social partners, the National Institute for Public Policy Analysis, the National Agency for Active Labour Policies.

²⁰⁴ Apprenticeships which are part of compulsory education.

²⁰⁵ *Decreto 5 gennaio 2021 - Disposizioni per l'adozione delle linee guida per l'interoperatività degli enti pubblici titolari del sistema nazionale di certificazione delle competenze* (21A00166) (GU Serie Generale n.13 del 18-01-2021).

²⁰⁶ The employment rate of recent VET graduates in 2020 was 53.3%, well below the EU average of 76.1% (Eurostat).

Box 2: ESF support for developing lifelong learning in the Friuli Venezia-Giulia region

Project title: 'Services for the development of the Network of Lifelong Training and Guidance in the context of lifelong learning'.

Years of intervention: 2018-2020, extended to 31 December 2021.

The programme 75/17 was created as part of the regional lifelong learning system to support people's transversal skills and increase their employability and perception of self-effectiveness. The project's aim is to establish a network of services for lifelong learning in the region in order to be able to face the challenges of a knowledge-based society. It provides the following integrated services:

1. training courses to enhance technical and vocational skills;
2. support for certification of skills;
3. workshops to develop transversal skills that are instrumental in increasing people's employability;
4. guidance services to develop professional development action plans, through regional guidance services.

As part of the 2021 extension, a number of specific workshops have been designed to combat functional illiteracy and develop basic digital and civic skills. So far 256 workshops have been organised, with a total of 2 775 participants, and 59 four-hour seminars have been held, reaching a total of 1 059 beneficiaries.

Total budget: EUR 800 000 of which EUR 426 288 has already been committed to organise workshops and seminars.

<http://www.regione.fvg.it/rafvvg/cms/RAFVG/istruzione-ricerca/studiare/FOGLIA17/>

7. Modernising higher education

Despite improvements in completion rates and in the average duration of studies²⁰⁷, Italy's tertiary educational attainment rate continues to lag significantly behind the rest of the EU. In 2020, the share of 25-34 year-olds with tertiary educational attainment was the second-lowest in the EU at 28.9%, well below both the EU average of 40.5% and the new EU-level target of at least 45% by 2030. Tertiary attainment is particularly low among the foreign-born population, at 13.6% against the EU average of 36%. Women are more likely to hold a tertiary qualification than men (35% vs 22.9%) with a larger-than-average gender gap (12.1 pps vs EU 10.8 pps). Science, technology, engineering and mathematics (STEM) graduates represented 24.5% of the total in 2019, as compared to an average of 26% in the EU. Women made up 38.9% of total STEM graduates, well above the 32.3% EU average²⁰⁸. On a more positive note, fears about a possible fall in tertiary enrolments due to the pandemic did not pan out. Student enrolment and scholarship applications increased by 7% and 6% respectively in academic year 2020/2021. This is possibly a consequence of the wider fee exemptions introduced in 2020 (European Commission 2020 ETM) and the lower costs²⁰⁹ associated with distance learning.

Tertiary graduates' employment rates appear to have withstood the impact of the pandemic, but remain below the EU average. The employment rate of recent tertiary graduates was 64.1% in 2020, down from 64.9% in 2019 but still on an upwards trend since 2013, when it fell to 57% following the financial crisis. On a less positive note, Italy has one of the lowest tertiary

²⁰⁷ The average age at graduation in 2020 was 25.8, down from 26.9 in 2010. 54.4% of graduates completed their studies within the prescribed timeframe (up from 39% in 2010). Source: AlmaLaurea (2021).

²⁰⁸ Eurostat, online data code: [educ_uoe_grad02]

²⁰⁹ E.g. travel and accommodation costs.

graduates' employment rates in the EU, and remains significantly below the EU average of 83.7% in 2020 (down from 85% in 2019).

Disadvantaged and VET students are increasingly under-represented in higher education.

Family background exerts a growing influence on tertiary attainment: 30.7% of those who graduated in 2020 had at least one tertiary-educated parent, compared to 26.5% in 2010, and 22.4% came from a privileged socio-economic background (AlmaLaurea 2021). The proportion of graduates with a general upper secondary school (*liceo*) diploma was 75.4% in 2020 (compared to 68.9% in 2010), while those with a technical or vocational secondary school diploma represented just over 20% of the total. The recent introduction of vocational tertiary degrees²¹⁰ could help increase the tertiary attainment rate of the population in general, and of VET graduates in particular.

Figure 4 – Tertiary attainment rate for 25-34 year-olds, 2010-2020



Source: LFS, [edat_lfse_03]

Universities were quick in switching to online teaching during the lockdown, reverting to blended formats during phases of declining contagion. According to a 2020 survey of 3 400 academics, 91% of respondents had never experienced distance teaching before. However, 75% declared themselves 'satisfied' or 'fully satisfied' with the experience. What appears to have suffered is the daily contact with students and the possibility to adequately test their knowledge.

The government is taking steps to expand the tertiary vocational offer and to simplify graduates' access to certain professions. A reform of the *Istituti Tecnici Superiori* (ITS) was adopted in 2021. It strengthens the role of business within the ITS foundations and simplifies the recruitment of teachers from the business world. The objective is to double the number of ITS students (currently 18 750) and graduates (currently 5 250) by 2026²¹¹. The reform is backed by EUR 48 million in funding for 2021 and EUR 68 million from 2022, in addition to EUR 1.5 billion from the RRF. In parallel, draft legislation adopted in June 2021²¹² simplifies access to a number of professions for graduates in the relevant disciplines, by abolishing the requirement for a further State exam.

Student financial support is increasing. In 2019 the resources invested in student support amounted to EUR 743 million. Of these, almost three quarters (72.5%) represented scholarships, the remaining being divided among housing (13.3%) and transport contributions (4.6%). Only

²¹⁰ *Lauree professionalizzanti*, in place since 2018.

²¹¹ On average, 80% of ITS graduates find a job consistent with their training within a year of graduating, with peaks of over 90%.

²¹² DDL n. 2751 - "Disposizioni in materia di titoli universitari abilitanti"

0.04% was allocated to student loans. The number of scholarships has significantly increased in the past 5 years (+58% between 2015 and 2019), and is now close to matching actual needs, with a coverage of 97.6% of eligible students in 2019/2020 (compared to 93.7% in 2015/2016) (MUR 2021). There is no evidence of reduced attendance due to aggravated financial constraints for students from disadvantaged backgrounds. Italy's NRRP envisages an investment of EUR 500 million to increase both the number of scholarships and their value (from the current EUR 3 000 to around EUR 4 000). In addition, EUR 960 million are earmarked for bringing the offer of student accommodation from the current 64 000 places to 120 000 places by 2026.

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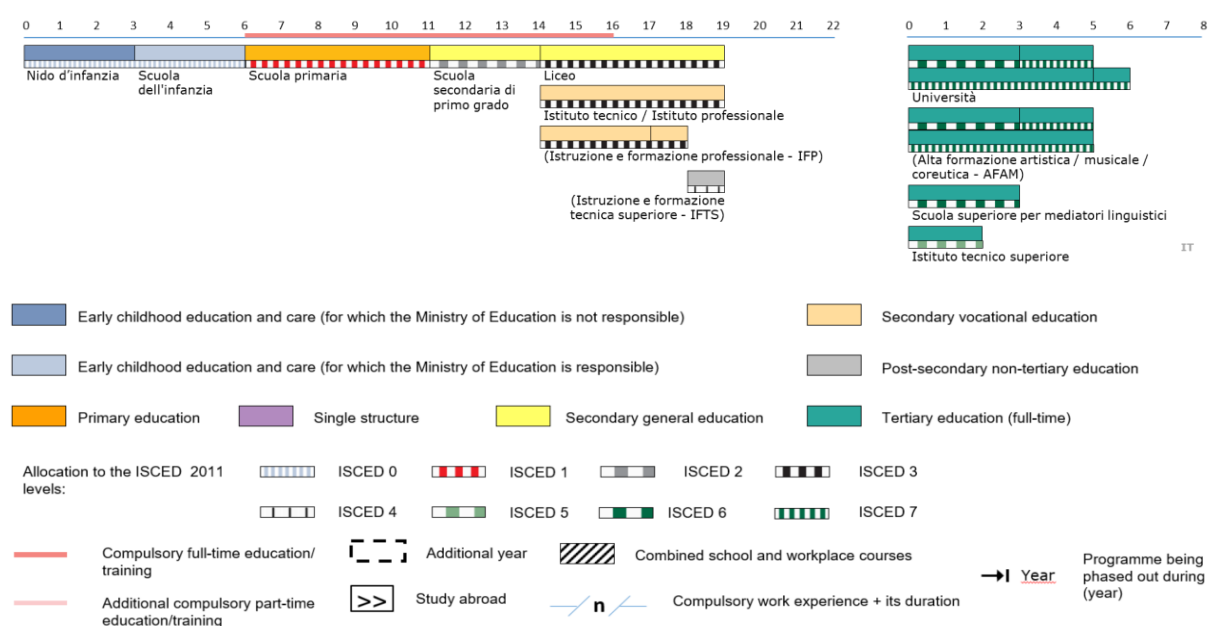
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14. Data by country of birth: edat_ifse_02.

Indicator	Eurostat online data code
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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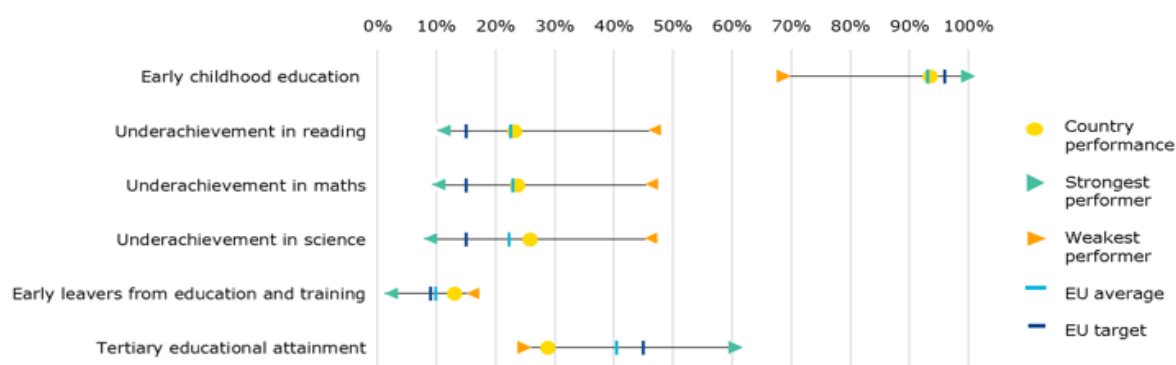
1. Key indicators

Figure 1 – Key indicators overview

			Latvia		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		91.3% ¹³	94.1% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.6% ^{09, b}	22.4% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	22.6% ⁰⁹	17.3% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	14.7% ⁰⁹	18.5% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		12.9%	7.2%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		34.7%	44.2%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		6.2%	5.8%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€5 366 ¹²	€4 580 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€5 684 ¹²	€5 758 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€8 072 ^{12, d}	€6 848 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		13.0%	7.2%	12.4%	8.7%
	EU-born		: ^u	:	26.9%	19.8%
	Non EU-born		: ^u	:	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			80.3%	88.0%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		34.4%	44.0%	33.4%	41.3%
	EU-born		: ^c	: ^u	29.3%	40.4%
	Non EU-born		43.8%	49.9%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, c = confidential, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Well-being in education is receiving increased attention in the wake of the COVID-19 pandemic.
- Learning outcomes remain dependent on place of residence, with a significant urban/rural divide.
- The tertiary attainment rate is high and growing, but the share of graduates in science, technology, engineering and mathematics (STEM) is low.
- The gender gap continues to represent a challenge at all education levels.

3. A focus on well-being in education and training

Measures fostering well-being in education are scattered across different national policies, but efforts are underway to adopt a more coherent and systematic approach. Latvia's *National Development Plan 2021-2027* addresses well-being on a national level, and includes emotional and psychological well-being among its priorities. The plan places specific emphasis on child-parent relationships as a factor in school and work achievement. The plan sets two targets for education: (i) increasing the share of children and young people with special needs who continue their education after compulsory education (currently 28%) to 33% by 2024 and to 38% by 2027; and (ii) reducing the share of school children who report being bullied by schoolmates to 20.5% by 2027. Latvia's Education Development Guidelines 2021-2027 include support for the growth and development of each student as a policy objective.

National criteria for school evaluation include indicators related to well-being. The State Education Quality Service (IKVD) includes 'safety and psychological well-being' among the national criteria for schools' self-evaluation reports. The criteria include a requirement for schools to: (i) have clear behavioural rules; (ii) enforce these behavioural rules; and (iii) foster an inclusive physical and emotional environment. The level of pupils' safety and psychological well-being in an educational institution is also part of IKVD's criteria for evaluating school leaders.

Concern about widespread bullying in Latvian schools had sparked a debate on well-being in education well before the COVID-19 crisis. According to the OECD's 2018 Programme for International Student Assessment (PISA), 35.5% of Latvian 15-year-olds reported being bullied at least a few times a month, the highest proportion in the EU (where the average was 22.1%). There is evidence of negative repercussions of bullying on learning achievement: reading performance in Latvia decreased by 18 score points with every one-unit increase in the index of exposure to bullying, compared to the EU average of an 11.6 score point decrease for every one-unit increase in the index (OECD 2019c). The *National Guidelines for the Development of Education 2021-2027* address the need to improve the 'insufficiently inclusive and socially emotionally safe environment in educational institutions', notably by reducing bullying (MoES 2020). On a more positive note, the share of students who feel they don't belong in school (25.7%) is significantly lower than the EU average of 34.8%. This indicator is positively correlated with lower truancy rates and higher expectations for further education (OECD 2019c).

Some initiatives address well-being in early childhood education. In 2018, the children's rights NGO Dardedze Centre created a knowledge platform called Safe Childhood (Droša Bērība) for teachers and employees of pre-school educational institutions. This platform, consisting of 10 learning modules, helps pre-school staff to create and maintain a supportive and respectful environment for children's development. Latvia also participates in the EU-funded PROMEHs (Promoting Mental Health at Schools') project, which aims to promote mental health in schools at all levels of education, by (i) developing and implementing an evidence-based universal mental health curriculum in schools and (ii) delivering high-quality training for school staff.

During the COVID-19 crisis, the government provided targeted support for vulnerable children and families. As schools closed, the Ministry of Education and Science (MoES) conducted a survey to determine the number of children without access to a computer device or an internet

connection. In partnership with two private companies, the MoES then donated over 5 000 smart devices in the first week of closures (European Commission, 2020). In collaboration with municipalities, the MoES also provided free school meals for disadvantaged children during the pandemic. Students considered at risk of dropping out received remote counselling through the Pumpurs project (funded by the European Social Fund) for tackling early school-leaving. Staff at special-education institutions provided distance learning, conducted telephone consultations with parents and, where necessary, supported children at home. There is no comprehensive data yet on the impact of the pandemic on vulnerable children, nor on the adequacy of the support provided.

The government acted to ensure pupils' emotional well-being during school closures. The State Inspectorate for Children's Rights hosted a telephone hotline and online chatbot providing psychological support to children. The MoES collated various websites, tools and services promoting children's well-being. In March, the MoES announced the launch of a specific programme for young people to mitigate the effects of the COVID-19 pandemic. The programme has a budget of EUR 500 000 and was developed in collaboration with the National Youth Council (LJP). During the pandemic the MoES carried out regular surveys on the implementation of distance learning and issued recommendations based on their findings. School leaders were encouraged to seek regular feedback from pupils on their mental and emotional well-being, and to provide individual support where necessary. There is no sufficient evidence yet to measure the emotional toll of school closures on students, but media reports noted a higher incidence of teenagers turning to psychological support services for help. This suggests that stress has risen and teenagers are facing challenges to their well-being.

Teacher training programmes are starting to take stress management and emotional well-being into account. Before COVID-19, 22.7% of Latvian teachers reported experiencing stress 'a lot', well above the EU average of 16% (European Commission/EACEA/Eurydice 2021). There are no data on the impact of the pandemic on teachers' well-being, but the National Education Centre is planning to launch a continuing professional development module for teachers on how to address the risk of burnout and develop emotional resilience. However, there is no comprehensive approach to these issues in teacher training, whether in initial teacher education and training or in continuous professional development.

4. Investing in education and training

Latvia invests heavily in education, but maintaining a large and inefficient school network weighs heavily on resource allocation. Government expenditure on education remained well above the EU average in 2019, both as a share of GDP (5.8% against an EU average of 4.7%) and as a proportion of total government expenditure (15% against an EU average of 10%)²¹³. The largest share of the education budget goes to primary and pre-primary education (39% against an EU average of 33%), while investment in secondary education is well below the EU average (23% against an EU average of 39%). The share of government expenditure devoted to tertiary education is in line with the EU average (16%). A comparatively high share of Latvia's education budget was spent on intermediate consumption (20%) and on gross capital formation (15%), well above the EU averages of 14% and 7% respectively, while teacher salaries only accounted for 59% of education expenditure, compared to an average of 64% in the EU. Expenditure per student expressed in purchasing-power standards is comparatively high relative to Latvia's GDP per capita but remains below the EU average at all levels of education, reflecting teachers' low salaries. Latvia's National Recovery and Resilience Plan (NRRP) envisages investments in digital skills, school infrastructure, and higher education reform (Box 1).

Box 1: The National Recovery and Resilience Plan

Latvia's NRRP addresses the country's key challenges through a set of reforms and investments in a broad range of policy areas. The plan is worth EUR 1.826 billion in non-repayable support from the EU's Recovery and Resilience Facility (RRF).

²¹³ General government expenditure by function (COFOG) [gov_10a_exp].

Reforms and investments related to education and training are planned under 3 of the NRRP's 6 components:

- 'Reduction of inequalities': investments in school infrastructure and equipment;
- 'Digital transformation': measures for closing the digital divide for vulnerable students, increasing adult learning, and strengthening digital skills;
- 'Economic transformation and productivity reform': higher education reform and consolidation grants to help streamline higher education institutions (HEIs).

Latvia's NRRP has the potential to increase GDP by 2% by 2026.

5. Modernising early childhood and school education

Participation in early childhood education and care (ECEC) is almost universal for children aged between 3 and the start of compulsory education, but enrolment of younger children is lower. 94.1% of 3-6 year-olds were enrolled in ECEC in 2019, slightly more than the EU average of 93.1%, and not far below the new EU-Level target of 96% by 2030. The share of children under 3 enrolled in childcare services almost doubled between 2009 (15%) and 2019 (28.3%). However, it remains below both the EU average of 35.3% and the Barcelona target of 33%, even though Latvia's Education law stipulates that all children are legally entitled to a place in ECEC from the age of 18 months.²¹⁴

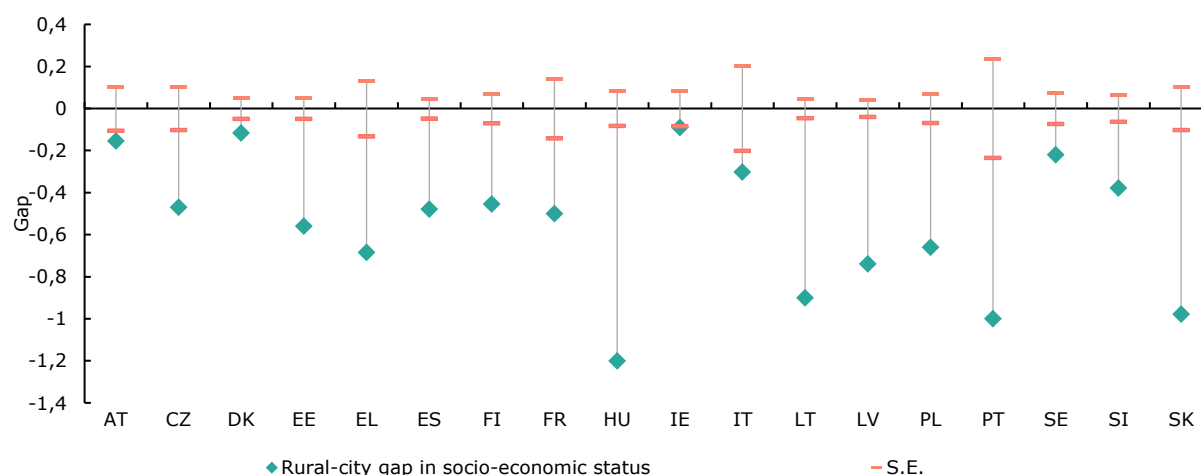
The government's Guidelines on the Development of Education include some objectives and measures related to ECEC. The guidelines provide for: (i) introducing early diagnostics for learners who enter pre-school education at the age of 5; and (ii) strengthening educational institutions in cooperation with parents to support learning and create an emotionally safe and positive environment. The only quantitative target related to ECEC in the Guidelines is the proportion of children aged between 1 and 4 enrolled in ECEC, which the government plans to raise from 68% in 2018/2019 to 70% in 2024 and to 73% in 2027 (MoES).

The proportion of early leavers from education and training continues to fall steadily, but the gender and rural/urban gaps remain significant. The proportion of early leavers from education and training (ELET) fell to 7.2% in 2020, down 1.5 pps from 2019, and well below the new EU-level target of 9% by 2030. In the same period, the EU average fell only slightly, from 10.2% to 9.9%. Men are twice as likely as women to be early school leavers (9.5% against 4.7%), as are people in rural areas (9.9% against 5.5% in cities).

Ensuring education of equal quality across schools and regions is a challenge. Overall, Latvian students score above the EU average in basic skills achievement (PISA), but access to quality education remains dependent on students' place of residence. Students in larger urban schools have higher average educational outcomes than those in smaller rural schools. Urban students in Latvia outperformed their rural peers by 52 points in reading in PISA 2018, the equivalent of more than 1.5 years of schooling. In addition, rural schools tend to have a higher proportion of lower socio-economic status (SES) students (Fig. 3), a lower share of resilient students (those with disadvantaged backgrounds but high academic performance); and a higher rate of grade repetition²¹⁵. These challenges persist into adulthood, as adults in rural areas are twice as likely not to hold an upper secondary qualification and less likely to participate in adult learning (see Section 8). The causes of these inequalities are complex, ranging from structural challenges such as demographic change and socio-economic distribution, to educational challenges such as school size, teacher salaries, and quality of teachers (Krasnopjorovs, 2019). While it is too early to evaluate the impact of the pandemic on regional disparities, it is likely that distance learning has exacerbated existing inequalities.

²¹⁴ <https://likumi.lv/ta/en/en/id/50759-education-law>

²¹⁵ Rural students are more than three times more likely to repeat a year than their urban peers

Figure 3 - Rural-city gap in students' socio-economic status, PISA 2018


Source: OECD (2021), adapted from Figure 3.9. Note: Socio-economic status is measured by the PISA Index of Economic, Social and Cultural Status. S.E. = Standard error.

Latvia has started to reform its large school network, but progress is slow²¹⁶, delaying gains in quality and efficiency. Latvia plans to use RRF funding to improve the quality of education and reduce the gap between urban and rural secondary schools by boosting the streamlining of the school network. EUR 31 million will be invested in renovating and equipping 20 secondary schools with a balanced territorial coverage. The plan's success will depend to a large extent on the timely adoption of plans by the municipalities for streamlining their secondary school networks (planned for March 2022). The implementation of the competence-based curriculum proceeded according to plan in 2020 with its introduction in grades 1, 4, 7 and 10 of primary and secondary schools.

Latvia is taking steps to close the digital divide for socially vulnerable pupils and schools. The government plans to invest EUR 15 million from the RRF to set up and equip computer libraries in upper secondary schools, enabling pupils and teachers who need computers for learning or teaching to borrow one for the duration of their studies. This measure supports the new regulatory framework on the organisation and implementation of remote learning, which will be adopted by the end of 2021.

The gradual switch to Latvian as the sole language of instruction is scheduled to enter its final stage. All upper secondary schools will teach only in Latvian from the 2021/2022 school year. In primary school (grades 1-6), three models of bilingual education are being implemented, allowing some classes to be taught in a minority mother tongue (European Commission 2018). Final preparations for the transition are ongoing.

Box 2: ESF support for developing learners' individual competences

The project aims to ensure diversity of education services in Latvia based on developing and implementing individual learning approaches in general education institutions. As a result of the project, at least 272 general education institutions will have developed and implemented individual approaches to promote learning achievements that meet the needs of learners across Latvia. This project will introduce new forms of learning approaches (individualised classes, activity cycles, study visits, etc.), and provide an alternative set of non-formal education activities (thematic camps, competitions, innovative interest-education programmes, etc.). It will also contribute to the professional development of teachers.

- Number of beneficiaries: National Education Content Centre and 117 partners (i.e. municipalities).

²¹⁶ Between the school years 2019/2020 and 2021/2022 the number of primary, lower secondary and upper secondary schools went from 45 to 40, from 243 to 242 and from 260 to 229 respectively. The MoES estimates that 40% of upper secondary schools are not in line with the Ministry's quantitative criteria.

- Budget: EUR 34 145 389 (EUR 29 023 581 from the ESF).
- Years of intervention: 01.01.2017 - 31.12.2022.
- Results so far: 154 general education institutions that have introduced an individual approach to the development of learners' competences.

Website: <https://www.esfondi.lv/es-fondu-projektu-mekletajs/project?number=8.3.2.2%2F16%2F1%2F001>

6. Modernising vocational education and training and adult learning

Latvia's vocational education and training system is being modernised, but ensuring a balanced distribution of students between vocational and general education remains a challenge. Only 38.9% of students choose VET, compared to the EU average of 48.4% (2019). Although the employment rate of VET graduates has improved from 65.6% in 2019 to 70.2% in 2020 (as compared to 76.1% in the EU), overall numbers of VET students and graduates continue to fall, reflecting changes in the demographic structure in the last 10 years. In 2020, there were 34.3% fewer young people aged 15-19 than in 2010²¹⁷.

There are major gaps in the VET system, despite significant investments over the last 10 years, including from EU funds. In a major 2020 evaluation of the vocational education system, Latvia's State Audit Office (SAO) concluded that significant challenges remain. According to the SAO, the underlying reasons for the lack of improvement in VET are: (i) mismatches between labour-market demand and the VET offering by professional schools; and (ii) students' reliance on personal preferences when selecting a training course instead of labour-market needs. Fragmentation of the system (including in management, qualification standards, and tracking of graduates) is further hampering progress in this area, despite advances in modernising buildings and equipment infrastructure.

Several measures are being implemented to tackle these challenges. The graduate tracking system is being updated in line with OECD recommendations (OECD 2019a). Following the revision of the national quality assurance system in 2019, procedures for accrediting VET providers and programmes have been updated, and a new concept for VET financing was developed in 2020 (Cedefop and ReferNet, 2021). Latvia is also continuing to improve links between professional education and adult learning, notably by implementing work-based VET for employees of enterprises. As part of its Resilience and Recovery Plan, Latvia is piloting the 'skills funds' approach in adult learning, as well as individual learning accounts.

Adoption and implementation of the overarching reform is progressing slowly. Amendments to the VET legislation are yet to be approved by the Latvian Parliament. The reform will introduce to VET the latest best practice and improve flexibility of the VET system as part of a wider approach to adult learning and skills development. The key sectoral policy document - the 2021-2027 *Future skills for the future society* guidelines - was approved by the government in June 2021.

Participation in adult learning remains low. Only 6.6% of adults participated in adult learning in 2020 – a drop from 7.4% in 2019 and well below the EU average of 9.2%. This could be a consequence of the COVID-19 crisis and the decline is in line with the trend across the EU²¹⁸. Latvia's main challenge remains attracting low-skilled adults to learning. Despite the significant unemployment rate of low-skilled adults, only 3.4% of participants in adult learning were low-skilled in 2019. A recent study²¹⁹ shows that most learning activities don't target the low-skilled specifically, and so don't reach them due to their lower overall motivation to take part in adult learning. To tackle

²¹⁷ Source: Central Statistics Bureau of Latvia.

²¹⁸ Adult learning report, 2021.

²¹⁹ http://petijumi.mk.gov.lv/sites/default/files/title_file/BISS_zinojums_pieauguso_izglitiba_2020.pdf

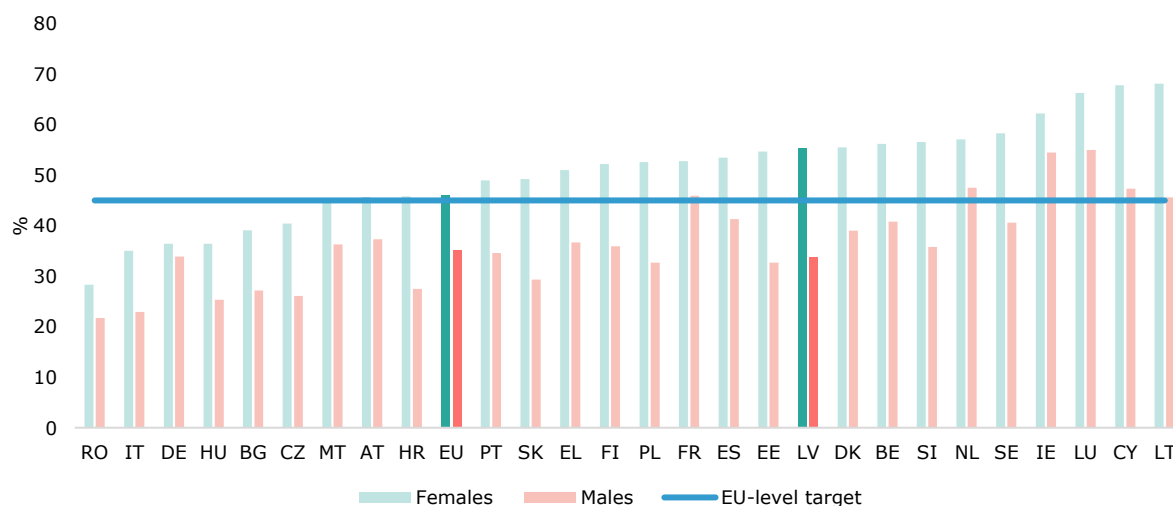
this, a “Guide for municipalities on adult education governance is being prepared, and more targeted education programmes for different target groups will be developed in 2021²²⁰.

In the last year, Latvia has focused on tackling the impact of COVID-19, including in adult learning. Latvia has improved the distance learning and digital skills offer for adults.²²¹ As part of its Resilience and Recovery Plan, Latvia is piloting the “skills funds” approach in adult learning, as well as Individual Learning Accounts. The strategy for mitigating the consequences of the COVID-19 crisis aims to involve 165 000 people in adult education by 2023. The plan aims to reduce the share of low-skilled people in the workforce by improving the overall skills base (including in digital skills) of the population, while targeting investments in sectors with high export potential. Latvia is also strengthening links between work-based learning and professional education. Support is being provided to businesses who offer additional training for staff, and online courses for the unemployed are partially reimbursed. In addition, the upcoming VET reform (pending Parliament approval) will introduce more flexibility in acquiring and improving professional qualification. The Education Development Guidelines 2021-2027 aim to: (i) improve links between higher and professional education; (ii) introduce skills funds and individual learning accounts; and (iii) strengthen both work-based learning, and the recognition of qualifications and skills. Adult learning also forms a significant part of Latvia’s NRRP (digital skills, reskilling/upskilling within ALMPs).

7. Modernising higher education

A high proportion of young adults have a tertiary qualification, but the gender gap remains significant. In 2020, 44.2% of Latvian 25-34 year-olds had a tertiary qualification, well above the EU average of 40.5%, putting Latvia on track to reach the new EU-level target of 45% by 2030. Over half of Latvian women (55.3%) have a tertiary degree, while only a third of men do (33.8%). At 21.5 pps, the gender gap in tertiary-degree attainment is one of the widest in the EU, and almost twice the EU average of 10.8 pps (Figure 4).

Figure 4 - Tertiary educational attainment (25-34) by gender, 2020



Source: Labour Force Survey, [edat_ifse_03]

The share of STEM graduates is comparatively low in Latvia. In 2019, 19.9% of all graduates had a STEM qualification, 1.4 pps fewer than in 2014 and well below the EU average of 26%. The share was particularly low for women at 9.5% (also down by 1.5 pps since 2014) compared to an EU average of 14.7%. STEM graduates tend to be concentrated in engineering, manufacturing and construction (12.5% of all graduates). ICT graduates represented 4.4% of all graduates.

Latvian HEIs were closed between March and May 2020 and again in November and December 2020, with the exception of practical activities required for final-year students

²²⁰ LV EMCO fiche, 17.3.2021.

²²¹ National Reform Programme 2021, p.18.

to complete professional studies. The return to in-person instruction depended on COVID-19 transmission levels and on HEIs fully complying with government safety requirements (International School of Riga, 2020). Higher levels of COVID-19 transmission and/or moderate or low compliance by institutions with safety regulations typically led to a recommendation for the HEI to introduce hybrid learning and potentially close campuses. Remedial measures to address learning gaps were provided outside regular class hours to all students who needed them²²². However, there is not yet any comprehensive data which would make it possible to analyse the impact of the pandemic on equity and quality in higher education.

The employment rate of recent tertiary graduates fell sharply in 2020. In 2020, 85.2% of recent tertiary graduates aged between 20 and 34 had a job, compared with 96.6% the year before. During the same period, the EU average declined only slightly from 85% to 83.7%²²³.

Latvia is implementing a comprehensive reform of higher education which is expected to boost quality and efficiency and increase international competitiveness, with support from the RRF. The reform envisages complex structural changes across three pillars:

- governance (separating academic and strategic decision-making, involving external members);
- funding (increasing the performance-based component of funding – from the current 6-7% to at least 20%, and introducing financial incentives for HEIs to consolidate);
- human resources (developing a new and unified career model for academic and scientific staff in line with best global practice, and seeking to attract and retain international staff, especially from the Latvian diaspora).

If successful in achieving its goals, the reform could have a positive, long-lasting impact on the quality of higher education and research in Latvia. In June, the Law on Higher Education Institutions was amended to introduce different types of HEIs²²⁴ and institute governing boards in all public universities. These amendments entered into force in August 2021. The reform is backed by EUR 82.5 million RRF funding for research, development and consolidation grants. Priority in allocating these grants will be given to HEIs and scientific institutes showing a higher degree of readiness to change their governance model, including changes in the election of the HEI Council and the Rector. The government expects at least 10 national HEIs and scientific institutes to consolidate internally or externally by 2026.

A reform of the PhD system is underway. On 16 June 2020, the government approved the conceptual report *On the Introduction of a New Doctoral Model in Latvia*, which aims to improve the quality of doctoral studies and make them more attractive²²⁵. It is planned to introduce a new financing procedure ensuring that doctoral candidates are competitively remunerated during their studies, and to set up uniform procedures for promotion.

Latvia is preparing to introduce a cyclical institutional accreditation system in higher education with support from EU funds. In August 2020, an Erasmus+ project²²⁶ was launched to prepare a framework for the implementation of regular, comprehensive evaluation of the quality of university work. The introduction of cyclical accreditation (to be implemented gradually starting in 2024) will ensure regular, comprehensive evaluation of the quality of higher education, and will serve as a basis for gradually redirecting funding to study programmes that have been assessed as 'excellent' and 'good' in the new accreditation cycle. Currently, there is little overall available research funding, and the amount of performance-based funding for HEIs remains limited. This could hamper the reforms' capacity to produce rapid systemic changes and to attract highly qualified academic staff.

²²² OECD/UNESCO-UIS/UNICEF/World Bank Special Survey on COVID. March 2021.

²²³ Eurostat [edat_lfse_24]

²²⁴ The new law divides HEIs into: (i) science universities; (ii) arts and cultural universities; (iii) applied science universities; and (iv) applied sciences university colleges. Each type of HEI will need to meet a specific set of criteria.

²²⁵ Latvia has a comparatively low proportion of students enrolled in PhD programmes (3% in 2019 against an EU average of 4%). Eurostat.

²²⁶ <https://www.izm.gov.lv/lv/projekts-cikliskas-augstakas-izglitiba-instituciju-akreditacijas-ieviesanai>

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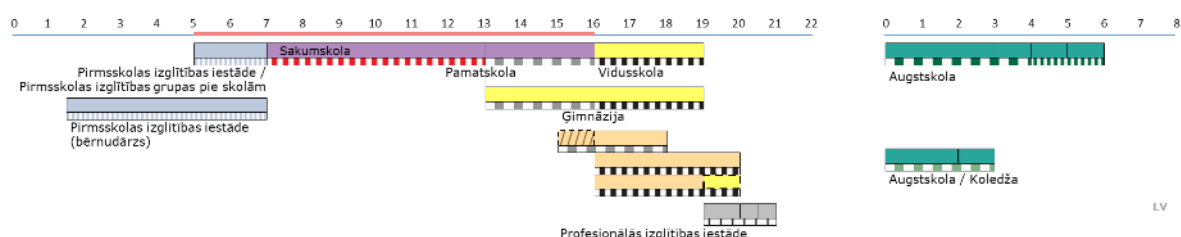
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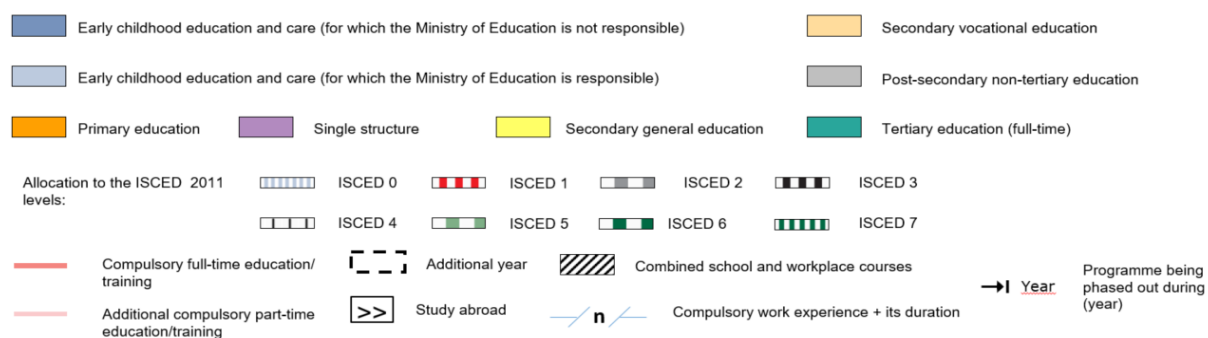
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system





Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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LITHUANIA

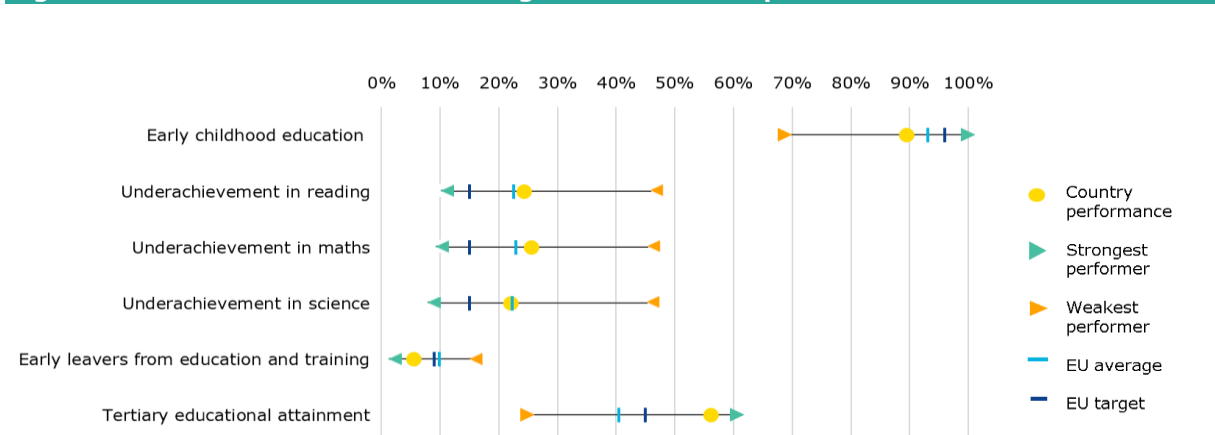
1. Key indicators

Figure 1 – Key indicators overview

			Lithuania		EU-27	
			2010	2020	2010	2020
EU-level targets		2030 target				
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		83.4% ¹³	89.6% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		45.1% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	24.4% ^{09, b}	24.4% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	26.4% ⁰⁹	25.6% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	17.0% ⁰⁹	22.2% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		7.9%	5.6%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		46.3%	56.2%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.9%	4.6%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€3 499 ¹²	€4 447 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€3 968 ¹²	€4 655 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€6 542 ¹²	€6 273 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		8.0%	5.6%	12.4%	8.7%
	EU-born		:	: ^u	26.9%	19.8%
	Non EU-born		: ^u	: ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			87.0%	90.1%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		46.1%	56.1%	33.4%	41.3%
	EU-born		: ^u	: ^c	29.3%	40.4%
	Non EU-born		: ^u	62.6% ^u	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, c = confidential, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

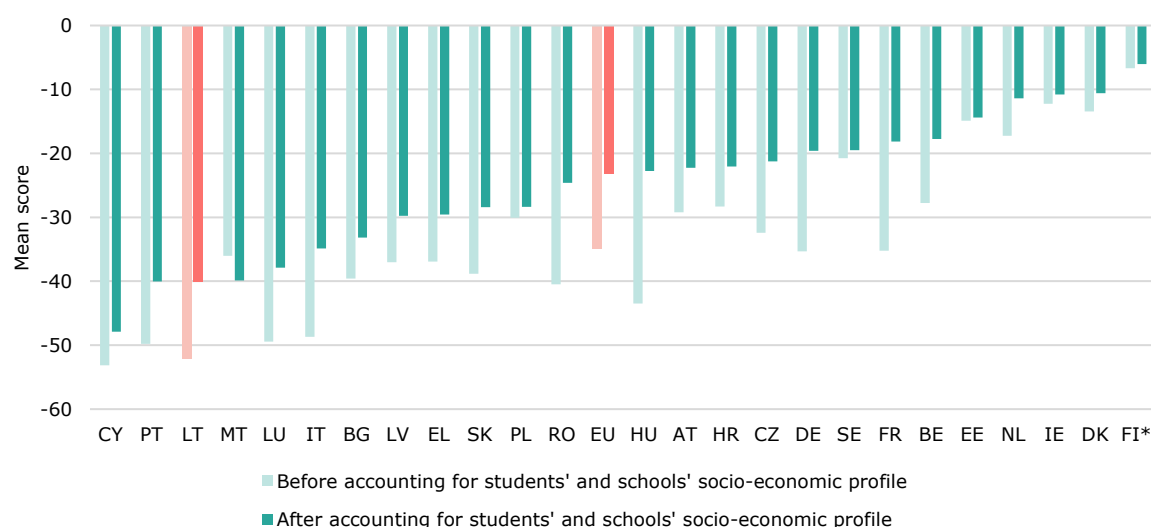
2. Highlights

- Improving well-being at all education levels could help Lithuania to both achieve better education outcomes for all and counterbalance the long-lasting effects of the pandemic.
- The reorganisation of the education network, which has been announced as a reform objective for years, is to some extent envisaged in the National Recovery and Resilience Plan.
- Measures have been planned to increase access and participation in early childhood education and care which will potentially have a positive impact on education outcomes and equity in the long term.
- Steps are being taken to make VET more attractive and more responsive to labour-market needs. Steps are also being taken to create a more coherent framework for life-long learning.

3. A focus on well-being in education and training

A greater sense of belonging at school could have a positive impact on student achievement in Lithuania. Only 55.7% of 15-year-olds surveyed in the OECD's 2018 programme for international student assessment (PISA) feel that they belong at school compared, with an average of 65.2% at EU level. PISA 2018 shows that sense of belonging is associated with a 20-point increase in reading performance in Lithuania (compared to an average of 11 points), after accounting for the socio-economic profile of students and schools. Social and territorial differences in Lithuania also manifest themselves in indicators of pupils' well-being. For instance, in 2018 27.5% of pupils from less advantaged socio-economic backgrounds reported being a victim of bullying at least a few times a month against 17.6% of more advantaged students. This 9.9 pps gap is the third highest in the EU (the average gap at EU level is 5.7 pps). Bullying has a significant impact on reading performance: it results in a 40-point decline in reading score whereas it only results in an average 23-point decline at EU level (Figure 3). This significant impact of bullying in Lithuania could further widen the achievement gaps between pupils from less advantaged and more advantaged socio-economic backgrounds, and it points to a need for extra support targeting the most disadvantaged. At present, extracurricular activities that can help students develop non-cognitive skills such as persistence, resilience or a stronger sense of belonging (Massoni, 2011) are more frequently available in advantaged schools (OECD, 2020b).

Figure 3 - Change in PISA reading performance when students reported being bullied at least a few times a month, 2018



Source: OECD (2019b). Note: data for FI are not statistically significant.

Improving students' well-being has become a national policy objective in the last decade.

Between 2015 and 2018, the share of 15-year-olds being bullied at least a few times a month increased by 6.2 pps (compared with an average increase in the EU of 3.3 pps) to 22.6% (EU: 22.1%), as shown by PISA 2018. Since 2017, schools have been required to provide bullying-prevention programmes and assistance to pupils and teachers experiencing violence or bullying. The Structural Education Reform (2018-2021)²²⁷ included a policy action aiming at making schools a safe place for all (Box 1) by moving from an individual to a more systematic approach to students' well-being. Prevention programmes which also cover social and emotional competences became part of the new curriculum after this reform (see Section 5). However, further teacher training could be necessary to guarantee a safe educational environment for all children and ensure that teachers respond to different educational needs effectively, as set out in the Agreement on the national education policy (2021-2030). According to the 2018 OECD Teaching and Learning International Survey (TALIS), about 21% of teachers report a high level of need for professional development in student behaviour and class management (as against an average in the EU-22²²⁸ of 14.2%). Moreover, a lack of funds and shortages of specialists²²⁹ in schools could hold back the implementation of more comprehensive approaches to supporting well-being at schools (such as approaches that also include teachers' well-being, which is not yet addressed). Not all schools can afford or attract the necessary competent staff. At tertiary level, each institution is responsible for its students' well-being and a more systematic approach across the tertiary sector is lacking so far.

Box 1: Creating a safe environment at school

The aim of this European Social Fund project was to create and maintain a safe school environment by: creating favourable conditions for the personal development of students; improving academic achievements; reducing social exclusion; and preventing pupils from dropping out of school.

The project planned targeted prevention programmes that had already been evaluated and the effectiveness of which had already been confirmed. The programmes aimed at: preventing violence and bullying at school, substance use, sexual abuse; and developing social skills.

Between 2017 and mid-2021, the project addressed 2 071 students from grade 1 to 12 in order to start prevention as early as possible. About 13 500 teachers and other school staff in 822 schools were also offered training in this period.

Budget: EUR 9.9 million.

<https://www.nsa.smm.lt/svietimo-pagalbos-departamentas/projektai/saugios-aplinkos-mokykloje-kurimas-ii-nr-09-2-2-esfa-v-729-03-0001/>

Lithuania has allocated additional funds to mitigate the impact of the COVID-19 crisis on students' well-being.

Students were largely unprepared for the sudden and unexpected change of moving from face-to-face to remote learning, and many had emotional problems in coping. A report from Vilnius University suggests that tertiary students have experienced difficulties in concentrating and low motivation due to a loss of social contact, higher workload, and the increased number of hours spent online. To help university students to better cope with the negative impact of the crisis, additional psychological support services were provided during the 2020/2021 academic year. National surveys²³⁰ confirm that the well-being of younger pupils between first and eighth grade has also suffered. High achievers from less advantaged socio-economic backgrounds were especially affected, as their parents had fewer opportunities to support them at home. The current crisis risks further exacerbating the learning gaps that already exist due to socio-economic background if disadvantaged pupils are not offered additional support to help them catch up. To mitigate the impact of the current crisis on students, the National Agency for Education has organised training programmes for specialists on how to provide assistance remotely and for teachers on how to identify

²²⁷ LRV 6 reformos spaudai sutvarkytas (1).pdf

²²⁸ In 2018, 22 Member States participated in TALIS.

²²⁹ Mokykla 2030, <https://www.mokykla2030.lt/wp-content/uploads/2021/01/KAIP-VEIKTI-DIEGIANT-ATNAUJINTAS-BP-1.pdf>.

²³⁰ https://www.smm.lt/uploads/documents/VU_Tyrimas_Evaikai_2021_02_25_%20Forumas.pdf

risks of sexual abuse and substance addiction online. In cooperation with municipalities, education centres and the Ministry of Health, teachers were encouraged to take care of their emotional health by participating in training. As part of the 'Action Plan 2021-2022 to reduce the long-term negative effects of the COVID-19 pandemic on individual and public mental health', the Ministry of Education, Science and Sport has announced 'the Well-Being Programme' with a budget of about EUR 5 million in 2021.

4. Investing in education and training

The government has announced increases in education spending. In 2019, general government expenditure on education as a proportion of GDP was almost at the EU average (4.6% against 4.7% in the EU), and above the EU average as a proportion of total general government expenditure (13.3%; EU: 10%). The government plans to increase investment in education to address national education challenges in the next decade. According to the agreement on national education policy, funding per student will amount to at least 36% of GDP per capita in 2030 an increase of 11 pps since 2017. A new agreement between the Ministry of Education and teachers' unions was signed in late 2020 to introduce gradual increases in teachers' salaries until 2025. A regulation on full-time pay for teachers was already revised in 2019. Nevertheless, the principles for determining what constitutes full-time work for a teacher have still not been laid down, and schools enjoy great autonomy in defining this (National Audit Office of Lithuania, 2020). Standardised criteria to determine the workload of teachers and calculate salaries would ensure a uniform application of the legislation across schools.

Box 2: The National Recovery and Resilience Plan (NRRP)

The Lithuanian NRRP²³¹ is worth EUR 2.224 billion in non-repayable support under the Recovery and Resilience Facility (RRF)²³². Investments related to education and skills represent about 15% of the country's NRRP. More than half of the entire amount dedicated to education and training in the RRF will finance the 'Millennium School Programme' which aims at encouraging at least 80% of municipalities to consolidate the school network by 2025. This will mean closing certain schools and merging them with others to result in fewer but larger schools. More than 15% of the NRRP funds will cover measures to foster digital skills and digital education (see below).

RRF funds could offer the impetus needed to implement the challenging reorganisation of the school network. Optimising the oversized school network has been a stated objective of the government for years. However, the current funding system has provided few incentives for this reorganisation. Municipalities have also resisted possible school closures, fearing a negative impact on community life. Around 40% of schools have less than 200 pupils, while 28% operate joint classes²³³. While maintenance spending on small schools in rural areas is excessive, little is spent on teacher training²³⁴ (see Section 5). Urban-rural gaps in education outcomes are also significant, with students in urban schools outperforming those in rural schools (European Commission, 2020). OECD (2020a) shows that school size and test scores are positively associated in Lithuania. New rules for municipalities which link access to public funding to the size of schools and prohibit joint classes from the fifth to the eighth grade will be published by the end of the year. Financial support will be provided only to schools which present a five-year programme to improve quality and achieve efficiency targets. Municipalities with at least 1 000 pupils enrolled from primary to upper-secondary level will be able to apply under this scheme. Schools below this threshold can associate with adjacent municipalities if they wish to apply. Funds will reach 150 already existing public schools by 2026 and can be used to innovate current infrastructure, provide students with support, and strengthen the competences of teachers and school principals. The programme aims at promoting school networking

²³¹ Ekonomikos gaivinimo ir atsparumo didinimo priemonė 'Naujos kartos Lietuva' (lrv.lt)

²³² Commission Staff Working Document: Analysis of the recovery and resilience plan of Lithuania | European Commission (europa.eu).

²³³ Ekonomikos gaivinimo ir atsparumo didinimo priemonė 'Naujos kartos Lietuva' (lrv.lt)

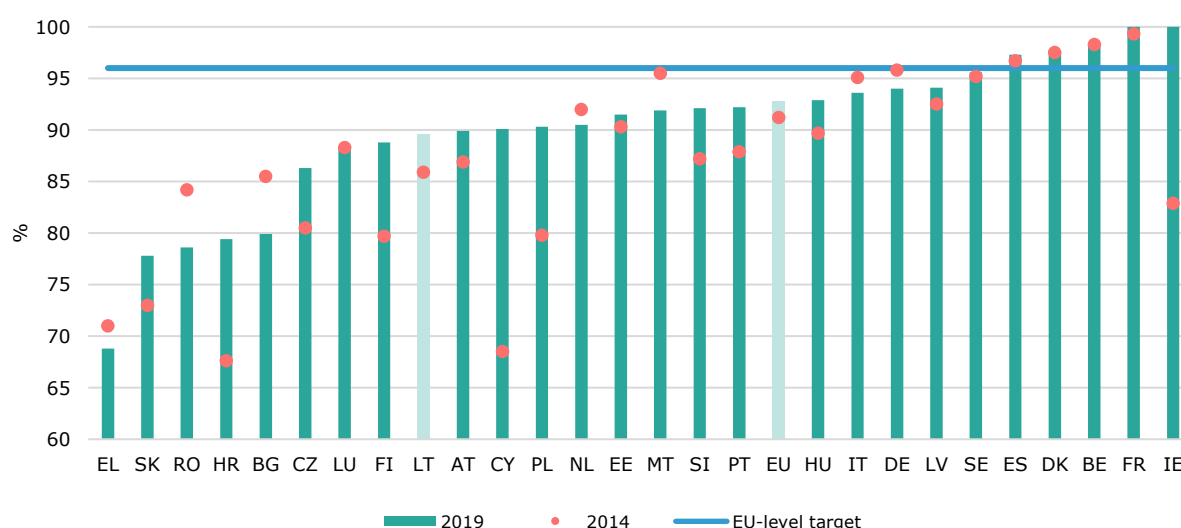
²³⁴ Between 2017 and 2019, the share of funding for quality improvement decreased by 13% whereas the share of funding on school maintenance increased by 17.5% (National Audit Office of Lithuania, 2020).

beyond the territory of one municipality and encouraging smaller schools to connect to larger ones. However, effective implementation of the programme will require weighing the benefits of school reorganisation in terms of efficiency with drawbacks such as a longer journeys to and from school, especially for younger children. Besides ensuring transportation of pupils to and from the schools, it will be necessary to build consensus around this reform at municipal level while steering the process at central level. Reaping the full benefits of this reform will require improving school monitoring and increasing the competences of school principals, as they currently enjoy great autonomy in managing schools.

5. Modernising early childhood and school education

Amendments to the Education Law aim to increase participation in early childhood education and care (ECEC). Participation in ECE of children from age 3 to 6 stood at 89.6% in 2019, below both the EU average (92.8%) and the new EU-level target of 96% set for 2030 (Figure 4). The possibility to enter to pre-primary education has been lowered from 6 to 5 years, entering into force in September 2023. In 2019, 26.3% of children under 3 attended formal childcare – a significant rise of 15.3 pps since 2009, yet still below the EU average of 35.3%. The government plans to extend the legal entitlement to pre-school education in the coming years. Municipalities should provide ECEC to all 4-year-old children whose parents require a place in 2023, for all 3-year-olds in 2024, and for all 2-year-olds in 2025. As of September 2021, children from families at risk of poverty should be guaranteed access to pre-school education. Municipalities which design and implement local services, including decisions on procedures for enrolment, will be financially supported by the central government. This is particularly important given the need to compensate for the impact of the COVID-19 pandemic, above all on more disadvantaged students. The RRF will fund a feasibility study in 2021 on how to adapt existing ECEC infrastructure and develop transport services and whether a further expansion of capacities is needed to meet increasing needs and tackle imbalances in ECEC provision (European Commission, 2020). According to the National Audit Office of Lithuania (2020), in 2019-2020, around 64% of children living in 41 municipalities were not transported to ECEC facilities despite their need.

Figure 4 - Participation in early childhood education of pupils from age 3 to the starting age of compulsory primary education, 2014 and 2019



Source: UOE, [educ_uoe_enra21].

Some measures have been planned to improve quality in ECEC. The NRRP envisages an update of the pre-primary education curriculum to better match the learning needs of younger children. An expert group was set up in May 2021 to develop new pre-school educational guidelines for municipalities by 2022. According to the National Audit Office of Lithuania (2018), only a third of municipalities analyse their provision of pre-school education by conducting internal audits or thematic inspections. A new methodology for self-evaluations and external evaluations at ECEC and

school level will be developed by 2022, supported by EU funds. This could help put in place a central monitoring system that ensures high-quality across Lithuania. While all these measures are welcome, significant improvements in participation and quality also require: (i) better coordination between local and central level; (ii) highly-qualified administrative staff; and (iii) proper financial and organisational support for municipalities. Increasing the number of highly-qualified ECEC staff is also needed to meet the ambitious objectives.

Some steps are being taken to improve school outcomes. Lithuania performed better than the EU average in the 2019 Trends in International Mathematics and Science Study (TIMSS)²³⁵, showing that its pupils cope relatively well with the school programme. However, student outcomes, particularly in science, technology, engineering and mathematics (STEM), are generally poor, as shown by PISA 2018²³⁶ (Figure 1) and national tests. Tests also highlight high dispersion within schools: 73% of school leavers in the 2020 'Matura' school-leaving exam deviated from the average level of maths achievement in their schools. In addition, almost one third of students failed the 2020 'Matura' school-leaving exam and almost 20% of 10th graders scored below satisfactory in a maths test in spring 2021. Lithuania is currently updating the general curriculum framework for primary and secondary education to implement competence-based curricula from 2023, as planned in the NRRP. Successful implementation of these curricula will also require an update of the system for student assessment, as was already planned in the 2018-2021 programme for structural education reform. 27% of school leavers in the Matura exams who had high scores in class tests did not pass the final exam. This update of the primary and secondary curricula should also look at the framework and content of the Matura, and is essential to ensure greater consistency between final exams, class assessments, and other assessments of competences, including non-cognitive competences. The RRF will also help to develop a network of 10 STEAM centres with the aim of improving access to laboratories and non-formal learning activities to strengthen pupils' STEAM competences.

More systemic oversight could help increase quality and inclusion more effectively. The National Audit Office of Lithuania of Lithuania (2020) maintains that the number of schools which monitor the individual progress of pupils is increasing. Nevertheless, a more systemic monitoring system is still missing. Setting up a monitoring system linked to the reorganisation of the school network and the development of a new methodology for school evaluation could represent a first step to ensuring higher-quality education across Lithuania by collecting relevant data and information. This would also help to provide more targeted support to address shortcomings in learning due to the pandemic and the high impact of socio-economic background on education outcomes as shown by PISA 2018. Despite a greater share of students engaged in peer-to-peer tutoring and homework support in socio-economically disadvantaged schools (OECD, 2020b), the use of private tutoring is widespread in general. This increases the performance gaps in education caused by socio-economic background (National Audit Office of Lithuania, 2020). TIMSS 2019 shows that 59% of pupils (against an EU-22²³⁷ average of 57%) are taught by teachers who say they need professional development to address individual students' needs. Although the rate of early school leaving is still well below the EU average (5.6% against 9.9% in 2020), it has increased by 1.6 pps since 2019. This is the second highest increase in the EU, driven by a particularly strong increase in rural areas (+3.3 pps). This trend could be exacerbated by the COVID-19 pandemic, and highlights the need for additional support to target disadvantaged young people in rural areas. To better support students in their final grade of school and address the impact of remote learning, the government allocated about EUR 5.25 million for student tutoring in 2021.

As of 2024, all schools must ensure access for children with special needs and provide them with any necessary special assistance. Pupils with disabilities in Lithuania lack access to inclusive education (OECD, 2020a), and there has been no progress towards the objective of reducing the share of pupils in special institutions to 0.5% by 2022 from the 1.1% share they occupied between 2016 and 2019 (National Audit Office of Lithuania, 2020). Investments in school

²³⁵ TIMSS is an international assessment which measures how well students at fourth and eighth grades have mastered the factual and procedural knowledge taught in school mathematics and science curricula.

²³⁶ See European Commission (2020) for details. Note that PISA results are not directly comparable with TIMSS as they assess different constructs and different samples of students, see OECD (2021).

²³⁷ TIMSS 2019 only covers 22 EU Member States.

infrastructure will also be needed to implement the principle of inclusion, as less than 10% of schools are able to guarantee access to pupils with special needs²³⁸. Progress towards more inclusive education will also make it necessary to increase the supply of specialist teachers across the country. During the 2018-2019 school year, 28% of schools did not have a special-needs teacher or a speech therapist (European Commission, 2021a).

Investment in teachers' competences will be boosted by the RRF. It will finance training in ICT competences for 2 200 school teachers as well as further qualifications, including Master's degrees, for 10 200 teachers. To foster the uptake of digitally driven educational innovations, the Edtech platform will support the testing of innovative education methods in schools designed by start-ups and innovators. The aim of improving teachers' competences is to contribute to better education outcomes and effective implementation of the curriculum reform. This is urgently needed, as about 50% of students²³⁹ are currently taught by teachers who say they need professional development in content, pedagogy, curriculum, and assessment in mathematics and science (TIMSS 2019). A revision of the Teacher Training Regulation is also planned in the NRRP by 2022. The objective of this revision is to make teacher training more flexible by: making it possible to obtain credits for acquiring higher qualifications, including Master's degrees; and recognising informally acquired competences and completion of short modules in certain subjects. This may also have a positive impact on the attractiveness of the profession, (European Commission, 2019). To better adapt teachers' professional development to schools' needs (European Commission, 2019) it will be important to continue measures aimed at fostering the competences of school principals, particularly in assessing training needs and managing school budgets (European Commission, 2020). Teachers' training fees are mainly covered by school budgets and the European Social Fund.

6. Modernising vocational education and training and adult learning

The RRF will boost efforts to make VET more attractive. Initial VET learners in lower- and upper-secondary education as a percentage of the total student population has remained almost stable at about 29% between 2013 and 2019. To make VET more attractive, it has been possible for students in general education to take up vocational modules since September 2020. The NRRP also aims for at least 4 900 students to complete by 2026 vocational modules oriented towards developing skills to support the green and digital transitions. In addition, to facilitate the acquisition of practical skills in small and medium-sized enterprises by students, apprenticeships and work-based learning support scheme will be established by 2022. Moreover, to ensure that the content of VET better matches the needs of the labour market, vocational programmes will be updated or prepared, following consultation with social partners. A national IT platform will also be set up for the Progress of VET that brings together social partners, authorities, VET providers and other stakeholders to ensure a long-term and sustainable vocational training model in each region. In 2020, Lithuania also approved a new procedure to assess competences acquired through apprenticeships, work experience, self-study or other types of learning.

Measures have been implemented to support the shift to remote learning during the current crisis. During the pandemic, universities and other education institutions and businesses provided free access to digital resources to teachers and the general public. The Qualifications and VET Development Centre has set up a digital resource-bank of good practices in VET. In 2020, specific training was provided to teaching staff on STEM education in VET institutions and organising remote learning in VET. This was part of a project to develop a system of continuous professional development for vocational teachers and adult educators.

Participation in learning has remained largely stable during the pandemic. In 2020, 7.2% of Lithuanian adults (aged 25-64) participated in learning, up from 7% in 2019, but still below the EU average (9.2%). This may be because adult educators adapted to the pandemic rather well, especially during the second lockdown (from November 2020). Furthermore, the continued implementation of various projects, including those funded by the EU, kept up the momentum in

²³⁸ <https://www.svietimonaujienos.lt/svietimui-skiriamos-lesos-letai-bet-auga/>

²³⁹ At EU-22 level, about 36%.

education. It also helped to improve general, special and professional skills, and motivated adults to engage in training.

To further promote adult learning, the NRRP aims to put in place a unified model for the functioning and governance of the life-long learning framework. A central IT system will be set up for programmes that meet applicable quality standards. This system will contain a mechanism to identify programmes for acquiring high-value-added competences. The creation of the one-stop-shop online platform for life-long learning by 2023 will consolidate the currently fragmented framework for adult skills development. The system will: provide access to career guidance; gather information on competences acquired during training and on ways to recognise competences/qualifications. At least 21 600 people are expected to be helped to improve their digital skills by 2026.

7. Modernising higher education

The funding model for tertiary education will be revised to further promote quality and efficiency. Lithuania had one of the highest share of people aged 25-34 with a tertiary qualification in the EU in 2020 (56.2% against an EU average of 40.5%), well above the new EU-level target of 45% set for 2030. Nevertheless, tertiary graduates tend to experience vertical and horizontal mismatches in the labour market or have skill levels very close to those of secondary graduates (European Commission, 2020; OECD, 2021). To increase the competence levels of new university students, Lithuania has planned to set uniform minimum requirements for access to publicly subsidised and non-subsidised study places. The minimum requirements for non-subsidised places tend to be lower to allow students who do not meet the admission requirements to enrol as the funding received by tertiary institutions is mainly dependent on the number of enrolments. To improve the labour market relevance of tertiary education, foster internationalisation²⁴⁰ and ensure stable funds for research, the NRRP plans for a new funding formula to be developed by 2023. Besides a basic contribution from the government to tertiary institutions that is linked to the number of enrolled students, the government will provide additional funding according to performance indicators such as the development of study programmes in areas with high research potential. The idea is to ensure a better allocation of resources, closer cooperation with business, and a concentration of study programmes in fewer areas. A special funding scheme will also be created to incentivise mergers of universities. Recent attempts to consolidate the university network did not bring the expected results (European Commission, 2020) due to a lack of incentives, the absence of consensus around the reform and a lack of central steering. Institutions' performance will be monitored and assessed through external evaluations – which are currently not being carried out regularly – against a new set of criteria, which were developed between 2019 and 2020. The availability of comparable indicators on the performance of higher-education institutions and the monitoring of their progress would make it possible to implement quality-assurance measures in a timely manner and improve the quality of courses of study (National Audit Office of Lithuania, 2021). Making tertiary education more responsive to the needs of the labour market will be essential to increase youth employment following the economic disruption caused by COVID-19²⁴¹.

The mission of universities and colleges will be updated to foster the reorganisation of the network of colleges. An expert group will present a review of this mission by 2022 with the aim of drawing up new criteria for programmes to: (i) better respond to labour market and social needs; and (ii) clarify the different roles of universities and colleges which offer vocationally oriented professional Bachelor's degrees. Imposing higher quality requirements (such as a higher employment rate of recent graduates) is supposed to help reorganise colleges, increasing the overall efficiency of the higher-education sector. Some colleges will further develop their applied R&D activities in cooperation with local businesses and communities, thus transforming themselves into institutes of applied sciences without university status. Other colleges will merge with vocational schools. The RRF will finance the implementation of 5 projects to consolidate colleges by 2024.

²⁴⁰ In Lithuania, the aim was that by 2020 (before the COVID-19 pandemic), 20% of students would have completed part of their studies abroad, but the proportion was less than 4% (National Audit Office of Lithuania, 2021).

²⁴¹ Even with a best-case scenario, the EU forecasts that overall unemployment in Lithuania will be 8.5% in 2021, well above 2019 levels (6.3%).

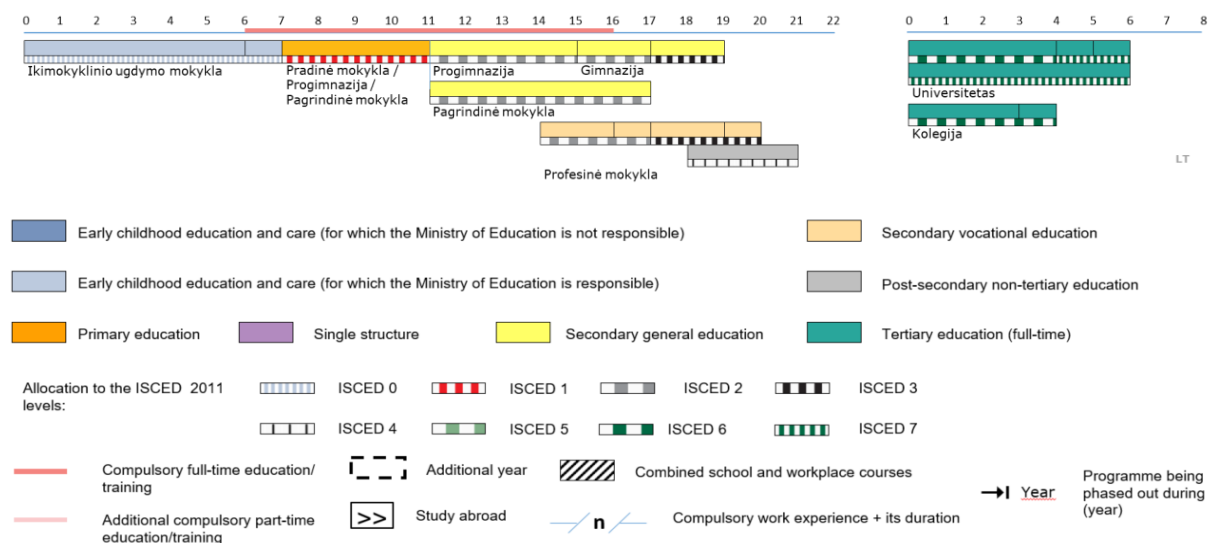
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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LUXEMBOURG

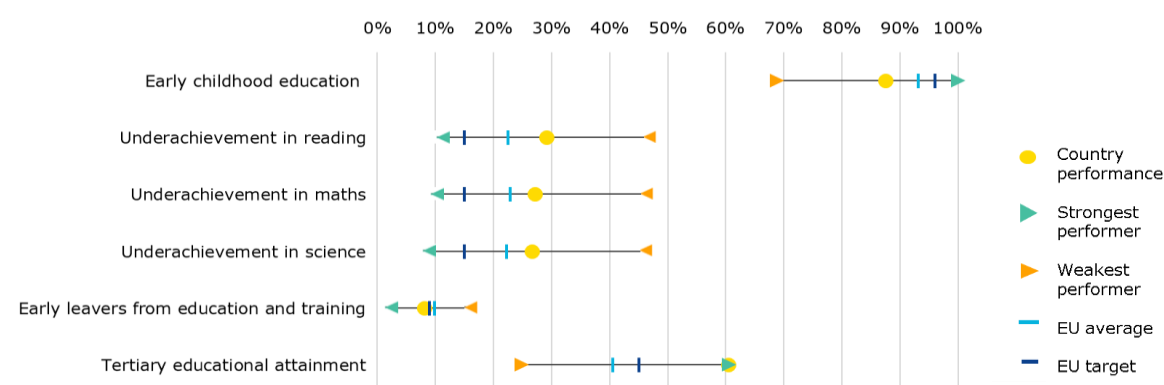
1. Key indicators

Figure 1 – Key indicators overview

			Luxembourg		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	89.9% ¹³	88.4% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	:	50.6% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	26.0% ^{09, b}	29.3% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	23.9% ⁰⁹	27.2% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	23.7% ⁰⁹	26.8% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	7.1%	8.2%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	44.2%	60.6%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.3%	4.7%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€15 050 ¹²	€16 008 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€15 169 ¹²	€17 151 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	: ¹²	€33 514 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		6.0%	7.8%	12.4%	8.7%
	EU-born		11.0% ^u	8.7%	26.9%	19.8%
	Non EU-born		: ^u	: ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			73.4%	75.4%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		40.0%	48.6%	33.4%	41.3%
	EU-born		49.0%	70.5%	29.3%	40.4%
	Non EU-born		46.0%	65.9%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 – Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

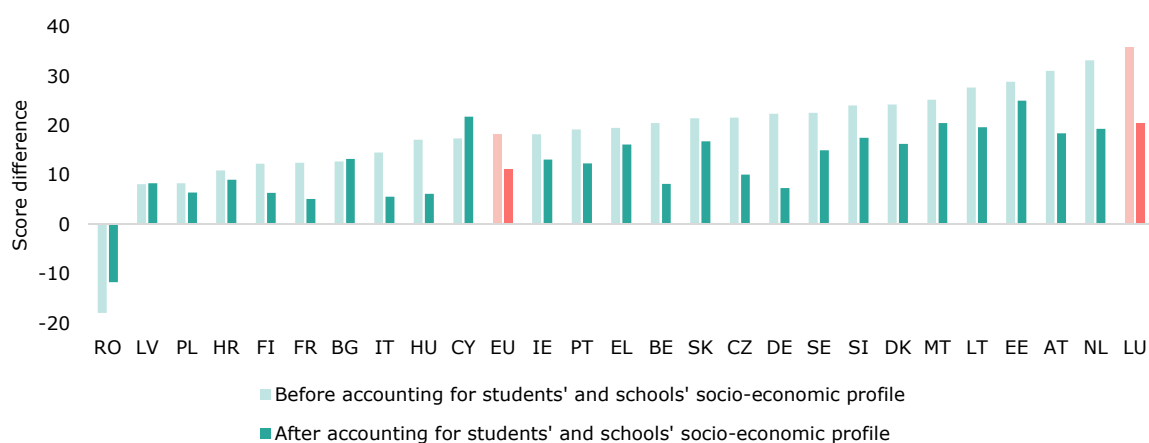
2. Highlights

- Bullying is evenly distributed among schools, but disadvantaged students show a lower sense of belonging.
- Public expenditure on education is well above the EU average and families received further support to mitigate the impact of the COVID-19 crisis.
- Learning deficits were discernible with particular regard to language skills in German, the teaching language for most subjects.
- Employment rates among young people declined during the pandemic, including for tertiary graduates.

3. A focus on well-being in education and training

In the international comparison, bullying is at average levels in Luxembourg, but pupils' sense of belonging depends largely on a school's socio-economic profile. Pupils' well-being is not covered by the Education Acts. Compared to other PISA-participant EU countries, the sense of belonging among Luxembourg pupils would appear to be one of the factors with the strongest positive impact on their reading performance (Figure 3) (OECD, 2019). The gap in the sense of belonging between pupils attending advantaged and disadvantaged schools is one of the highest in the EU, with pupils from an immigration background in particular reporting a lower sense of belonging. This suggests that performance could be improved by stronger inclusion measures. The share of pupils reporting that they were bullied at least a few times a month is below the EU average (20.6% vs 22.1%). In Luxembourg, the differences between schools in the levels of bullying incidents are smaller than in other countries. The proportion of pupils who reported being bullied at least a few times a month increased by 5 percentage points between 2015 and 2018 (EU average: 3.3 percentage points). One of the tools used to reduce bullying in Luxembourg's European Schools - international schools primarily attended by the children of EU staff - is Finland's KiVa anti-bullying programme, which has effectively reduced bullying in Finland and developed into a worldwide anti-bullying network. KiVa is based on the idea that the way peer bystanders behave when witnessing bullying plays a critical role in perpetuating or ending the incident. As a result, the intervention is designed to modify peer attitudes, perceptions and understanding of bullying. The programme specifically encourages students to support victimised peers rather than embolden bullying behaviour (European Commission, 2018).

Figure 3 – Change in reading performance when students feel that they belong at school, PISA 2018



Source: OECD (2019). Note: data for FI and IT are not statistically significant.

A regular report examines the situation facing young people. According to the 2008 Youth Act, the Minister responsible for Youth is in charge of presenting a 5-yearly report on this issue. The Act also specifies that interventions in the field must be based on evidence gathered on the situation facing young people. The report's author is the University of Luxembourg, which also conducts the Youth Survey launched in 2019. The 2020 Youth Report (MENJE, 2021a) finds that the overall well-being of young people in Luxembourg is satisfactory but influenced by individual, social and structural factors. Disadvantaged families are less able to support their children. Even before the pandemic, the number of young people suffering from mental-health issues grew substantially. On a positive note, the report finds that formal and non-formal learning can play a central role in impacting positively on the well-being of young people. Another related survey focuses on pupils' behaviour as regards health (HBSC, 2020). According to the most recent edition in 2018, in the space of 12 years the proportion of 11-18 year-old pupils becoming victims of mobbing (bullying of an individual by a group) fell from 13% to 8%. Another positive trend is lower consumption of alcohol and cigarettes and healthier eating habits among young people. Less positively, the proportion of pupils suffering from performance pressure and exam stress had increased over the same 12-year period from 35% to 40%.

Life satisfaction and emotional well-being among children fell during the first lockdown. The report on 'Subjective well-being and stay-at-home experiences of children aged 6 to 16 during the first wave of the COVID-19 pandemic in Luxembourg' shows that children's life satisfaction decreased sharply during lockdown (Kirsch, C., Engel de Abreu, P. M.J., Neumann, S., Wealer, C., Brazas, K., & Hauffels, I., 2020). While 96% of children said they were satisfied or very satisfied with their lives before the pandemic, only 67% were satisfied or very satisfied with their lives during it. The emotional well-being of children varied according to various factors. Significantly lower emotional well-being was reported by older children, children with a less advantaged socio-economic background and girls. Key dimensions of subjective well-being during the pandemic were the difficulty, quantity and content of school work when schools were closed, fear of illness, and satisfaction with the way adults listen to children. During the school closures, teachers received guidance from the Ministry of Education on how to detect pupil distress and how to address pupils' issues and concerns.

Young people display alarming rates of suicidal thoughts and depression. The evaluation of the 2015-2019 national suicide prevention plan, a multi-sectoral policy including education, was published in March 2020 (Santé, 2020). The plan was based on the Australian 'Living Is For Everyone (LIFE)' initiative, the main goal of which is to make individuals, families and the community better able to respond quickly and in a coordinated manner to people's distress. The evaluation of the action plan under the suicide prevention plan revealed that 15.2% of 12-18 year-olds had seriously contemplated suicide in the 12 months prior to the survey. 28% of the same age group suffered bouts of depression of at least 2 weeks during which they stopped their usual activities.

4. Investing in education and training

Public expenditure on education is above the EU average and was further increased to support parents during the school closure period. Public expenditure on primary to tertiary education per student, expressed in purchasing power standards, was the highest in the EU in 2018 (the most recent year for which data are available), standing at EUR 17 013.30 (followed by Austria with EUR 10 944.3). Public expenditure on education as a proportion of GDP is not a reliable indicator for Luxembourg because cross-border workers and foreign capital invested in the country make a significant contribution to its GDP. Measured as a percentage of the total public budget, Luxembourg spent 11% on education in 2019, compared to an EU average of 10%. Staff remuneration accounts for 69% of education expenditure. Statutory salaries for teachers with 15 years of experience at each level of education are 66% to 79% higher than the salaries of other tertiary graduates (OECD, 2020). In order to allow parents to look after their children during school closures, special leave on family grounds was introduced. The amount budgeted for this was estimated at EUR 222 million, depending on for how long educational institutions were closed (Government, 2020).

Families received various forms of pandemic-related support. At the beginning of 2021, the child benefit allowance was increased. The basic monthly amount of child benefit was raised to EUR 265, combined with a monthly age supplement of EUR 20 for children aged over 6 and EUR 50

for children over 12. During school closures, parents were exempted from paying the childcare contribution. Over this period, the government continued to pay its contribution to childcare hours under the childcare voucher scheme (*chèque-service accueil* – CSA) in favour of education and care facilities, mini-crèches and certified childminders (Government, 2020).

The school population is growing and becoming ever more diverse. Between 2010 and 2020, the school-age population (4-16 year-olds) increased by 11% (vs 1% on average in the EU). The overall population grew by 24% in the same period, mainly due to immigration. In the 2020/2021 school year, pupils with Luxembourgish as their first language were the minority both in primary (34.3%) and secondary education (39.6%) (MENJE, 2021). Only 84.0% of pupils follow the national curriculum; others follow a European or international curriculum in public schools (4.4%) or private schools (11.6%). This high cultural and linguistic diversity poses particular challenges for the school system.

Box 1: The national recovery and resilience plan

The Luxembourg plan²⁴² is worth a total amount of EUR 183.1 million, of which EUR 93.4 million will be funded as non-repayable support under the Recovery and Resilience Facility (RRF). It aims to address structural challenges in skills, health, housing and governance and to foster the green and digital transitions²⁴³. Investments related to education and skills account for more than 5% of the total RRP budget.

5. Modernising early childhood and school education

Recent investments aim to increase access to and improve quality in early childhood education and care (ECEC). 88.4% of children take part in ECE from the age of 3, which is below the EU average (92.8%) and the new EU-level target of 96% set for 2030. Luxembourg has invested heavily in extending access to early childhood education and care and non-formal day care facilities in the last 10 years, nearly tripling the number of places and doubling the availability of childminders (Neumann 2018). Compulsory education starts with 2 years of pre-school from the age of 4, which can be supplemented with an optional year from the age of 3. The 2016 Youth Act established national quality standards in ECEC which all providers had to meet by September 2017 in order to be eligible for the government's childcare voucher (CSA) co-financing scheme. This includes activities to familiarise children aged 1 to 4 with Luxembourgish and French. Childcare vouchers give parents reduced rates at crèches, after-school centres, mini-crèches and day care centres. In 2019, the childcare system was extended to include a new type of institution, mini-crèches. These are small-scale day care centres for children aged up to 12 that look after a maximum of 11 children.

Teachers and families received significant support during the school closures linked to the COVID-19 pandemic. A national learning platform, 'souldoheem.lu', was created to provide digital learning materials and is updated daily with new content. It provides educational material for primary and secondary education, links to other interesting platforms, online challenges in various topics, links to helplines, etc. A second website, 'kannerdoheem.lu', provided recreational materials and ideas for non-formal learning, games and leisure activities for confined home spaces. In primary school, teachers provided pupils with a work plan and learning materials. Secondary school teachers gave regular assignments and feedback to their pupils in languages, mathematics and their specialisation subjects. All pupils were offered a two-week catch-up session before the start of the 2020/2021 school year, and additional coaching sessions were offered during the first term of the school year for pupils who were lagging behind.

The rate of early leavers from education and training (8.2%) is within the EU-level target (below 9%). This figure should be treated with caution because of the limited sample size. National estimates based on the actual number of young people under 24 who left the Luxembourgish school system without a diploma or leaving certificate during the reference year indicate that early school leaving decreased from 9.2% in 2016/2017 to 8.16% in 2019/2020. This rate also includes young

²⁴² <https://mfin.gouvernement.lu/fr/dossiers/2021/planderelance.html>

²⁴³ <https://mfin.gouvernement.lu/dam-assets/pr/com-2021-332-swd-fr.pdf>

people who had left the national school system but then enrolled in a foreign or private school later on. Boys are 83% more likely to leave school early than girls. Most young people are aged between 16 and 18 or in grades 9 and 10 when they drop out of school. These are the grades when pupils need to choose between different educational paths: academic (*classique*), general (*général*) or vocational (*régime professionnel*) (MENJE, 2021b). 97% of pupils who dropped out repeated a year at least once. Numbers repeating the school year remain high: by the end of primary education (age 12) 21.1% of pupils have repeated at least one school year (MENJE, 2021d). According to a survey by the National Youth Service (MENJE, 2021c), young people who have left education without a qualification are three times more likely not to participate in either education, employment or training at age 20 to 34 than their peers who have not dropped out from education. In 2020, the proportion of 20-34 year-olds not in education, employment or training (NEET) was 9.6% (EU average: 17.6%). To support reintegration, the SNJ contacts these young people and informs them about possible training and employment offers or alternative paths such as a period of voluntary service or a training workshop.

Pupils' basic skills are below the EU average and strongly linked to socio-economic status.

Luxembourg's average levels of competence, as measured in the OECD Programme for International Student Assessment (PISA), were lower in 2018 than in 2015 and 2012 in reading and science, but stable in mathematics. All were significantly lower than the respective EU average. The proportion of low achievers is well above the EU average in all three areas tested: 27.2% in mathematics, 29.3% in reading and 26.8% in science, compared to 22.9%, 22.5% and 22.3% respectively at EU level. In 2018, advantaged students scored 122 points higher than their disadvantaged peers, the largest such gap observed across all EU countries. Only 1% of disadvantaged students performed at the top levels (5 or 6), compared to the EU average of 2.5%. Pupils' performance is heavily influenced by their ability to cope with the trilingual education system²⁴⁴. This system is challenging for all, but especially for pupils who speak a language other than Luxembourgish at home.

National tests give some insight into the pandemic's impact on pupils' learning development. Based on the results of the national competence tests (*Epreuves Standardisées – EpStan*), the University of Luxembourg analysed the influence of the pandemic on pupils' learning outcomes. In pre-primary and primary education, the competency scores remained stable, except for a substantial decline in German in grade 3. The same trend was observed in lower secondary, especially among pupils from less advantaged socio-economic backgrounds, deepening existing inequalities. As German is the language of literacy training and teaching in Luxembourg, this deterioration is also likely to have repercussions for most other subjects. According to the accompanying survey, families coped well with home schooling and teachers communicated with their pupils regularly. Infrastructure was not a problem for accessing digital materials (LUCET, 2021). With an average class size at primary level of 15 pupils in public institutions – compared to the OECD average of 21 – Luxembourg was in a favourable position to reopen its schools while maintaining a safe distance of 1 to 2 metres between pupils and staff (OECD, 2020).

Digital sciences are being introduced in secondary education. In 2015, the government launched the Digital4Education strategy to boost young people's digital skills. This covers a wide range of actions and options, such as raising cybersecurity awareness, 'maker spaces' that allow pupils to experiment with 3D printers, and free access to digital classrooms and the MS Office suite for teachers. Since the 2020/2021 school year, coding has been incorporated in mathematics classes in teaching cycle 4 (ages 10 to 11) and from 2021/2022 it will be taught across all subjects in teaching cycles 1 to 3 (ages 4 to 9). In secondary education, computer science will become a new subject in 2021/2022, including coding and computational thinking. From 2021/2022, some 18 secondary schools – about half of all secondary schools – will take part in a pilot scheme introducing digital sciences from grade 7 onwards through the 3 years of lower-secondary education. From 2022/2023, the new subject will be taught once a week in all secondary schools from grade 7 (MENJE, 2021c). In addition, the Luxembourg Tech School (LTS) programme offers extracurricular activities for 11-19 year-old pupils who are interested in the digital world and willing to learn about and apply

²⁴⁴ The vernacular language at primary level is Luxembourgish, while pupils learn to read and write in German. All subjects (except French) are taught in German. The main teaching language in technical secondary education remains German, but in the upper grades mathematics is taught in French, which is the language of the final exam. In academic secondary education, the teaching language switches from German to French in the seventh grade for mathematics and in the 10th grade for other subjects.

technology in a real-world business context. Currently, LTS is present in more than 10 schools providing project-based personalised coaching for more than 200 pupils. As part of the strategy for improving digital education, the National Teacher Training Institute (Institut de formation de l'Éducation nationale – IFEN) offers new continuing professional development courses to both primary and secondary school teachers.

6. Modernising vocational education and training and adult learning

Vocational education and training (VET) graduates continue to enjoy excellent employment prospects. The employment rate among recent VET graduates is 100% (EU average: 79.1%). Nevertheless, the data need to be treated with caution because of the small sample size. In 2020, 61.9% of all learners in upper secondary education were enrolled in vocational education and training. The government took several measures to mitigate the impact of the COVID-19 crisis on the number of available apprenticeship places and thereby prevent early school leaving from VET colleges. In 2020, direct financial aid in the form of an apprenticeship bonus (between EUR 1 500 and EUR 5 000 per apprentice) was launched to encourage training organisations to offer apprenticeship places; the deadline for signing an apprenticeship contract was also extended.

A new technical programme in smart technologies replaces the former training programme in electronics. Since 2018/2019, five secondary schools have offered 'Smart Technologies technical training'. The new 4-year technical programme uses a practice-orientated and project-based teaching approach. During the first 2 years of the programme, students learn the basics of electronics and smart technologies. In the second half of the programme, students can opt to specialise in one of five fields: robotics and automation; computing and electronics ('infotronics'); renewable energy; smart energy; and e-controls. During the specialisation period, students work at a company in order to learn how to apply their skills in real life. Students graduate with a diploma in general secondary education, allowing them either to enter the labour market straight away or to continue their studies at tertiary level.

Overall participation in the labour market and adult learning is high, but lower among low-skilled and older workers. 16.3% of adults participated in learning, compared to an EU average of 9.2% in 2020. Participation is much less common among low-skilled workers (5.7%), increasing the risk of their skills becoming outdated and, ultimately, of early retirement. The employment rate among older workers (aged 55 to 64) remained particularly low (43.1%) in 2019, compared to an EU average of 59.1%. In its coalition agreement, the government pledged to promote the quality of lifelong learning by introducing a personal training account and training vouchers allowing all employees to follow basic training for digitalised professions free of charge. In June 2019, the establishment was announced of a new quality assurance agency (MENJE 2019d).

Various measures were taken to promote adult learning. The 'Future Skills' initiative launched in October 2020 allows jobseekers to follow a 3-month training course combined with a 6-month traineeship. The training focuses on soft, digital and project management skills. The 'Digital Skills' programme offers training vouchers to employees who benefited from the short-time work scheme between January and March 2021. In addition, the public employment service launched a 'Basic Digital Skills programme' for jobseekers in January 2020.

Luxembourg's national recovery and resilience plan fosters skills development. There will be investments in vocational training programmes for jobseekers and workers placed in short-time work respectively. These vocational training programmes are expected to help mitigate the employment impact of the COVID-19 crisis. A complementary reform under the plan relates to the design of further vocational training programmes.

Box 2: European Social Fund project 'Skill you up 2.0'

Total budget: EUR 599 500 (ESF: 50%)

Duration: 1 January 2020–31 December 2021

Target: 144 jobseekers

This measure builds on a previous scheme set up in 2018. It targets jobseekers aged over 30 who have a minimum of 5 years in secondary education, takes stock of their acquired skills (both technical and behavioural) and of their motivations, and draws up a concrete professional project for their reintegration into the labour market.

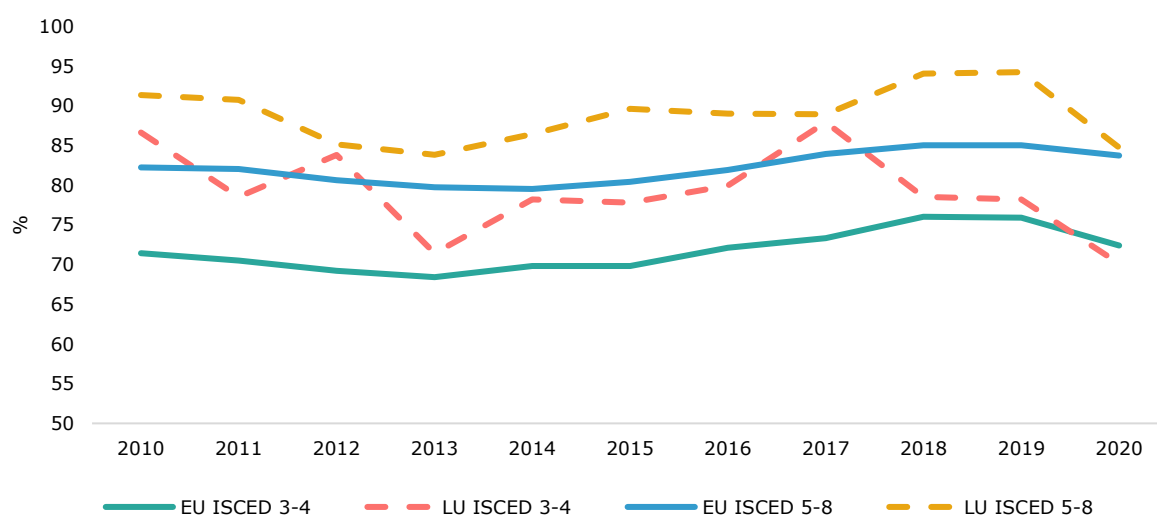
7. Modernising higher education

Tertiary attainment and graduate employment rates are among the highest in the EU.

60.6% of the population aged 25 to 34 holds a tertiary degree (EU average 40.5%), the highest rate in the EU. This is partly thanks to the high proportion of graduates in the migrant population (69.0%, compared to 48.6% of native Luxembourgers). The proportion of highly qualified women in this age group exceeds that of men by 11.3 pps (EU average 10.8). Study programmes at the University of Luxembourg are either bilingual, trilingual (French, German, English) or entirely in English. With a high proportion of international students, Luxembourg may have been more adversely affected by the travel restrictions linked to the pandemic than other countries (OECD, 2020).

Employment rates declined during the pandemic. The employment rate of recent tertiary graduates in 2020 was 84.7%, above the EU average of 83.7%, but almost 10 pps lower than in 2019 (Figure 4). Young people were hit particularly hard by the crisis: their unemployment rate increased by 7.9 pps within a year, reaching 25.1% in the first quarter of 2021. Having a tertiary degree carries not only an employment premium, but a considerable earnings advantage in most OECD countries. In Luxembourg, 25-64 year-olds with a tertiary degree and income from full-time, full-year employment earned 47% more in 2018 than full-time, full-year workers with upper secondary education, compared to 57% on average across OECD countries.

Figure 4 – Employment rates of recent graduates (20-34 years old) at ISCED levels 3 to 4 and 5 to 8, 2010-2020 (%)



Source: LFS, [edat_ifse_24]

University education was adapted to COVID safety standards in 2020/2021. All seminar rooms at the university were equipped with multimedia tools to enable students' on-site participation on a rotation basis. The other students in the groups followed classes via video-conferencing. The university announced that the 2021 summer exams would be organised in a remote format and that it would extend hybrid teaching to the winter semester of 2021/2022. To support the mental and physical well-being of students and staff, a free programme, Campus Life, was launched in October 2020 with three focal points: Campus Sport, Campus Art and Campus Well-Being. The programme aims to encourage students and staff to try a new form of art, a new sport or a new discipline and to maintain or even improve their inner balance.

A new short-cycle programme was launched in October 2020 to protect young people from unemployment. The new 'Diplom+' post-secondary training scheme is a flexible programme over two semesters targeting young people who, having completed secondary education, are not enrolled in higher education and have yet to find employment. Participants are offered modules in general job skills such as project management and presentation and computer skills. On average, 25 hours per week are expected to be spent on study, leaving enough time for participants to search for a suitable job or study option. The programme can be interrupted at any time and completed modules are certified. Diplom+ entitles participants to benefit from study allowances. Take-up in the first year was modest, with 143 enrolments, of whom 22 youngsters were able to find a job or enrol in a study programme.

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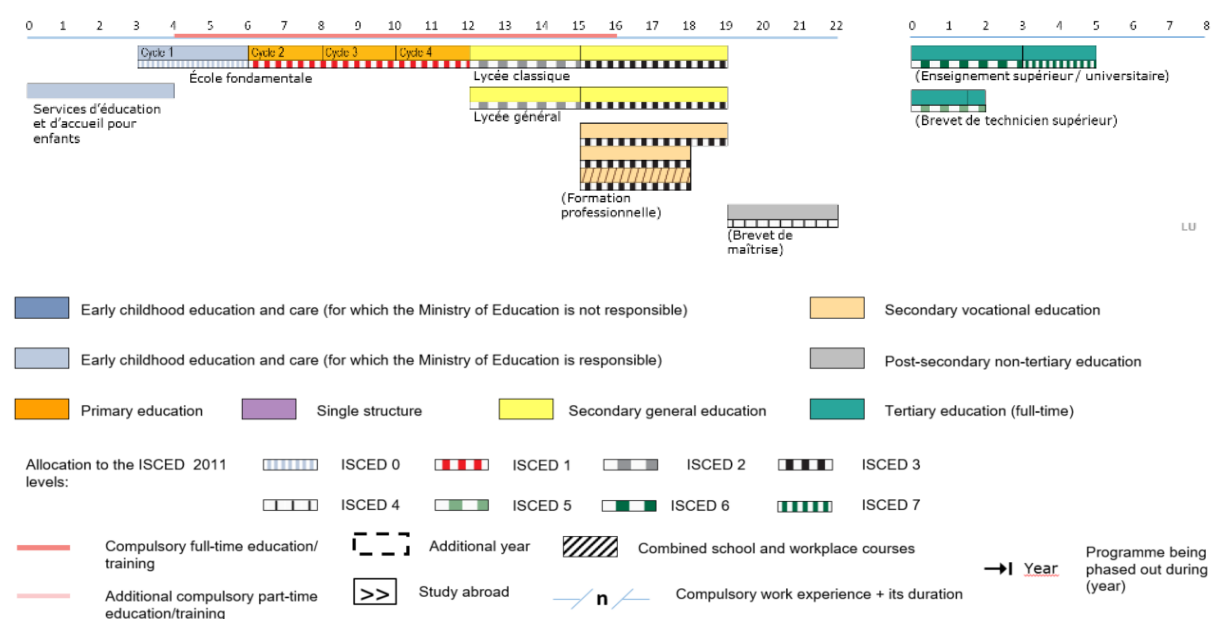
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Any comments and questions on this report can be sent to:
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MALTA

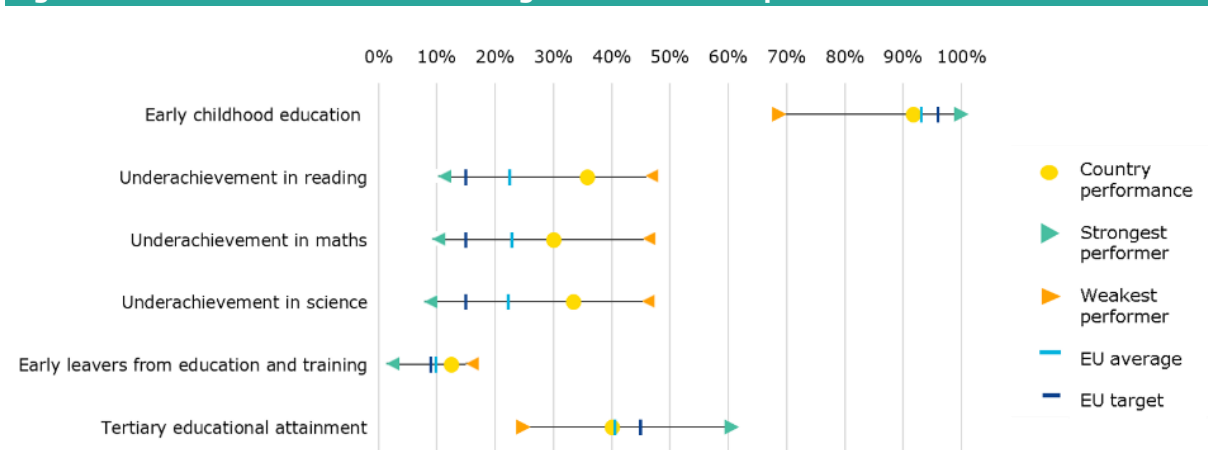
1. Key indicators

Figure 1 – Key indicators overview

			Malta		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		99.4% ¹³	91.9% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	36.3% ^{09, b}	35.9% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	33.7% ⁰⁹	30.2% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	32.5% ⁰⁹	33.5% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		21.4%	12.6%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		24.3%	40.1%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.4%	5.3%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€4 757 ¹²	€7 321 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€6 687 ¹²	€9 724 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€12 687 ¹²	€15 040 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		21.6%	11.7%	12.4%	8.7%
	EU-born		: ^u	: ^u	26.9%	19.8%
	Non EU-born		: ^u	26.2% ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			75.2%	85.1%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		23.6%	37.7%	33.4%	41.3%
	EU-born		: ^u	51.3%	29.3%	40.4%
	Non EU-born		35.6%	46.3%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Students' well-being has received increased attention in education policies, but serious challenges persist, impacting on student outcomes.
- A holistic approach to policy evaluation is key to increasing the efficiency and effectiveness of the relatively high levels of spending.
- Measures continues to be put in place to further reduce the rate of early school leaving.
- Continuous investment in vocational education and training (VET) infrastructure and the quality of adult learning aims to address skills shortages by equipping all learners with relevant labour-market skills.

3. A focus on well-being in education and training

Student and educator well-being was central in the design of recent education policies for all education levels. This reflects an increasing awareness of the topic's importance at national level. The 2017 National Children's Policy promotes children's well-being by focusing on five components, including education. The 2019 updated National Inclusion Policy and Framework re-designed processes and practices to respond to all learners' needs and social realities. A series of recommendations on the well-being of educators was launched in collaboration with the University of Malta in 2020²⁴⁵. The 2020 - 2025 Strategic Plan for the University of Malta also aims to improve the well-being of the academic community. A Well-being Index based on a number of WHO indicators has just been established by the Malta Foundation for the Well-being of Society and the University of Malta. The current index is for adults, but work to develop others for children is planned for this year. The 2017 Learning Outcomes Framework includes competences in well-being and resilience, which were identified as mainly coming under the curriculum for the subject 'personal, social and career development' and are assessed through a formative approach. Several psycho-social services are offered to students and their parents within compulsory education and at tertiary level, and range from psychotherapy to career-guidance services. Learning-support educators paid by the government are employed in public, church and independent schools to support all learners who might be encountering difficulties because of emotional, social, cultural or linguistic barriers.

Addressing bullying and promoting a greater sense of belonging at school could positively impact education outcomes. In comparison with the rest of the EU, 15-year-olds in Malta experience a lower degree of well-being as measured by the 2018 OECD Programme for International Student Assessment (PISA)²⁴⁶. Maltese students in all types of schools feel strongly supported by their teachers (OECD, 2019²⁴⁷), which should have a positive impact on their feelings about school (Wang and Holcombe, 2010); however, a relatively low proportion of pupils feel they belong at school (63.8% vs 65.2% at EU level). This contributes to the low average level of basic skills (Figure 1). A stronger sense of belonging at school is associated with higher scores in reading (+20 PISA points in reading vs 11 at EU level), even after accounting for the socio-economic profile of students and schools.

Bullying is a major problem that concerns all types of schools and students, regardless of their socio-economic profile. About 32% of pupils report being bullied at least a few times a month, compared to 22.1% at EU level, with a significantly higher rate among low-achieving students (47.3% vs 25.5% for high-achieving students). Malta is the only country in the EU where the share of pupils reporting being bullied is higher among advantaged students (35.5%, vs 28% for disadvantaged students²⁴⁸). Bullying is also relatively high in private schools²⁴⁹ in EU comparisons (34.1% vs 19.6% at EU level). Similar results for younger children are reported in the study carried

²⁴⁵ [Recommendations-for-the-Wellbeing-of-School-Educators-V5-002.pdf \(stedwards.edu.mt\)](https://stedwards.edu.mt/recommendations-for-the-wellbeing-of-school-educators-v5-002.pdf)

²⁴⁶ See also Cefai and Galea (2020) for findings related to other areas of children well-being.

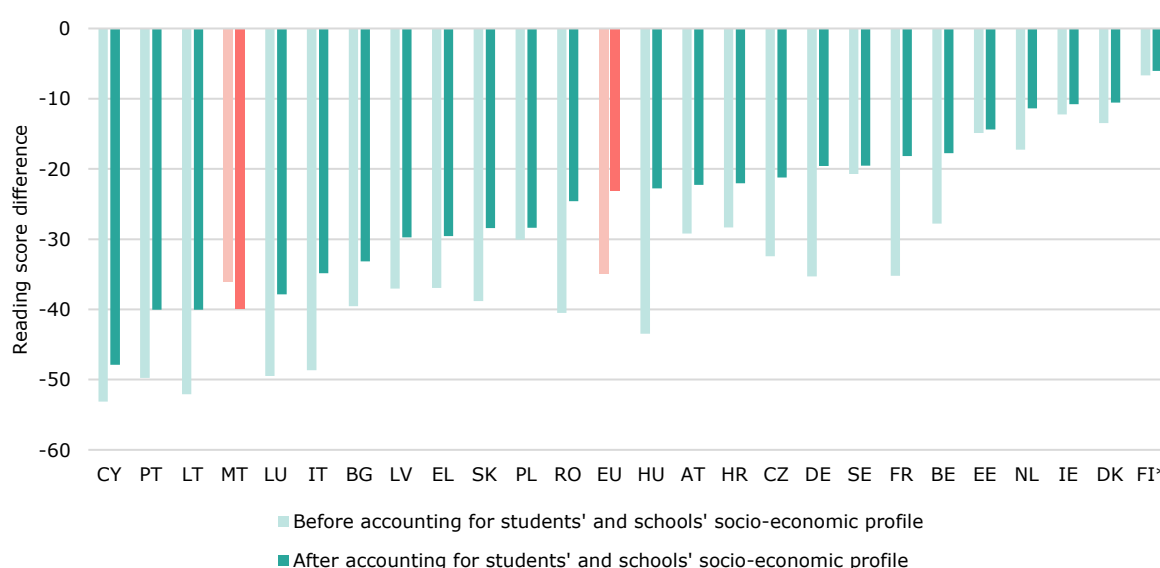
²⁴⁷ See Table III.B1.6.2.

²⁴⁸ At EU level, (19.4% vs 25.1%).

²⁴⁹ The share of students in private schools who report being bullied at least a few times a month is 29.7% (EU: 21.7%).

out by Cefai and Galea (2020). This study also indicates a decline in the incidence of physical and relational bullying, with less bullying reported in the 2017-2019 wave of the study when compared to the 2013-2015 wave²⁵⁰. Being bullied contributes to a low reading performance (-40 PISA points in reading vs 23 at EU level) (Figure 3) and may also contribute to the high rate of school dropout (Townsend et al., 2008) or absenteeism. About half of students report having skipped at least 1 day of school in the 2 weeks before the PISA test (EU: 25%). To date there are no particular mechanisms for monitoring school climate, well-being or bullying, so there is no evidence available to assess the effectiveness of the well-being policies in place. The implementation of a whole-school approach that also takes teachers' well-being into account would help promote well-being, including in non-public schools where bullying is also a problem (Cefai et al., 2021). This is the policy approach proposed in the new strategy on early school leaving (see Section 5) to tackle bullying and absenteeism.

Figure 3 - Change in reading performance when students reported being bullied at least a few times a month, PISA 2018



Source: OECD, PISA 2018. Results for FI are not statistically significant. Results for SI and ES are not available.

Maltese children were able to handle the stress of the first lockdown better than tertiary level students. A study carried out during the first wave of the pandemic when schools were closed in 2020 suggests that school children between 11 and 16 years-old adapted quite well to the challenges. However, there were also indications that the share of students reporting difficulties in well-being increased after 4 months of lockdown. Family-related factors appeared to be particularly important for children's good mental health. The role of schools and teachers did not feature among the top protective factors (Cefai et al., 2021) for children. Students at the University of Malta adjusted successfully to online learning and registered high satisfaction with teaching staff during the first lockdown. A study reports a significant association between fear of COVID-19 and self-reported increases in alcohol use, as well as the impact of COVID-19 fear on negative emotions such as depression, exhaustion and loneliness (Bonnici et al., 2020). Studies on the second and third wave will provide further clarity on the lockdown's impact during the 2020/2021 academic year and the effectiveness of the measures taken²⁵¹. The Ministry for Education has published a series of recommendations for the well-being of students and school educators. The recommendations have promoted practices to support educators in addressing learning losses due to school closures by also supporting psycho-social and emotional well-being and acknowledging different learning patterns and differing educational needs.

²⁵⁰ However, these results cannot be compared with PISA 2018 as it covers school children around the ages of 8, 10 and 12.

²⁵¹ Schools were open for the whole 2021/2022 school year, excluding nine days in March 2021. Information provided by Malta in October 2021.

4. Investing in education and training

Public expenditure on education is above the EU average and increased by 61.5% in real terms between 2010 and 2019. In 2019, Malta's general government expenditure on education was 5.3% of GDP (compared with 4.7% at EU level). As a proportion of total public expenditure, spending was the second highest in the EU (14.2% vs 10% at EU level). Looking at the expenditure categories, the highest increase in real terms between 2010 and 2019 was for intermediate consumption (115% vs 0.7% at EU level) which comprises the purchase of non-durable goods (e.g. teaching materials such as teaching manuals) and services needed to provide education (e.g. heating, electricity, cleaning and maintenance services). The category represented 9% of total expenditure in 2019, below the EU average (14%). The Resilience and Recovery Facility (RRF) will finance the renovation of public schools to increase energy efficiency and the building of a pilot near-carbon-neutral school. This will complement hard-infrastructure investments made in recent years to accommodate increases in student population (European Commission, 2019a) and a sharper focus on vocational education (see Section 6).

A holistic evaluation framework could increase efficiency and effectiveness in investment in education and better learning outcomes. Although expenditure on education is relatively high and has increased substantially in the last decade, educational outcomes are lower compared with the rest of the EU (European Commission, 2020a). This suggests some challenges in the efficiency (Central Bank of Malta, 2021) and effectiveness of spending. The creation of an evaluation framework could enable the cost-effectiveness of investments to be assessed and support national decision-making on education and training. Strengthening the capacity of the policy-monitoring unit within the Ministry for Education, as referred to in the National Recovery and Resilience Plan (NRRP), is welcome in this context; it might represent a further step towards establishing a more comprehensive evaluation framework, in addition to the work done on strengthening external school evaluation (European Commission, 2020a). The framework should be based on the collection of relevant data and on student assessment, teacher appraisal, school leader appraisal, school and tertiary education evaluation and system evaluation – the component of assessment and evaluation – that should be used in concert and aligned to education goals to create a holistic and effective approach to evaluation (OECD, 2013).

Box 1: The National Recovery and Resilience Plan

The Maltese plan is worth a total of EUR 345 million²⁵² in non-repayable support under the RRF. The estimated total costs of the plan are higher than the total allocation (EUR 316 million). The national budget will fund the remaining amount. Planned reforms and investments cover reskilling and upskilling and compulsory and post-secondary education focusing mainly on vocational education to increase school retention and reduce the proportion of low-skilled people. Investments related to education and skills represent almost 20% of Maltese grants and cover renovation of public schools, and the building of a new vocational education institute (see above and Section 6) and a new ECEC facility for up to 120 children.

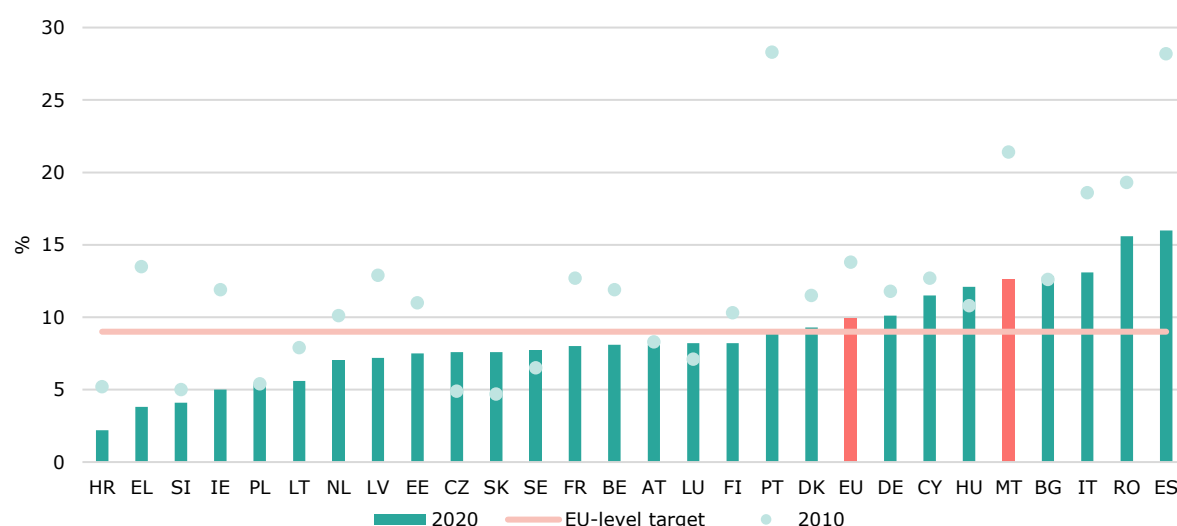
5. Modernising early childhood and school education

Participation in early childhood education of children above the age of 3 continues to decrease. The ECE rate stood at 91.9% in 2019 (EU: 92.8%), below the new EU-level target of 96% set for 2030. It has decreased by 3.4 pps since 2014. Conversely, the proportion of children below the age of 3 in formal childcare was above the EU average (38.3% vs 35.5%) in 2019. A public consultation on the revision of National Standards for Child Day Care Facilities (0-3) was launched in May 2021 and closed in July 2021. A new policy framework for ECEC has been published. It aims at improved accessibility and quality by a better-qualified workforce, who should have a clear career path and regular internal and external monitoring and evaluation.

²⁵² https://ec.europa.eu/info/files/commission-staff-working-document-analysis-recovery-and-resilience-plan-malta_en

The early school leaving rate remains relatively high in EU comparison. Despite a decrease of 8.8 pps since 2010, the early school leaving (18-24) rate remained above the EU average (12.6% vs 9.9%) in 2020 and the EU-level target (9%) set for 2030 (Figure 4). At 7.9 pps, a gap exists between native-born (11.7%) and foreign-born (19.6%²⁵³) young people. The decreasing trend for native-born early school leavers in recent years indicates that the policies put in place to tackle early leaving²⁵⁴ are effective. However, the still high values for foreign-born young people seem to mirror the fact that the proportion of pupils (aged 5-16) from abroad has increased by 190%²⁵⁵ between 2010 and 2019 and strengthened efforts are necessary to balance demographic diversity and make the Maltese school system more inclusive. According to PISA 2018, only a low share of students (12.4% vs 52.4%) are provided with additional language-of-instruction classes outside school hours and even fewer (2.5%) of those are in schools in the bottom quarter of the socio-economic distribution. This could hinder the inclusion of migrant children needing additional help to catch up. With support from the European Commission's Structural Reform Support Programme, Malta is working to improve the inclusion of migrant learners in mainstream education. The two-year project also aims to enhance migrants' sense of belonging at school.

Figure 4 - Early leavers from education and training, 2010 and 2020 (%)



Source: LFS, [edat_ifse_14]. Note: 2020 data for HR are low reliable.

A national strategy on early school leaving has been launched. It endorses strategic actions towards a whole-school approach based on the three components of prevention, intervention and compensation. This approach engages the entire school community (school leaders, teaching and non-teaching staff, learners, parents and families) and entails strong cooperation with external stakeholders. It should enable the Maltese education system to deploy comprehensive strategies to tackle the multifaceted challenge of early school leaving²⁵⁶. Monitoring mechanisms will be reinforced by the Data Warehouse Project to be put in place in 2022. Its primary objective is to identify gaps in tackling early school leaving by collecting various data (on e.g. school attendance, student assessment, socio-economic status, etc.) about students from the beginning to the end of their educational path. This will allow more targeted evidence-based interventions and more effective monitoring and evaluation of measures implemented. The project will start by processing all the data of state schools, from grades 1 to 11, followed by state post-secondary schools and tertiary institutions. Independent and church schools should also be part of the monitoring in the years ahead.

²⁵³ Data for foreign-born young people are low reliable and should be treated with caution.

²⁵⁴ [Malta's Recovery Resilience Plan - July 2021.pdf \(govt.mt\)](#).

²⁵⁵ Eurostat: [migr_pop4ctb].

²⁵⁶ See European Commission (2019). Assessment of the Implementation of the 2011 Council Recommendation on Policies to Reduce Early School Leaving.

Addressing underachievement and improving school outcomes remains a priority. Despite some improvements since 2011, the 2019 Trends in International Mathematics and Science Study (TIMSS) (TIMSS) confirms that the school outcomes of Maltese pupils are relatively poor²⁵⁷, as already shown by PISA 2018 (Figure 1) (European Commission, 2020). To address low achievement early on, between 2021 and 2024 about 1 000 underachieving pupils aged 6 will join the Reading Recovery Programme (in place since 2018), with the objective of making about 80% of participants proficient in writing and reading after 20 weeks. Teachers involved in this programme will be provided with further training. Providing adequate support and professional development opportunities for teachers is key to identifying and responding more effectively to students' needs and ensuring effective implementation of the new curriculum that was introduced in the 2017/2018 school year. TIMSS 2019 shows that almost half of students in grades 4 are taught by teachers who report a need for future professional development in mathematics content and curriculum. The implementation of the new Learning Outcomes Framework at higher grades will be underpinned by teacher training in 2021/2022 to align teaching practices to the new learner-centred approach. This could make the help provided by teachers more effective; PISA 2018 shows that support provided by teachers for homework does not lead to improvements in student reading performance.

The pandemic could further increase the number of underachievers and have a long-lasting effect on student learning outcomes. The Learning Outcomes framework for the 2020/2021 school year was revised to identify the key learning areas to focus on, but final exams were held this year. Last year, students were issued a 'predictive' grade after exams had to be cancelled because of the pandemic, so those grades could not be compared to this year's. In 2021, preliminary results indicate that 19% of those who sat the Maltese language exam, 18% of those sitting maths and 14% of those who did English failed the test²⁵⁸. Results for vulnerable students who were affected by the COVID-19 pandemic and did not take the test were assessed based on their 2020 end-of-exams and previous assessments. This gave them the opportunity to obtain their school certificate. To help students catch up in the months ahead, additional lessons were provided during the summer for primary and secondary students who had a high rate of absenteeism during the 2020/2021 school year.

Further investments are planned to foster inclusion in mainstream education of children with special needs. The NRRP includes the roll out of multi-sensory learning rooms for students with a high level of needs in colleges and the setting-up of two autism units in middle schools for a maximum of 16 students. These measures will help to further integrate pupils with special needs into the mainstream school environment and will be accompanied by continuous training in inclusive pedagogy for teachers and learning-support educators through phase course training and Community of Professional Educators (CoPE) sessions for Senior Leadership Team (SLT) and educators.

6. Modernising vocational education and training and adult learning

Participation in vocational education at upper-secondary level remains below the EU average. Following an increase in 2018, enrolments in upper-secondary VET declined slightly from 28.5% to 27.7% in 2019, remaining significantly below the EU average of 48.4%. The proportion of VET learners at upper-secondary level enrolled in programmes involving work-based learning rose to 39% in 2019 from 35% a year earlier, continuing the upward trend recorded in recent years. In 2020, training programmes for college-based apprenticeship mentors and industry-based mentors were developed for implementation in 2021. In addition, a review of the compliance of apprenticeship, internship and placement contracts with the Work-Based Learning and Apprenticeship Act (2018) should help improve learner well-being. The option introduced by the

²⁵⁷ TIMSS is an international assessment that measures how well students in grade 4 and 8 have mastered the factual and procedural knowledge taught in school mathematics and science curricula. Note that PISA results are not directly comparable with TIMSS as they assess different constructs and different samples of students - see OECD (2021).

²⁵⁸ In 2019, 19% of those who sat the Maltese exam, 17% of those sitting maths and 12% of those who did English failed the test.

MyJourney reform²⁵⁹ allowing students to take at least one vocational or applied subject at lower-secondary level was taken up by 71.1% of students in state schools²⁶⁰ in 2019/2020, an increase of 46% in comparison to the previous year. This may lead to a higher VET take-up in the coming years and help Malta to continue reducing the early school leaving rate.

Improvement of VET infrastructures continues, assisted by European funds. The ERDF co-funded INVEST project saw the completion of 7 new VET labs, resulting in 78 fully functional laboratories in 2020 in 14 different secondary and middle schools. This facilitates the delivery of vocational and applied subjects as part of MyJourney reform and the take-up of vocational and applied subjects. The RRF will finance a new campus for the Institute of Tourism Studies to address skill shortages and the high early school leaving rate by providing alternatives to a more academic path. It will incorporate an incubation centre encouraging entrepreneurship, and a childcare centre. An increase in the number of enrolments from 700 to 2 500 students is expected by 2034. This investment should ease the transition towards more sustainable tourism by equipping students with the appropriate set of competences, as well as upskilling and reskilling low-qualified workers operating in the sector through the development of tailored and flexible learning programmes. In May 2021, the Malta College of Arts, Science and Technology (MCAST) also launched the consultation process for the new Act and the Strategic Plan 2022-2027, aimed to strengthen vocational and professional education.

The COVID-19 pandemic slowed progress in participation in adult learning also in Malta.

The transition to online courses did not compensate for the decrease in traditional training, as for the first time since 2010 participation in adult learning in the past 4 weeks dropped by 1 pp. to 11.0% in 2020 (EU: 9.2%), (European Commission, 2020b). The share of low-qualified adults remained stable at 44.8% in 2020, but the participation rate of low-qualified adults in learning fell by 0.8 pps to 3.5% (4.3% in 2019) and their employment rate decreased by 0.5 pps (64.9% in 2020 compared with 65.4% in 2019). The Directorate for Research, Lifelong Learning and Employability took steps to make online learning available after in-person delivery temporarily shut down in March 2020. However, participation fell sharply, in part due to lack of digital infrastructure and the moderate share of adults (aged 25-64) with basic digital skills (19% vs 27% at EU level). IT helpdesks, increased recruitment of coordinators and the creation of an on-site internet hub in the Lifelong Learning Centre at Msida alleviated the initial pressure and may help overcome resistance to transitioning away from the traditional in-person model in the long run.

Malta is making efforts to improve the overall quality of adult learning, with resilience and well-being featuring more often in policy considerations. The Directorate for Research, Lifelong Learning and Employability is working on a National Framework for Basic Skills to provide better upskilling/reskilling opportunities through a reinforced guidance system extending available student services to adults. Plans include development of a guidance unit to strengthen support, including in the form of well-being counselling. In 2021, a National Strategy for Lifelong Learning 2020-2030, was launched for public consultation with the aim to facilitate the possibility of adults to continue learning. To expand upskilling and reskilling opportunities for all adults, an e-college offering comprehensive online courses as well as online coaches and a helpdesk to assist learners will be set up by 2022, as noted in the NRRP. Additionally, Malta is part of the Erasmus project Check-in-Take-off (CITO) aiming to improve personal skills development, recognition and validation.

7. Modernising higher education

There was no increase in the tertiary educational attainment rate in 2020 – the first time in 10 years. The tertiary educational attainment rate of people aged 25-34 remained stable in 2020 and stood at 40.1% (EU: 40.5%), below the EU-level target of 45% set for 2030. Overall, the rate has increased by 15.8 pps since 2010 – one of the highest increases across the EU. This positive trend is likely to be driven by both a higher number of students participating in tertiary programmes

²⁵⁹ For more information about this reform, see (European Commission, 2019a).

²⁶⁰ Figures provided by the Ministry for Education in the context of the EMCO-EDUC review 2021.

– in particular women²⁶¹ – and strong reliance on high-skilled foreigners in a buoyant labour market (European Commission, 2020a; Central Bank of Malta, 2021).

Measures are in place to support participation in tertiary education by alleviating financial obstacles to studying. Maltese and EU nationals studying full-time first-cycle and short-cycle programmes do not have to pay tuition fees. At Master's level, no fee applies if the additional degree is required to obtain a qualification for entry to a regulated profession. Maltese students also receive grants to cover their expenses when they are enrolled in a short-cycle programme, at both Bachelor's and Master's level, if the courses lead to a regulated profession. In 2019/20, 95% of full-time students in the first cycle received this grant; in the second cycle it was 45% (European Commission/EACEA/Eurydice, 2020). The 2022 Budget announced a 10% increase in stipends for post-secondary and tertiary education students. Those students who work will not lose out on their stipend for up to 25 hours/week. In addition to the financial measures already available to support participation in tertiary education (see Box 2), the University of Malta launched a student solidarity fund²⁶² during the first lockdown to support part-time or full-time university students residing in Malta and experiencing financial problems due to the COVID-19 outbreak.

Box 2: Supporting participation in tertiary education through the European Social Fund

The ENDEAVOUR scholarships scheme aims at promoting tertiary education and developing skills needed by the Maltese labour market. In 2020, the scheme issued its sixth call for scholarships and, by the end of the year, 728 awardees had successfully completed their studies at ISCED 7 and 8; 314 awardees obtained a distinction.

In relation to this scheme, the Further Studies Made Affordable financial instrument supports students and professionals through loans to pursue a study programme at tertiary level in Malta or abroad. The support applies to tuition fees, accommodation costs, subsistence expenses and other expenses and allows easier access to bank loans with zero interest payment and no upfront contribution by the beneficiaries; a guarantee for the financial institution is also provided. The budget for the financial instrument was increased to EUR 3 million and by 2020, 177 students had been supported in completing their studies, notably in business, law, computer science, fashion, art & music, veterinary studies and aviation.

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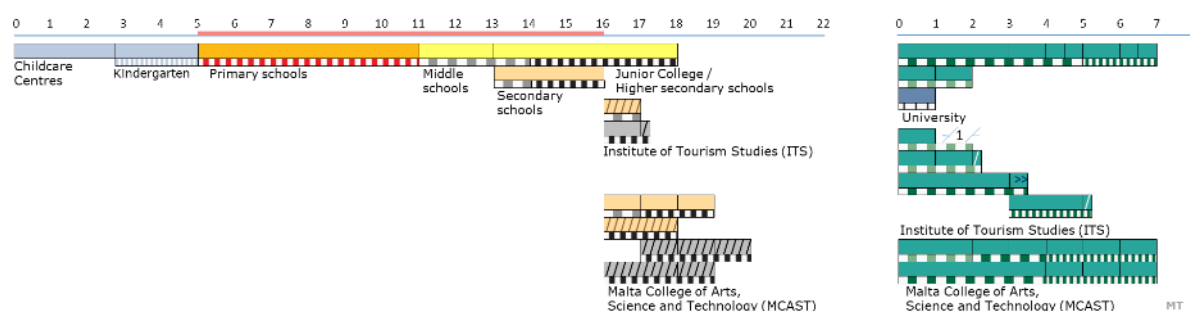
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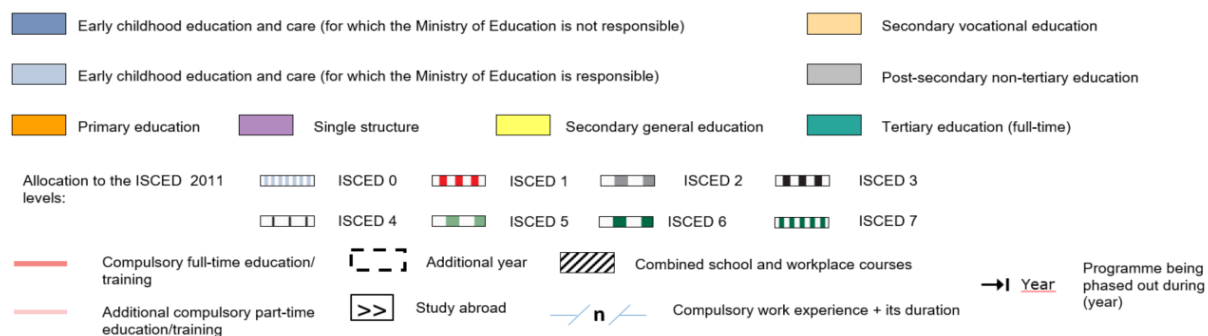
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14. Data by country of birth: edat_lfse_02.
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03. Data by country of birth: edat_lfse_9912.
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system





Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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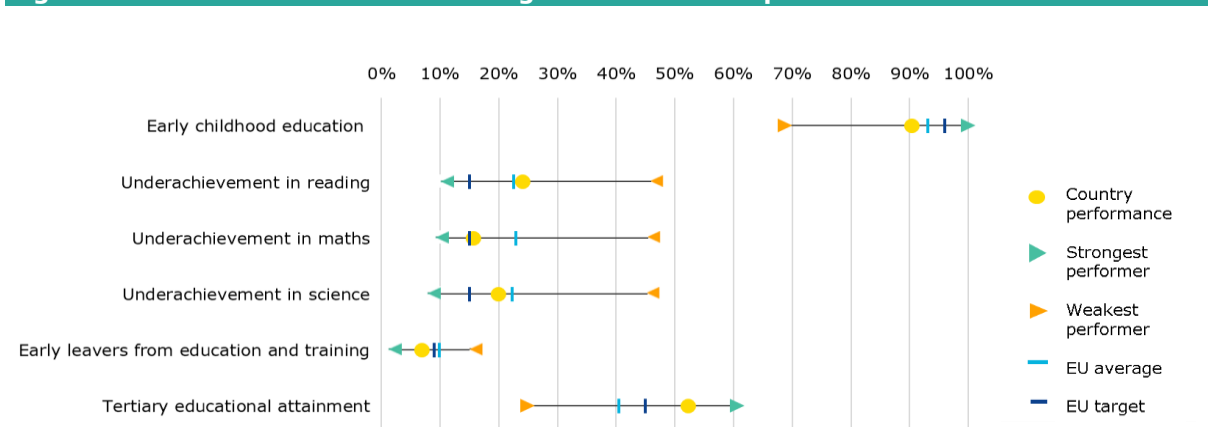
1. Key indicators

Figure 1 – Key indicators overview

			Netherlands		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	94.1% ¹³	90.5% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	26.4% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	14.3% ^{09, b}	24.1% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	13.4% ⁰⁹	15.8% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	13.2% ⁰⁹	20.0% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	10.1%	7.0%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	40.3%	52.3%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.6%	5.0%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€7 419 ¹²	€8 003 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€9 409 ¹²	€10 277 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€14 667 ¹²	€14 110 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		10.1%	6.6%	12.4%	8.7%
	EU-born		13.6%	9.8%	26.9%	19.8%
	Non EU-born		10.9%	11.5%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			77.3%	83.1%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		42.0%	52.8%	33.4%	41.3%
	EU-born		43.6%	55.6%	29.3%	40.4%
	Non EU-born		28.1%	45.0%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Pupils' safety and well-being at school is actively supported.
- Education received extraordinary additional funding to compensate for students' learning losses linked to school closures.
- The fragmentation of the school system reduces educational equity and its effect was exacerbated by the pandemic.
- Though tertiary education is highly accessible, financing appears to be insufficient for organising small-group tuition and investment in several areas.

3. A focus on well-being in education and training

By comparison with other countries, Dutch 15-year-olds feel safe at school and experience a high degree of well-being. The proportion of students who reported being bullied at least a few times a month is one of the lowest in the EU (12% against an EU average of 22%) (OECD, 2019). 79% of students reported being satisfied with their lives (OECD average: 67%) and the proportion of students reporting that they feel lonely at school (8%) was half the OECD average. While the disciplinary climate is one of the worst, the Netherlands had one of the highest scores among PISA countries on the sense of belonging index.

School safety is monitored regularly. Pupils' well-being is defined as 'having positive feelings about class and classmates, in the form of, for example, being able to be yourself, feeling comfortable and at home' (OCW, 2016). Since 2015, schools have had the legal obligation to safeguard their pupils' safety at school (Government, 2015). School boards are thereby obliged to implement a social safety policy, appoint a contact person for bullying, also responsible for coordinating actions against bullying, and monitor the social safety of pupils using a standardised instrument. While school boards monitor safety yearly at the level of the school, the Ministry of Education, Culture and Science carries out a national survey every 2 years.

Study shows success with combating bullying. In 2014, the School Safety Monitor, an instrument for monitoring bullying in schools, prompted the government to start a study on bullying at school (OCW, 2018a). Secondary education was not included in the study as there are fewer anti-bullying programmes available for this age group. The report revealed that nearly one in three children is bullied at primary school; a much higher rate than that recorded for 15-year-olds in PISA 2018. It also showed the importance of monitoring as pupils tend to be bullied more often than they report. On a positive note, the report also showed that bullying can be effectively reduced with targeted programmes.

Specific measures were taken to support and survey pupils' well-being during school closures. Families received information and advice about distance learning, including on how to reduce stress and motivate children (NJI, 2021a). In December 2020, the government announced that it would make EUR 58.5 million available to municipalities to offer activities and meetings designed with and for young people (OCW, 2020). Numerous studies looked into the impact of the pandemic on children, young people and families. To provide an overview of the available surveys and analyses, a literature report was drawn up by the Netherlands Youth Institute, presenting 128 different sources (NJI, 2021b). According to the report, the effects on young people's mental well-being, children's school outcomes and young people's incomes are clearly negative. On the positive side, many students became more autonomous, parents got more involved with school and online education was used and recognised as useful.

Study reveals serious emotional problems among children. A study published in January 2021 looked at the topics preoccupying children during the pandemic by analysing the forum chats and

telephone conversations of the children's telephone helpline, De Kindertelefoon²⁶³. The study found that the conversations during the second lockdown (from December 2020) addressed domestic violence and emotional problems such as loneliness and depression more often than before the second lockdown. It was also noted that children talked much less about normal adolescent matters such as love or friendships. An increasing number of 16 and 17-year-olds were calling De Kindertelefoon to talk about mental problems.

4. Investing in education and training

In 2019, public expenditure on education decreased slightly. Expenditure on pre-primary to tertiary education accounted for 5.0% of the Netherlands' GDP - down from 5.1% in 2018 but still well above the EU average of 4.7%. General government expenditure on education was also higher than the EU average as a proportion of total general government expenditure (11.8% vs 10.0%). In real terms, however, there was a 0.9% fall in education spending from 2018 to 2019. Between 2010 and 2019, spending on education fell by 0.5% in real terms. It decreased most (9%) in pre-primary and primary education. In secondary and post-secondary non-tertiary education it increased by 1.9%, and in tertiary education by 12.5%. This is linked to funding based on the number of pupils. While since 2010 the student population had shrunk in pre-primary and primary education by 7.85%, it had grown sharply (by 16.89%) in tertiary education.

Financing is found to be insufficient to address challenges. In April 2020, the McKinsey Institute published a study on the efficiency and adequacy of spending in primary and secondary education (McKinsey, 2020). According to the study, spending efficiency is at the average level for Europe as a whole. Educational outcomes differ strongly between schools, e.g. an average primary school pupil at one of the 10% best performing schools will be recommended to move on to a higher track of secondary education than if they attended one of the 10% lowest performing schools. In 2019, the government's structural investment in basic education in real terms was EUR 1.7 billion more than in 2009. However, this amount was completely offset by the EUR 1.9 billion decrease in expenditure from decentralised sources. Municipalities spend less on compensation for educational disadvantages, early childhood education and educational counselling, for example. The study concludes that expenditure on primary and secondary education is not enough to allow schools to pursue higher ambitions than meeting basic quality criteria, to address the country-wide teacher shortage and high work pressure or the increasing quality differences between schools.

In February 2021, the government announced an extraordinary additional investment in education to compensate for the learning losses linked to the pandemic. The National Education Programme encompasses all levels from primary to tertiary education and has a budget of EUR 8.5 billion. Primary schools will receive an average of EUR 180 000 and secondary schools around EUR 1.3 million each in the next school year. Schools with a higher proportion of disadvantaged pupils will receive proportionally more money. Schools were requested to carry out a 'school scan' and on that basis to choose projects for the next two and a half years from a list the government published in May 2021. Schools are responsible for the design, implementation and monitoring of the projects. Of the total amount, approximately EUR 5.8 billion is for school education, and EUR 2.7 billion for vocational training and higher education. In higher education, the money will be used to reimburse student tuition fees to compensate for the lack of in-class education and the study delays linked to the pandemic. The programme will run until 2023.

5. Modernising early childhood and school education

Participation in early childhood education and care (ECEC) is close to the EU average; recent investment aims to improve quality and participation time. From age 3, 90.5% of children participate in ECEC, which is below both the EU average (92.8%) and the new EU-level target of 96% set for 2030. For 2020, the government made an extra EUR 170 million available to improve the quality of ECEC (OCW, 2018b). The objectives are to increase the number of participation hours to 960 for children aged over 18 months (corresponding to 16 hours/week), raise the

²⁶³ De Kindertelefoon is a free helpline where children can have confidential conversations about subjects that they cannot, do not dare, or do not want to discuss with people in their environment. Volunteers listen to them and help them find solutions. If necessary, they refer children to specialist help and support them in taking the next step.

qualification level of ECEC staff to tertiary level, evaluate equal educational opportunities, and support municipalities and ECEC providers working to reduce educational disadvantages.

Discrimination in childcare support led to the fall of the government in January 2021. A parliamentary committee report of December 2020 revealed that ‘fundamental principles of the rule of law had been violated’ in the administration of childcare subsidies. The tax office claimed back childcare support payments from some 26 000 parents between 2013 and 2019. Families, often from an immigrant background, were identified as fraudsters over minor errors such as missing signatures on paperwork, with no means of redress. In 2020 the tax office admitted that 11 000 people had been singled out for extra scrutiny simply because of their ethnic origin or dual nationality. The government apologised for the tax office’s methods and set aside more than EUR 500 million in compensation, about EUR 30 000 for each family. The government eventually resigned, assuming political responsibility for the scandal.

Quality in ECEC is assessed regularly by the National Childcare Quality Monitor. The aim of the Monitor (*Landelijke Kwaliteitsmonitor Kinderopvang - LKK*) is to provide information about quality in childcare using structural and pedagogical criteria. Exceptionally, this assessment could not be carried out in 2020 because of the pandemic but some other in-depth analyses were conducted (OCW, 2020b). One of them looked at the differences between various criteria and found no significant quality gaps between regions and between urban and rural settings. However, the quality of childcare showed a positive correlation with services for children with an educational disadvantage, the so called early childhood education²⁶⁴. The study did not find a relationship between price and quality for day care.

The Netherlands has already reached the EU-level target (less than 9%) for early leavers from education and training. After increasing for 3 years, in 2020 early school leaving fell by 0.5 percentage points, to 7%. In 2015, the Netherlands set itself a related national target for 2021: to reduce the number of young people leaving education without a basic qualification during a school year to below 20 000. This number started rising in 2016/2017, reaching 26 894 in 2018/2019, but dropped to 22 785 in 2019/2020. This may be due to a lack of data as schools were exempted from reporting absences to municipalities after the school closure of March 2020.

There has been a decline in basic skills as measured by the OECD Programme for International Student Assessment (PISA). Over the long term, a downward trend in mean scores can be observed across the board. The proportion of top performers (Levels 5 or 6) in science and mathematics is above the EU average but has been in decline in all three domains since 2009. The proportion of underachievers is close to the EU-level target of 15% in mathematics (15.8% vs 22.9%) but above it in science (20% vs 22.3%) and especially in reading (24.1% vs 22.5%). The proportion of low achievers is especially high (56%) among pupils born abroad. Native-born pupils with a migrant background only partially catch up. Differences between schools have the strongest impact on pupils’ performance of all EU countries, reflecting ability-based tracking from an early age. The impact of socio-economic background on pupils’ performance is at the EU average.

During school closures, schools received considerable assistance and additional funding. Kennisnet – a semi-public organisation dedicated to ICT-innovation in school education and vocational training – supported schools in organising distance learning, planning classes and obtaining an overview of available digital resources. The government allocated EUR 2.5 million to purchase laptops for pupils who did not have the proper equipment for distance learning. In addition, a number of municipalities, NGOs and service providers offered free devices and internet access during the lockdown. In spring 2020, the government made EUR 244 million available for schools to assist students to catch up on work missed due to the pandemic. In October 2020, the government provided an additional EUR 38 million (OCW, 2020).

First data on learning losses is worrisome. During the first school closure, 70% of schools spent at least three quarters of the teaching time on the core subjects of language, mathematics and reading. After reopening, this remained the case in 30% of schools. A survey carried out among

²⁶⁴ Early childhood education (Voor en vroegschoolse educatie - VVE) is part of the policy to eliminate educational disadvantages. Its aim is to better prepare toddlers with a possible language or other developmental delay for primary school and to ensure that pre-schoolers can start school without any such delay.

primary pupils (Nationaal Cohortonderzoek Onderwijs) shows that pupils' learning progress dropped in all grades (Education Inspectorate, 2021). Compared to 2019, the level of reading skills, vocabulary and mathematics among first graders in secondary schools had decreased. Pupils at all levels of secondary education performed less well in reading and especially in mathematics. Pupils' learning deficit differs greatly according to the educational attainment level of their parents. While pupils with highly skilled parents show no significant deficit, pupils with low-skilled parents had made only about 85% of the progress expected for their grade.

The absence of centralised final tests in 2020 may have reduced pupils' upstreaming chances. In 2020, the centralised end-of-primary tests were cancelled and pupils were recommended to move on to particular secondary schools based on their primary school's assessment alone. This resulted in a smaller proportion (by 3% or about 14 000) of pupils going into general secondary education than in other years. Usually around 8% of pupils are advised to choose a higher track if they score better in the centralised tests than in the school assessment. This is mainly the case for children with an immigrant background, and those of parents with a lower income or educational attainment. The fact that this opportunity was not available in 2020 may have increased inequality.

Early tracking may be a factor in inequalities. Dutch children are streamed into different secondary education tracks by performance-based selection at age 12. This can lead to inequalities as pupils with the same cognitive capacities, but different backgrounds, may end up at different educational levels. In 2021, the Education Council²⁶⁵ published an opinion on later selection in response to a request from the government (Education Council, 2021). It recommends abolishing the end-of-primary test and postponing the time of selection nationally and simultaneously at all schools; this would require an adjustment of the whole secondary education structure. The Council also recommends providing more flexible, tailor-made education in primary and secondary schools, allowing pupils to follow education at different levels in different groups. The Council also draws attention to gifted pupils, who are not given enough challenges to develop their capacities.

Shadow education may further strengthen inequalities. A quarter of pupils in the final year of primary and nearly one third in secondary school have some form of private support (Bisschop et al., 2019 in: Education Inspectorate 2021). Over the past 15 years, families' annual spending on shadow education with registered providers grew more than 10-fold, from EUR 26 million in 1995 to EUR 284 million in 2019. Real expenditure is probably higher as much of this private education takes place in informal settings. Shadow education represents a risk of increasing educational inequalities as not all families are able to pay for it.

Segregation of pupils with disabilities has increased. Since 2014, all schools are responsible for placing every child, including those with special educational needs, in a suitable educational setting (*passend onderwijs*), preferably in mainstream education. Despite this legal obligation, which is in line with the UN Convention on the Rights of Persons with Disabilities, the influx of children with disabilities into special education has increased since 2015, while the special education school-leaving age was lowered from 20 to 18 years. The proportion of children with a disability receiving support in mainstream education fell between 2015 and 2016 from 1% to 0.3%. Between 2015 and 2018, the number of children with disabilities and complex support needs who are not accepted in any school but are referred to day-care centres increased by 36% (European Commission, 2021).

Teacher induction programmes receive extra support. In 2021 and 2022, EUR 88 million were made available to strengthen schools' personnel policy. School boards can use this budget to improve, among other things, the induction programmes for starting teachers. The Secondary School Council produced a roadmap to help schools draft and implement their programmes. A related network will also be launched in September 2021. This measure is part of the sectoral agreement for secondary education, according to which school boards need to ensure that starting teachers follow an effective induction and supervision programme as part of their strategic personnel policy (Secondary School Council, 2021).

²⁶⁵ The Education Council is an independent governmental advisory body which advises the Minister, Parliament and local authorities.

6. Modernising vocational education and training and adult learning

Vocational education and training (VET) is popular and graduates fare well on the labour market. The proportion of upper secondary school pupils participating in VET was 67.5% in 2019. The employment rate of recent VET graduates is 84.7% (vs a 76.1% EU average). In 2020 there was an increase in the number of students who continued on to higher education. However, since the introduction of the study loan system in 2015-2016, the proportion of VET graduates going on to higher education has declined.

Efforts have been made to reduce early school leaving and to combat discrimination at companies. In 2017, an Equal Opportunities Alliance was set up, involving diverse stakeholders which are encouraged to develop activities to promote equal opportunities. In November 2020, the Ministry of Education, together with a number of stakeholders, launched the campaign 'Kiesmij' (Choose me) to fight work placement discrimination against VET learners with a non-Western migration background; a knowledge centre for equal opportunities was also introduced. The impact of these efforts remains to be seen as discrimination persists (Verwey-Jonker, 2021). In 2020, the government also presented an agenda to improve inclusiveness in VET for the period 2020-2025 (Government, 2020).

Participation in adult learning is high and efforts are made to reach those most in need. Some 19.8% of adults participate in a learning activity (vs a 9.2% EU average). In October 2018, the government adopted a new lifelong learning strategy and multiannual action plan, to which a detailed roadmap was added in November 2020. An important measure of this strategy is the introduction of a public individual learning and development account (*STAP – Stimulus Arbeidsmarktpositie*), which will enter into force in January 2022. Anyone with a link to the Dutch labour market will be able to receive a subsidy of up to EUR 1 000 to cover their personal development and employability training costs. The measure will have an annual budget of EUR 200 million and will replace the previous option of tax deductions for educational expenses. In addition, the renewed action programme '*Tel mee met Taal 2020-2024*', promotes the development of adults' language, arithmetic and digital skills, with an annual budget of EUR 10 million. Finally, a package of measures was adopted in 2020 to mitigate the employment and social impact of the pandemic. The '*Steun en Herstelpakket*' [Support and Recovery Package] includes a wide range of measures, including support for upskilling and reskilling to preserve employment, various training offers and measures to tackle youth unemployment.

Box 1: ESF project for employment: House of Skills

House of Skills is a public-private partnership in the Amsterdam Metropolitan Area which brings together representatives from the business community, industry bodies, employee and business associations, universities and research institutes, the education sector and local government. The mission is to direct today's labour market towards a more skills-based focus, by making inter-sectoral mobility easier, and by approaching learning as a lifelong practice. To do this, tools are developed that facilitate skills matching for employers, employees, and job seekers. House of Skills has an important role as a retraining centre, including through VET. Nearly 400 people have participated in a skills project thus far.

Project duration: September 2017- September 2021

ESF contribution: EUR 1 591 074

Total budget: EUR 10 660 055

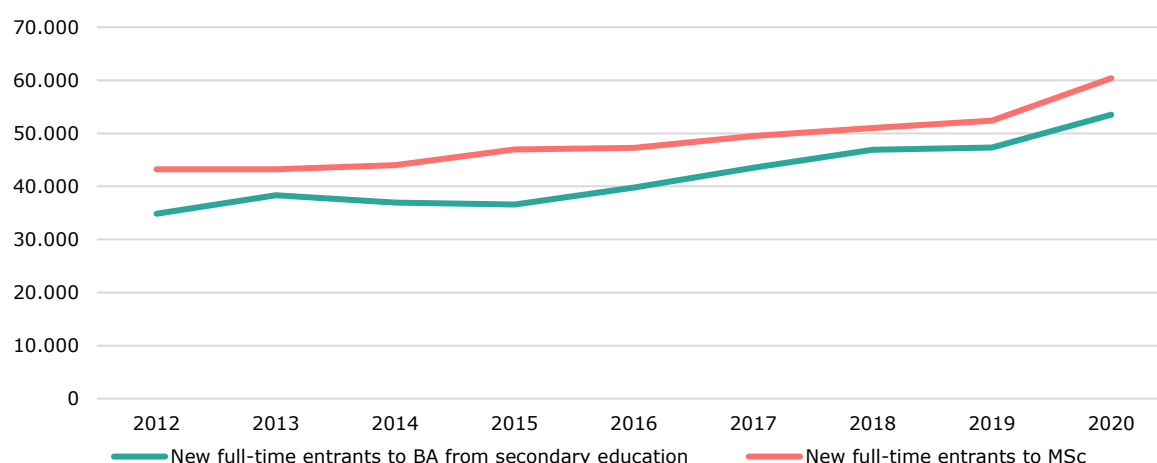
<https://www.houseofskillsregioamsterdam.nl/about-house-of-skills/>

7. Modernising higher education

Tertiary attainment and graduate employment rates are well above the EU average. 52.3% of the population aged 25-34 holds a tertiary degree (EU: 40.5%). The proportion of highly skilled women in this age group exceeds that of men by 9.6 percentage points (EU average: 10.8). The attainment rate among the EU-born population from outside the Netherlands (55.6%) surpasses that of the native population (52.8%) and is also relatively high among the non EU-born (45.0%; EU average: 34.4%). The employment rate of recent tertiary graduates is very high, at 94.5% (EU average: 83.7%).

A record number of young people are enrolled in higher education. In 2020, more secondary school graduates entered higher education than in the previous years and fewer dropped out from their studies. This is partly linked to the fact that fewer young people took a gap year because of the travel restrictions and uncertainties resulting from the pandemic. The other possible reason is the fact that the 'binding study advice' – which is issued to students who fail to meet the requirements associated with the first year of their study programme – was exceptionally abolished for 2019-2020.

Figure 3 - Full-time entrants to BA and MSc programmes between 2012-2020

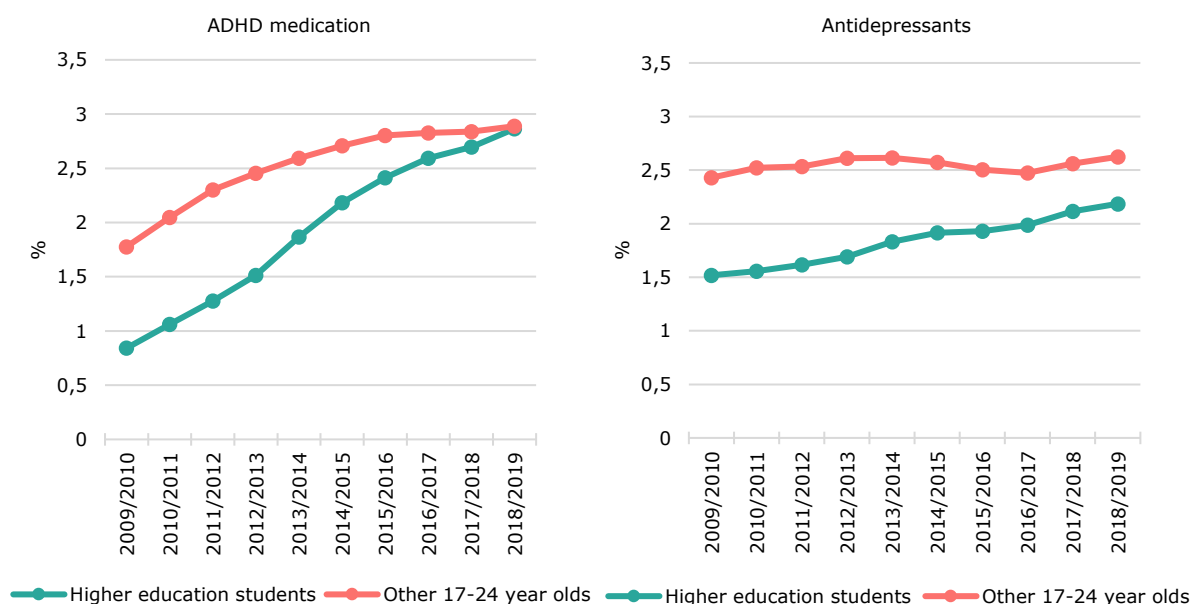


Source: Education Inspectorate, 2021

Drawing lots may be used again to ensure the fair selection of students. In March 2021, the Cabinet proposed an amendment to the Act on Higher Education, allowing higher education institutions to draw lots again in order to select students for a study programme with a *numerus fixus*²⁶⁶ (OCW, 2021). Since 2013, students for such study programmes have been selected based on at least two quality criteria, such as students' marks and motivation interviews. The student population of these programmes appears to be less diverse than those of other programmes, which suggests that these programmes are less accessible for certain groups of students. The Ministry of Education considers that drawing lots represents an objective selection method and will therefore help increase educational equity. The amendment would make drawing lots obligatory for all associate degree programmes and all Bachelor's programmes with a *numerus fixus*.

A growing number of students take medication to improve academic performance. The use of ADHD medication grew from 0.8% in 2009/2010 to 2.9% in 2018/2019 among 17-24 year-old higher education students (Fig. 3) (Education Inspectorate, 2021). Use was even higher among vocational students and among young people not in education. As many students take this type of medication without a prescription from a physician it is likely that actual use among students is higher than 2.9%. A survey among students in Groningen, for example, revealed that 16% of the respondents without an ADHD diagnosis also sometimes took ADHD medication. The health risks are high, and include psychoses, heart rhythm disorders and even sudden death.

²⁶⁶ A higher education institution may set a fixed capacity for certain study programmes. This is called the 'numerus fixus'. If the number of applicants exceeds the number of places available, a selection procedure takes place.

Figure 4 - The frequency of medication use among 17-24 year-olds from 2009 to 2018


Source: Education Inspectorate, 2021. Years before 2014 are estimates for non-higher education students.

Micro-credentials pilot launched in 2021. As part of the 'Acceleration Plan for Education Innovation with ICT'²⁶⁷, a pilot project called 'Micro-credentials in higher education' will be launched in October 2021. The aim is to bring more flexibilisation to higher education, in line with the objectives of the Acceleration Plan. The pilot will run for two years and will be open to all Dutch public institutions. It focuses on professionals who want to undergo retraining, further training or upskilling. Micro-credentials offer professionals specific, short-term and certified training opportunities. They allow higher education institutions to broaden their educational offer and better adjust it to the needs of the labour market. Participating institutions can make use of an incentive scheme involving up to EUR 45 000 per year.

Study finds financing makes tertiary education highly accessible but is insufficient to allow small-group tuition or investment in a number of areas. Commissioned by the Ministry of Education, Culture and Science, PricewaterhouseCoopers conducted research into the adequacy of the higher education budget to cover current costs and achieve the desired quality, the effectiveness of spending and the correctness of funding levels (PwC, 2021). The study found that tertiary education in the Netherlands is highly accessible, because financing follows the number of students. The macro budget covers universities' current expenditure but does not allow tuition to be organised in smaller groups. The budget available for research staff fell by 36% between 2010 and 2018. Universities compensate for the research resources they do not have by using the funding for education – leaving less money available for other areas, such as support staff, facilities and housing.

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²⁶⁷ The Acceleration Plan is a cooperative venture to promote equal opportunities and digitalisation in higher education, involving 39 higher education institutions and SURF (collaborative organisation for ICT in education and research).

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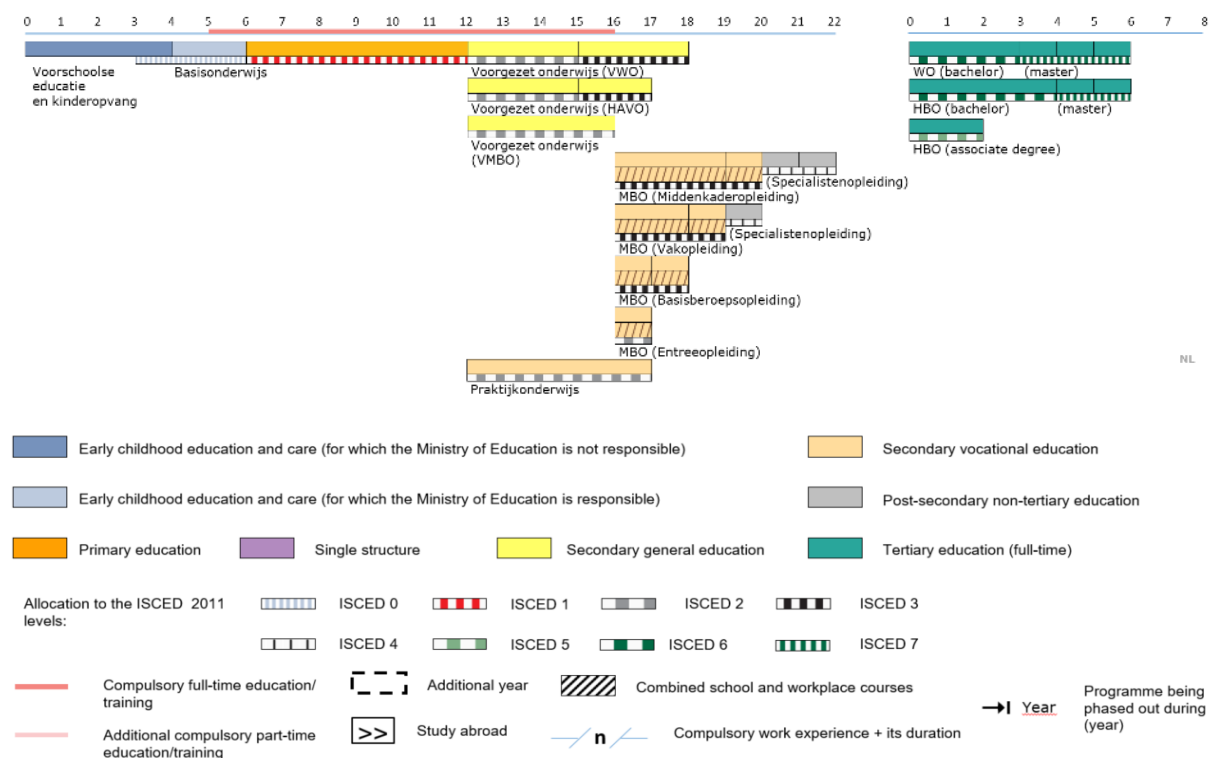
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14 . Data by country of birth: edat_lfse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03 . Data by country of birth: edat_lfse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022*: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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POLAND

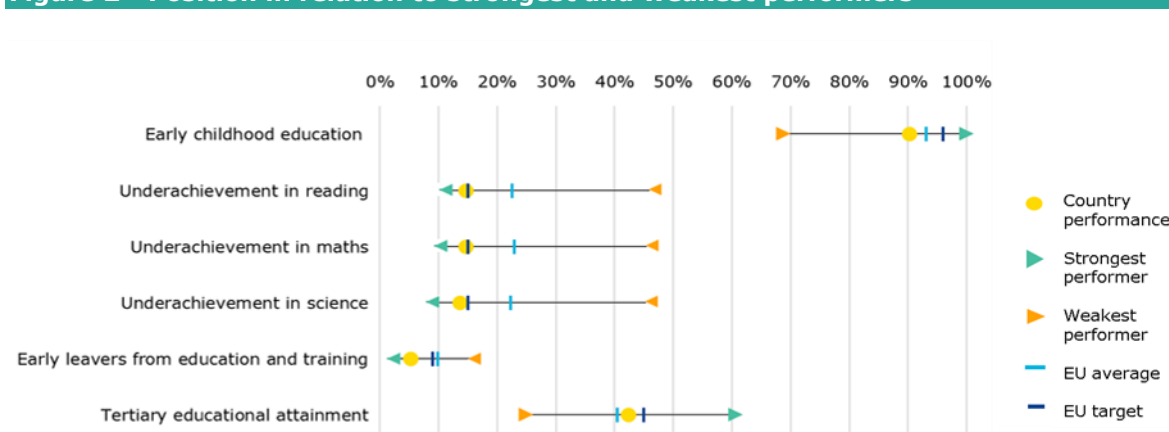
1. Key indicators

Figure 1 – Key indicators overview

			Poland		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	76.4% ^{13, d}	90.3% ^{19, e}	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	25.3% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	15.0% ^{09, b}	14.7% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	20.5% ⁰⁹	14.7% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	13.1% ⁰⁹	13.8% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	5.4% ^b	5.4%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	37.1% ^b	42.4%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		5.5%	5.0%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€4 943 ¹²	€5 841 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€4 519 ¹²	€5 318 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€6 537 ¹²	€7 899 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		5.4% ^b	5.4%	12.4%	8.7%
	EU-born		: ^{b, u}	: ^u	26.9%	19.8%
	Non EU-born		: ^{b, u}	: ^u	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			91.0% ^b	89.9%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		37.1% ^b	42.2%	33.4%	41.3%
	EU-born		: ^{b, u}	: ^u	29.3%	40.4%
	Non EU-born		55.8% ^{b, u}	62.6%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, e = estimated, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture based on Eurostat data (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- The participation rate in early childhood education and care for children 3+ continues to rise. The enrolment of children under 3 is low.
- Poland has launched remedial measures to address the negative impact of the COVID-19 pandemic. However, COVID-19 also made worse the existing challenges in education. The well-being of students and teachers needs to be improved.
- The Act 2.0 reform in higher education has progressed, but the recent decisions of the Minister of Education and Science have created uncertainty of the evaluation process.
- Poland continues to reform vocational education and training, and adopted the 2030 Integrated Skills Strategy.

3. A focus on well-being in education and training

While well-being is addressed in educational practice, major challenges persist. Well-being and some life competences, as defined at EU level (LifeComp), are present across all levels of the school curriculum. The key objective of the core curriculum for primary and lower-secondary is to ensure each pupil's integrated development at physical, cognitive, emotional, social and moral level. The core curriculum for upper-secondary education aims to develop students' communication and collaboration skills, critical thinking, as well as social and moral thinking. In recent years, however, challenges related to the well-being of children and young people in education have been in the spotlight. These challenges include using the internet safely, improving openness and building a positive school climate, reducing physical and psychological violence, promoting healthy lifestyles, and improving security in schools. To address them, Poland has implemented policy and support measures at national and regional level, also co-financed with the EU funds²⁶⁸. The non-governmental sector has been active in supporting child protection, cyber safety²⁶⁹, and fighting homophobia²⁷⁰. However, COVID-19 has heightened the existing challenges and the public debate on the mental health of students (Carretero Gomez, S. et al., 2021; PAN, 2021). The Ministry of Education and Science (the Ministry) plans to reform the pedagogical and psychological counselling system to improve the inclusiveness of education²⁷¹. In September 2021, Poland will pilot 16 new centres for inclusive education.

The school climate requires attention. According to OECD (PISA), the proportion of students who reported being bullied at least a few times a month increased between 2015 and 2018 by 5.3 pps to 26.4% (EU 22.1%). Bullying affects reading performance significantly (by 28 points), and is also more prevalent among low-achieving students (36.3% v 21.2% for high achievers). At the same time, it is less condemned by peers in Poland than in other countries (OECD, 2019a). While research shows that homophobia is a source of violence in schools (Wycisk, J., 2018), very few schools introduce relevant precautionary measures in the context of political obstacles at national and often local level (Mazurczak, A. et Winiewski, 2020). In 2016, almost 70% of the surveyed LGBTI young people below 18 had suicidal thoughts²⁷². The consequences of bullying can be severe, both in the short- and long-term, with impacts that can be both physical and mental (Pappas, S., 2013). The Supreme Audit Office recommended continuing the programmes concerning students' online and physical safety (NIK, 2017, 2020). In view of COVID-19, the 'Loguj się z głową' programme²⁷³

²⁶⁸ 'Safe and Friendly School' (2014-2018), 'Safety+' (2015-2018), 'Safer Together' (2018-2020).

²⁶⁹ <http://www.dziekowsieci.pl/>; <https://chronimydzieci.pl/>; <https://edukacja.fdds.pl/local/news/index.php>; <https://www.resql.pl>

²⁷⁰ <https://kph.org.pl/>; <https://www.transfuzja.org/>; <https://myrodzice.org/>

²⁷¹ <https://www.gov.pl/web/edukacja-i-nauka/edukacja-dla-wszystkich--kompleksowa-pomoc-dla-kazdego-dziecka-ucznia-i-jego-rodziny>

²⁷² <https://kph.org.pl/wp-content/uploads/2015/04/Sytuacja-spoleczna-oso%CC%81b-LGBTa-w-Polsce-raport-za-lata-2015-2016.pdf>

²⁷³ <https://www.gov.pl/web/edukacja-i-nauka/loguj-sie-z-glowa-czyli-jak-bezpiecznie-korzystac-z-internetu>

promotes online safety. Further systemic measures will be needed to strengthen tolerance, and physical and online safety of all students.

Creating a more supportive learning environment, and enhancing social-emotional learning could improve students' sense of belonging at school and academic ambitions.

The low sense of belonging at school has been one of the main weaknesses of the Polish education system (IBE, 2020). Since 2012, it has dropped by 16 pps, and in 2018, the proportion of students who reported that they belonged at school (60.8%) was lower than the EU average of 65.2% (OECD, 2019a). Research shows that supportive teacher-students relations positively affect student achievement, both directly and indirectly through a greater sense of belonging at school. The proportion of secondary school students who declared that teachers give extra help when needed was slightly lower in Poland (67.7%) than the EU average (70.7%) (OECD, 2019a). A 2018 WHO survey showed that the proportion of 13 and 15 year-olds reporting high teacher support was the lowest of all the countries surveyed, and the high classmate support was below the average (Mazur J., et al., 2018). A comparatively small proportion of Polish students holds a growth mindset²⁷⁴, which may affect the academic ambitions of those from disadvantaged background (OECD, 2019a).

Improving the well-being of teachers combined with adequate support and removal of systemic barriers are essential to improving the well-being of students. Over half of teachers surveyed have participated in training on recognising and coping with students' psychological problems. However, the overloaded curriculum and high administrative burden do not leave room for building teacher-student relationships (Fundacja Szkoła z Klasą, 2021). In international comparison, Polish teachers' enthusiasm in teaching is among the lowest in the EU (OECD, 2019a). Maths and science teachers' job satisfaction is the lowest in the EU, and only around a third of students (32%) are taught by very satisfied teachers (IEA, 2019). In the context of COVID-19, almost all teachers (93%) indicated a need for the administrative burden to be cut, more specialist support in schools for students (83%) and themselves (53%), and more peer cooperation (CEO, 2021).

Poland took several measures to counter the negative impact of COVID-19 on students' health and inequalities, but their effectiveness and long-term impact need to be monitored. During 2020/2021, students had 43 weeks of distance education²⁷⁵. Despite the support on offer, a study conducted between April and December 2020 at the Ministry's request showed that 23% surveyed boys and 36% girls had a low 'mental condition index' (general well-being and mental ability to cope with the situation) (Grzelak, S., Zyro, D., 2021). Cyberbullying affected students' participation in online classes. In response, the Ministry launched programmes for the recovery and return to school: additional sports activities, psychological and pedagogical support for students, measures concerning eyesight problems and remedial classes. Mental health issues also affect academia (RPP, 2020). During COVID-19, 91% of university students surveyed agreed that mental health is a common and/or serious problem affecting their community (NZS, 2021). With the government support, the Polish student parliament created online psychological support for university students²⁷⁶. Given the short-term and long-term effects of COVID-19 in particular on children and youth, it will be necessary to continue monitoring its impact, the effectiveness of the measures implemented and further needs.

4. Investing in education and training

During 2015-2019, public spending on education increased in pre-primary and primary sectors only. In 2019, Poland spent 5% of its GDP on education (EU 4.7%) and 12.0% of the total government expenditure (EU 10%)²⁷⁷. In real terms, during 2015-2019, public expenditure on education rose by 9.8%, however, the rise was only for pre-primary and primary education (by 47.6%). This included the costs for reorganising the school system which was launched in 2016. At the secondary and post-secondary non-tertiary level, expenditure dropped by 18.5%, and in higher

²⁷⁴ PISA: the belief that someone's ability and intelligence can develop over time

²⁷⁵ <https://en.unesco.org/covid19/educationresponse#durationschoolclosures>

²⁷⁶ <https://wsparciepsychologiczne.psrp.org.pl/>

²⁷⁷ Eurostat, COFOG: [gov_10a_exp].

education by 2.5%²⁷⁸, which is also due to declining student numbers. Local governments cover 44% of spending on pre-primary and school education for which they are responsible, including teachers' salaries (Statistics Poland, 2020). In the context of decreasing student numbers, local governments face challenges in maintaining the school network due to rising costs. In 2019, public spending per student at all education levels remained low compared to other Member States²⁷⁹. In 2020, 99 public higher education institutions (HEIs) which partly lost their income due to COVID-19 were supported with the additional amount of PLN 256 million (ca. EUR 57 million)²⁸⁰. Financial support was provided to disadvantaged students, and students who lost their income due to COVID-19 (one-off support of EUR 450 per student).

The attractiveness of the teaching profession remains limited, and teacher shortages are pronounced. The Supreme Audit controls (2018 - March, 2021) revealed shortcomings in the organisation of teachers' work, including mainly allocating overtime in excess of the maximum limit, insufficient classroom equipment, obsolete teaching aids, and working in more than one school. In 2018/2019 and 2020/2021, almost half of surveyed school heads (46%) had problems with recruiting qualified teachers, mostly of physics, mathematics, chemistry, English and computer science. To address the shortages, they assigned overtime to other teachers (52%), employed retired teachers (38%) or people without the necessary qualifications (35%). There were also problems with the organisation of extracurricular activities and teachers' remuneration for such activities. Most teachers (77%) believe that their work could be most improved by increasing the prestige of the teaching profession, teachers' autonomy (45%) and providing better teaching aids and equipment (41%) (NIK, 2021). Teachers' salaries remain far below the 2020 EU-22 average for teachers (OECD, 2021). The Polish Ombudsman called on the Minister for measures to reverse the negative trends concerning the teaching profession as teacher shortages may affect children's right to education (RPO, 2021). To improve the attractiveness of the teaching profession, in September, the Ministry proposed changes to the Teacher's Charter amending the salary, career progression and teachers' evaluation systems, introducing more working hours, and modifying the holiday entitlement²⁸¹. Stakeholders have criticised the proposal that it focuses predominantly on savings (actually, lowered hourly wage), lacks pro-quality solutions, the new career progression system decreases requirements for future teachers while the new evaluation system is oppressive towards teachers; experts and teacher community were not involved in the preparation of the two system proposals²⁸².

The education ministry's proposal to change the school governance raises significant concerns. The Ministry proposed strengthening the role of regional educational authorities, which are responsible for pedagogical supervision of schools. They will have the most important role in selecting and suspending school heads. They will also appoint school heads who are not teachers, take over management of schools when there are no candidates for the head's post, as well as control the activities of NGOs in schools²⁸³. The proposals limit the role of local authorities, which are responsible for school management, and stakeholder groups and the Ombudsman see them as limiting the autonomy of schools, the initiatives of teachers, pupils and parents²⁸⁴. The citizens' initiative 'Free School'²⁸⁵ opposes the changes, calling for more autonomy, cooperation and tolerance in schools.

5. Modernising early childhood and school education

The enrolment rate of children 3+ in early childhood education and care (ECEC) continues to rise. In 2019, the rate was 90.3%, below the EU average (92.8%) and the new EU-level target (96%). Since 2017-2018, children aged 3-5 are legally entitled to pre-school education. Since then,

²⁷⁸ Eurostat, COFOG: [gov_10a_exp].

²⁷⁹ Eurostat, UOE: [educ_uoe_fine09].

²⁸⁰ <https://www.gov.pl/web/edukacja-i-nauka/uczelnie-otrzymaja-dodatkowe-256-mln-subwencji>

²⁸¹ <https://www.gov.pl/web/edukacja-i-nauka/nauczyciel-dla-ucznia--zmieniamy-status-zawodowy-nauczyciela>

²⁸² <https://znp.edu.pl/opinia-znp-do-propozycji-zmian-mein-w-pragmatyce-zawodowej-nauczycieli/>

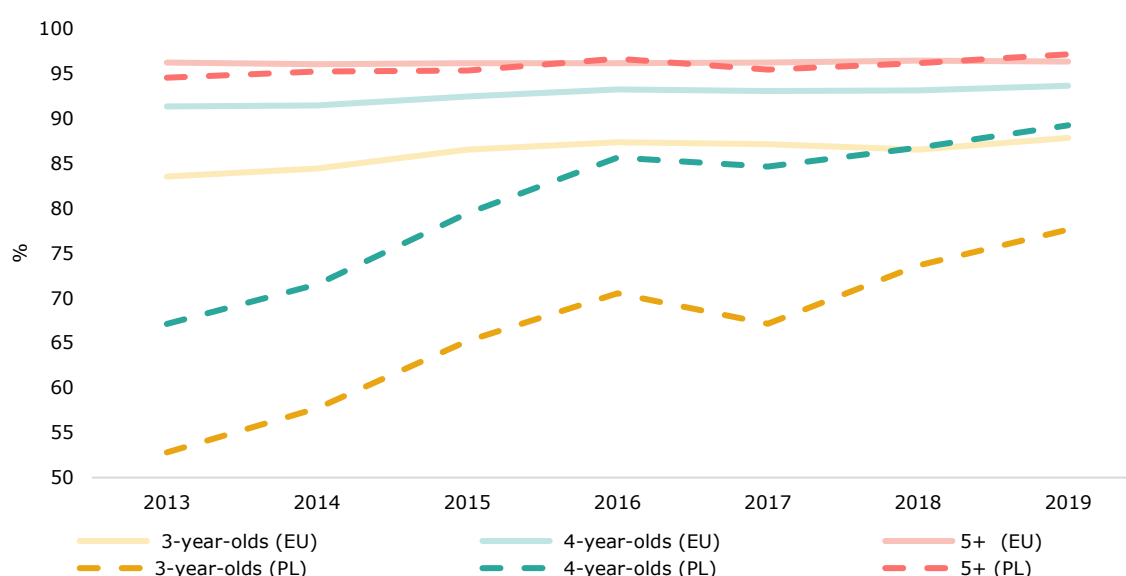
²⁸³ <https://www.gov.pl/web/edukacja-i-nauka/robocza-wersja-projektu-ustawy-dotyczacej-rozwiazan-w-zakresie-wzmocnienia-roli-kuratora-oswiaty>

²⁸⁴ <https://www.portaloswiatowy.pl/wazne-wydarzenia-dla-szkol-i-przedszkoli/znp-przeciwko-rozszerzeniu-uprawnien-kuratora-20225.html>

²⁸⁵ <https://www.wolnaskola.org/>

the participation of 3 year-olds increased by 10.5 pps up to estimated 77.6% and 4 year-olds by 4.6 pps up to estimated 89.2% (Figure 3). Given the key role of high-quality ECEC in children's development, it is important to address the urban-rural and regional disparities in accessibility (NIK, 2019). In 2021, ECEC facilities were closed briefly between 27 March and 18 April, when only children of medical and military workers involved in the COVID-19 prevention could attend ECEC services. Other children participated in some form of distance learning, adjusted to their age.

Figure 3 - Participation in early childhood education by age, 2013-2019 (%)



Source: UOE, [educ_uoe_enra18], [educ_uoe_enra19], [educ_uoe_enra20]

Since the participation rate of children under 3 in formal childcare remains low, Poland plans reforms to improve the availability of services. In 2019, the participation rate was 10.2% (EU 35.3%) despite visible efforts of the government to improve the situation ('Toddler,' 'Toddler+' national programmes in place since 2011). In 2021, Poland aims to create a further 19 000 places under 'Toddler+'. Public provision of ECEC is an important factor in ensuring broad access to affordable and quality services. In Poland, 83% of all childcare facilities (4 600) are centre-based crèches, of which 76% are private (Statistics Poland, 2021).

In 2020, the rate of early leavers from education and training remains low at 5.4%. Broad access to secondary education contributes to maintaining the low rate for both men (7%) and women (3.7%). However, while the rate is significantly below the EU average (10.1%), it has increased since 2018, in particular for men (by 1.2 pps), which contributes to the growing gender gap in the tertiary educational attainment. The 2020 ELET national target (4.5%) has not been reached.

The reorganisation of the school system continues, but faces additional challenges due to COVID-19 and Poland launches measures to address educational inequalities. In 2020-2021, primary schools introduced the new organisational structure and the new core curricula in line with the 2016 law²⁸⁶. Almost half of surveyed teachers declare that differences in students' knowledge and overcrowded schools and classes hindered classroom learning during 2018-2021 (NIK, 2021). The significant periods of distance learning and the new core curriculum requirements posed further challenges to achieving the expected learning outcomes. Although schools were open to students for direct consultations, overall, students had to largely rely on support from home in their learning, leaving some groups of students at greater risk of educational exclusion (Buchner & Wierzbicka, 2020). In 2021, the government allocated PLN 187 million (EUR 41.5 million) for the remedial classes programme. The scope of the eighth grader's and upper-secondary school leaving ('matura') exams during 2021-2024 will be reduced by around 20-30%, depending on the subject. The oral part of 2021 'matura' was cancelled and only the core subjects were compulsory. It would

²⁸⁶ The reform of lower and upper secondary schools introduced by the Law on School Education of December 2016 for implementation between 1 September 2017 and the school year 2022/2023.

be important to monitor whether the support provided has been sufficient to address educational losses, as well as to address a possible labour market disadvantage caused by the reduced final exams.

Poland continues improving digital education, but challenges persist. Poland has continued to invest in online education (Box 1). While the digital competences of teachers have improved, challenges remain: the time-consuming process of distance teaching, equipment shortages, stress and fatigue. Despite the services available, only 5% of teachers felt they received substantial support from the national authorities during distance education. The internet or videos were the most frequent sources for preparing distance lessons. Teachers created learning community groups, and many teachers found that the online tools and methods could enrich traditional teaching (Buchner & Wierzbicka, 2020). Education professionals underline the importance of the quality of digital teaching methodologies, technology and online materials adjusted to students' age (Fundacja Orange, 2020). The Supreme Audit concluded that the EU and national funds helped in providing the ICT equipment to teachers and in-service training on digital education. The proportion of teachers who had followed a training on digital education doubled between March and September 2020, reaching 81%. However, although schools were connected to the Polish online network and had ICT equipment available, 50% of teachers exclusively used their own equipment and internet. The key obstacles to online education indicated by teachers were also difficulties in student assessment (71%) and lack of adequate ICT equipment among students (52%). To improve digital education, two thirds (66%) of teachers indicated having a laptop with an internet connection, and better quality (31%) and availability (25%) of training on digital education, and its integration in initial teacher education. The Supreme Audit recommended carrying out a comprehensive analysis and evaluation of the barriers and opportunities of digital education to improve the overall educational process (NIK, 2021).

Box 1: The Integrated Education Platform (IEP) (ESF)

The platform launched in 2016 provides access to e-learning materials and solutions for pupils, teachers and parents. It provides opportunities for teamwork and supports individual learning style. Each pupil and teacher can collect their own materials through their profile account. The platform includes a content editor for teachers, allowing them to create, edit, share and adapt e-learning materials.

The aim of the projects supported with the European Social Fund that contribute to the IEP's content is to provide high-quality, free and publicly available e-learning materials for general and vocational education at all stages, and for career counselling. So far 7411 e-learning materials have been published on the platform. By December 2023, a total of 19422 e-learning materials for general and vocational education, and the information on professions will be available.

Value of signed contracts: PLN 393534434.63 (ca. EUR 87452096.6).

See: www.zpe.gov.pl

6. Modernising vocational education and training and adult learning

In 2020, VET graduates fared significantly better on the labour market than their peers completing general secondary education. While the employment rate of recent VET graduates (aged 20-34) dropped by 0.8 pp. to 78% in 2020, the employment rate of graduates from general education dropped by 5.3 pps for the same period, down to 65.7%. In 2019, the proportion of VET learners in upper secondary education continued to rise, reaching 52.5%, (EU 48.4%). Since 2016, support measures for young people neither in education nor employed conducted by the labour offices and the voluntary labour corps were broadened. These measures now include: individualised comprehensive support through diagnosis and needs identification, vocational counselling and guidance, development of individual plans, job placements, and individual and group counselling and psychological support.

The new secondary school graduate tracking system will be operational in 2021. The legislative act on a VET graduate tracking system sets out new ministerial responsibilities to monitor the career development of vocational, technical and general secondary schools graduates, as well as post-secondary and vocational special schools. The monitoring will be carried out each year and will cover school graduates who graduated 1, 2 and 5 years before the monitoring year. It will use administrative data sources from the social security administration and educational databases, allowing the systematic tracking of all secondary graduates. The system will be supplemented with in-depth quantitative and qualitative studies focusing on specific aspects of the situation of VET learners and graduates. This data will inform national, regional and local educational policy. The Ministry produced a forecast of the demands of the domestic and regional labour markets.

During COVID-19, VET learners were supported by online education. Distance learning was provided in theoretical subjects and the VET curricula were adjusted to remote learning. Between November 2020 and April 2021, apprenticeships took place online where possible or where safe working conditions were ensured. In 2021, vocational exams took place as planned.

Poland continues to reform lifelong learning by adopting a strategic approach to skills. In December 2020, Poland adopted the second part of the 2030 National Integrated Skills Strategy²⁸⁷. It has the status of a public policy for shaping and developing sector-specific skills. In particular, the strategy targets the development of basic, transversal and professional skills for children, young people and adults, as well as skills development for management and teaching staff in formal education. The strategy also promotes lifelong learning, career counselling, the use of skills in the workplace and skills recognition. To support the green transition and efforts towards climate neutrality, a special attention will also need to be paid to the development of 'green' skills.

7. Modernising higher education

Despite a slight drop, tertiary educational attainment rate remains above the EU average, but the gender gap continues to widen. In 2020, the higher educational attainment rate among people aged 25-34 was 42.4% dropping by 1.1 pps compared to 2019 (EU 40.2%). The gender gap at 19.9 pps in favour of women has widened, being double the EU average (10.8 pps). The overall proportion of graduates in science, technology, engineering and mathematics (STEM) fell to 20.8%, in contrast to the EU trend (EU 26.0%). The proportion of female graduates among all STEM graduates at 42.5% is comparatively high (EU 32.3%), and among ICT graduates, it is in line with the EU average (21% v 20.3%)²⁸⁸. The tertiary attainment rate among foreign-born people is high at 63.1%²⁸⁹.

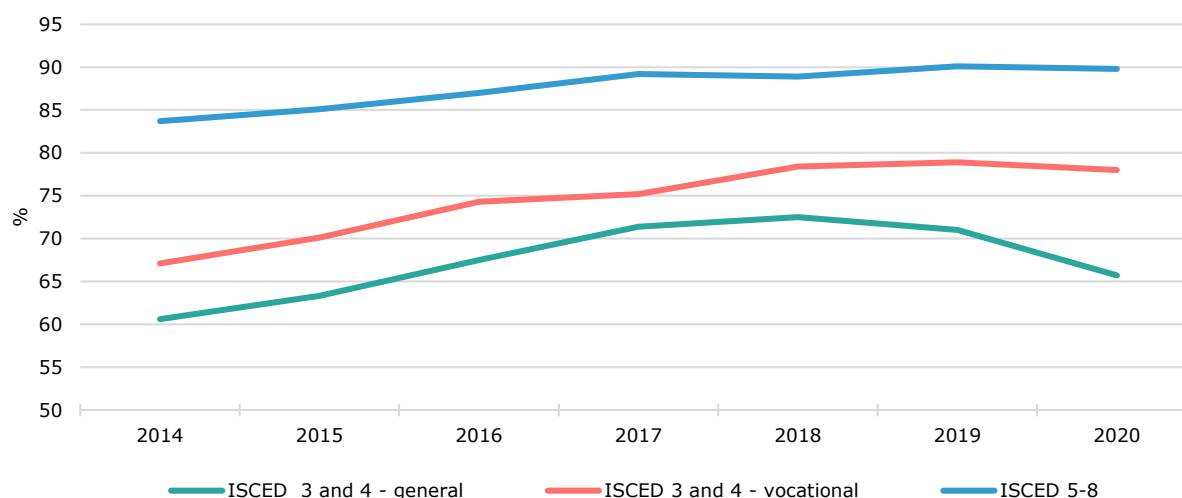
Higher education effectively protects young people from the risk of unemployment, however, disadvantaged students rarely plan on getting a university degree. The employment rate of recent university graduates grew steadily from 83.7% in 2014 to 90.1% in 2019 (EU 85%), and has remained the highest of all types of graduates (see Figure 4). In 2020, the drop in the employment rate was the smallest among tertiary level graduates, by 0.3 p.p., while it was 0.9 p.p. among VET ISCED 3 and 4 graduates and, the highest among general ISCED 3 and 4 graduates, at 5.3 pps. However, the attainment rate among people below 30 drops. In 2019, only 29% of men and 48% of women aged 27 had a higher education degree compared to 32% and 52.7% respectively in 2013 (LFS, 2021) as fewer people enroll in higher education. According to 2018 PISA, despite increase between 2015 and 2018 (22.8% v 29.3%), the proportion of the socio-economically disadvantaged 15-year-old secondary students planning to complete a tertiary degree is significantly below the EU average (44%). The gap in academic ambition between advantaged and disadvantaged students remained unchanged at 57.2 pps, being the second highest in the EU (EU average 38.6 pps). Moreover, almost half (47%) of high-achieving 15-year-old secondary students from disadvantaged backgrounds do not intend to complete tertiary education (OECD, 2019a). As COVID-19 strongly affected disadvantaged students, these trends might hinder social mobility.

²⁸⁷ <https://www.gov.pl/web/edukacja-i-nauka/zintegrowana-strategia-umiejtnosci-2030-czesc-szczegolowa--dokument-przyjety-przez-rade-ministrow>

²⁸⁸ Eurostat, UOE : [educ_uoe_grad02].

²⁸⁹ Eurostat, UOE : [edat_ifs_9912].

Figure 4 - Employment rate of recent graduates (20-34) by ISCED level, 2014-2020 (%)



Source: Labour Force Survey, [edat_lfse_24].

Higher education institutions (HEIs) are implementing the reform aimed at improving quality²⁹⁰; however, the recent decisions undermine its objective, creating tensions with academia. The first overall evaluation of HEIs according to the new principles will be conducted in 2022, for the period 2017-2021. In January 2021, the Ministry amended the index of journals recognised in the evaluation of universities' research activities, adding new titles and increasing the points for some journals, mostly in humanities and social sciences. Academia²⁹¹²⁹² criticised these changes as not being in line with Act 2.0. Relevant bodies were not consulted on the amendments and the newly introduced journals do not always fulfil the quality and relevance criteria set out in Act 2.0. Furthermore, the Ministry decided to set the limits of the evaluation levels based on the Minister's decision, rather than recommendation from the Commission of Evaluation of the Scientific Quality. All this creates uncertainty of the evaluation process and undermines the reform objective to improve the quality of higher education. According to the amendment of 1 October, the 'Academic Freedom Package', the expression of religious, philosophical or worldview beliefs by academic teachers will not constitute a disciplinary offense. A possibility has been introduced to lodge a complaint against the rector's decision to order the disciplinary spokesman to start the case. Academia²⁹³ and experts²⁹⁴ significantly criticised the amendment for breaching democratic legislative principles, reducing institutional autonomy and for insufficient recognition of the role of ethical standards concerning academia.

Throughout 2020/2021, higher education institutions continued online teaching, assessment and recruitment. To facilitate distance learning, the government awarded PLN 55 million (EUR 12.2 million) to public HEIs²⁹⁵, PLN 10 million (EUR 2.2 million) to 107 non-public HEIs, and to the Polish student parliament to develop online support for students following online education²⁹⁶. Under the operational programme 'Knowledge, Education, Development' (2014-2020), Poland continued developing online courses included in the national MOOC platform (www.navoica.pl). The need for the systemic support for academic teachers in developing their

²⁹⁰ Act 2.0 (*Ustawa 2.0*) of 20 July 2018 came into force on 1 October 2018.

²⁹¹ https://www.krasp.org.pl/resources/upload/dokumenty/Uchwa%C5%82y/kadencja%202020-2024/dok_9VIII-wykaz_czasopism_naukowych.pdf

²⁹² <https://informacje.pan.pl/index.php/informacje/materialy-dla-prasy/3249-wspolne-oswiadczenie-prezesa-pan-przewodniczacego-krasp-i-przewodniczacego-krpuz>

²⁹³ https://www.krasp.org.pl/pl/Aktualnosci/?id=21487/Korespondencja_Przewodniczacego_KRASP_do_Ministra_Edukacji_i_Nauki_w_sprawie_tzw_Pakietu_Wolnosci_Akademickiej_

²⁹⁴ https://www.krasp.org.pl/resources/upload/dokumenty/pakiet_wolnosci_akademickiej/Zal2-opinia%20wolnosc_akademicka_krasp.pdf

²⁹⁵ <https://www.gov.pl/web/edukacja-i-nauka/ponad-55-mln-zl-wsparcia-dla-uczelni-na-nauczanie-zdalne>

²⁹⁶ <https://ksztalceniezdalne.psrp.org.pl/>

pedagogical skills as well as the continuing professional development persists, intensified by the demand for the modernisation of teaching methods and aids during online learning. The Act 2.0 reform has not addressed this sufficiently²⁹⁷. Medical students supported hospitals in their fight against COVID-19.

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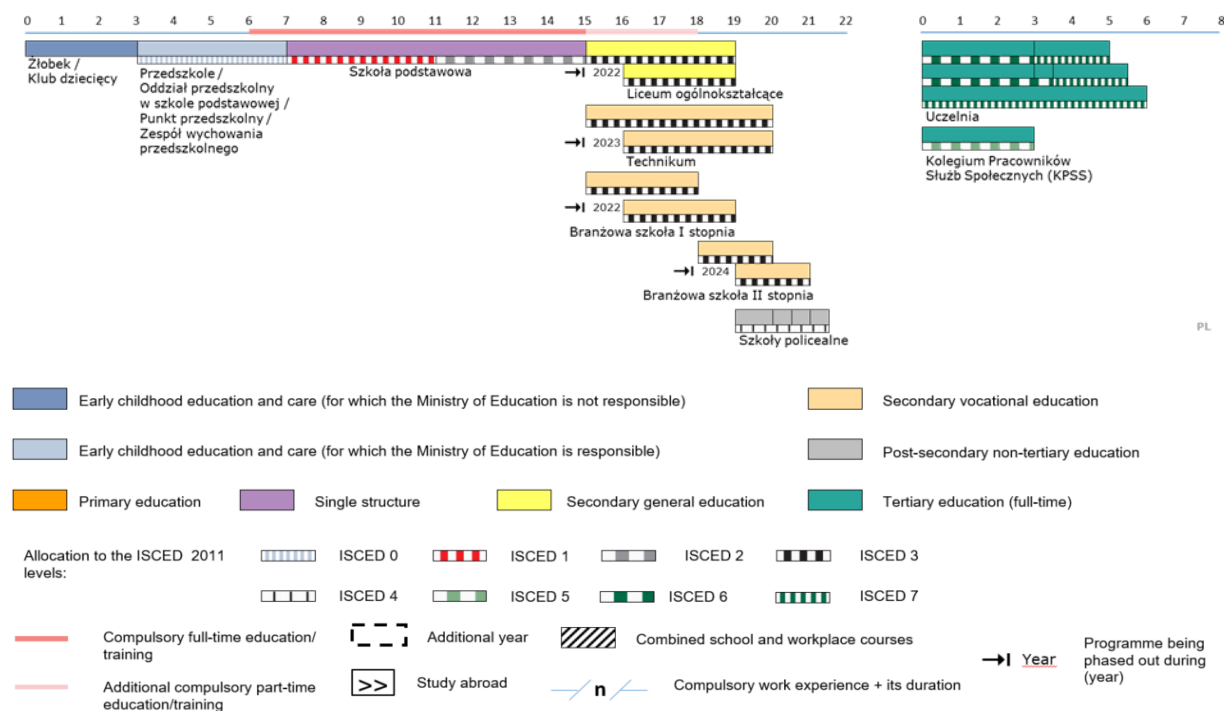
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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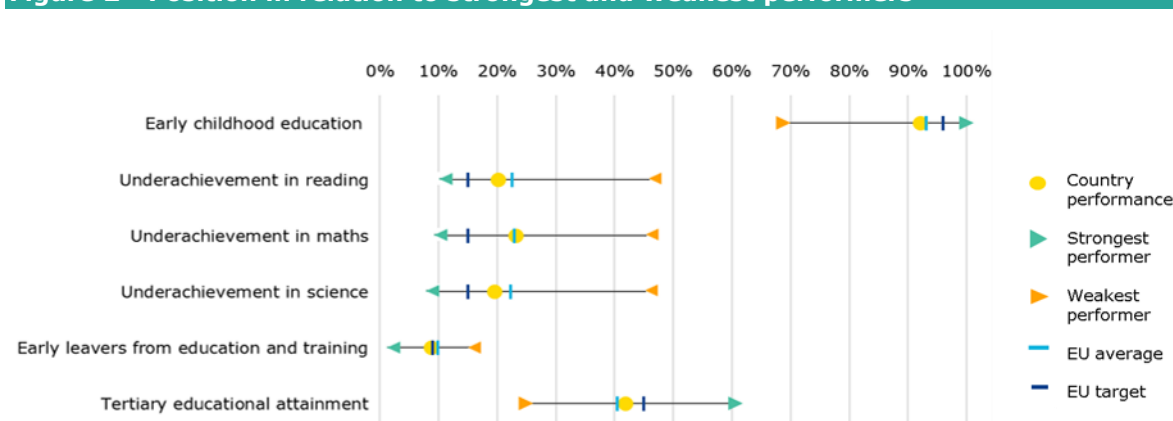
1. Key indicators

Figure 1 – Key indicators overview

			Portugal		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		88.7% ¹³	92.2% ^{19, d}	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	33.5% ^{18, ++}	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.6% ^{09, b}	20.2% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	23.8% ⁰⁹	23.3% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	16.5% ⁰⁹	19.6% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		28.3%	8.9%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		25.5%	41.9%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		6.7%	4.4% ^p	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€5 239 ¹²	€5 727 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€6 907 ^{12, d}	€6 970 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€7 403 ^{12, d}	€8 317 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		28.3%	8.8%	12.4%	8.7%
	EU-born		:	:	26.9%	19.8%
	Non EU-born		31.2%	:	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			59.1%	85.3%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		26.3%	42.5%	33.4%	41.3%
	EU-born		27.9%	47.9%	29.3%	40.4%
	Non EU-born		17.0%	34.0%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, p = provisional, d = definition differs, u = low reliability, : = not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019; ++ = Nearly met guidelines for sampling participation rates after replacement schools were included.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Schools are supported through several programmes to maintain students' well-being and a good school climate. However, less attention is paid to how teachers cope with stressful conditions, notably during the pandemic.
- Public investment into education keeps growing and will be boosted with allocations from the Recovery and Resilience Facility, with a special focus on improving schools' digital capabilities.
- Measures were adopted to mitigate the learning losses during the pandemic. Upper grade students were the most negatively affected.
- Portugal is making significant efforts, through policy reforms and investment in vocational education and training (VET) and adult learning, with EU support, to improve skills and competences of their workforce.

3. A focus on well-being in education and training

Student well-being and school climate are comparatively good. According to the 2018 programme for international student assessment (PISA) report (OECD, 2019a), 14% of students reported being bullied at least a few times a month, the second lowest in the EU (EU average: 22%). Indicators for disciplinary climate correspond broadly to the EU average: (i) 22% of students had skipped a day of school (EU average: 25%); (ii) 28% of students reported that their teachers have to wait a long time to quieten them down (EU average: 31%); and (iii) 50% had arrived late for school in the 2 weeks before the PISA test (EU average: 50%).

Dedicated programmes support well-being in education. The 'Health Promotion and Education Support Programme' (PAPES)²⁹⁸, launched in 2014 by the Ministry of Education, has been focused on: (i) mental health and violence prevention; (ii) healthy nutrition and physical activity; (iii) addictive behaviours and dependencies; and (iv) relationships and sex education. The 'Healthy School Seal'²⁹⁹ is granted to schools that promote health and well-being on a daily basis. The 'Escolhas Programme' (PE)³⁰⁰, created in 2001, aims to promote the social inclusion of children and young people from vulnerable socioeconomic backgrounds. This programme is co-financed by the European Social Fund (Alexandre et al., 2020). Furthermore, since 2019/2020, a Ministry's Plan aims to prevent and combat physical bullying and cyberbullying as well as other forms of violence³⁰¹. The Ministries of Labour, Solidarity and Social Security and the Ministry of Education issued guidelines for schools on children and young people at risk or in danger. Schools play an essential role in detecting warning signs and ensuring the well-being of children and young people³⁰².

Schools received guidance on how to mitigate the impact of the pandemic including support for pupils' well-being. In the academic year 2020/2021, the first 5 weeks were devoted to recovering and consolidating learning. The Ministry of Education published the 'Guidelines for the recovery and consolidation of learning throughout the academic year 2020/2021'³⁰³, in view of the expected learning gaps during the lockdown period. Several measures were suggested: (i) promoting students' well-being on their return to school; (ii) focusing on learning priorities; (iii) creating new support services for students and expanding those that already exist; and (iv) employing different ways to organise school schedules. Specific tutorial support was extended to students in primary and secondary education who did not succeed in the academic year 2019/2020. All schools set up mentoring programmes for students. During the pandemic, the Order of Portuguese psychologists also made several advisory documents and resources available online to

²⁹⁸ <https://www.dge.mec.pt/programa-de-apoio-promocao-e-educacao-para-saude>

²⁹⁹ <https://www.dge.mec.pt/selo-escola-saudavel-2019>

³⁰⁰ <https://www.programaescolhas.pt/apresentacao>

³⁰¹ <https://www.sembullyingsemviolencia.edu.gov.pt/>; <https://www.dge.mec.pt/noticias/plano-de-prevencao-e-combate-ao-bullying-e-ao-ciberbullying-escola-sem-bullying-escola-sem>

³⁰² https://apoioescolas.dge.mec.pt/sites/default/files/2021-02/orientacao_escolas.pdf

³⁰³ https://www.dge.mec.pt/sites/default/files/orientacoes_2020.pdf

support the education community in maintaining their emotional well-being during the confinement³⁰⁴.

Portuguese teachers are among the most stressed in Europe. Portugal is above the European average regarding stress levels associated with teaching, with 87% of teachers reporting quite a bit or a lot of stress at work (European Commission/EACEA/Eurydice, 2021). According to Varela et al. (2018), on a sampling of 10% of Portuguese teachers, 9 out of 10 teachers wanted to retire earlier and that there is a strong relationship between emotional exhaustion and a teacher's age (for teachers over 55 years old, the percentage is close to 70%). In 2019, 46% of teachers in Portugal were aged at or over 50 (EU average: 39%) (OECD, 2020). A recent literature review (Mota, Lopes & Oliveira, 2021) of 46 studies published from 2000 to 2019, concluded that the average percentage of full burnout in Portuguese teachers was considerable.

The pandemic negatively affected higher education students' and professors' well-being. Higher education institutions were required to develop programmes to mitigate the negative effects of the pandemic on students, especially for first-year students³⁰⁵. The well-being of university professors was assessed by an online survey carried out in June-July 2020. It covered the teaching staff from the whole country (including the autonomous regions of Azores and Madeira). The study indicates that 37% of professors suffered burnout associated with professional activity, due to prolonged physical and psychological fatigue. Although 96% of the professors gave classes online, only 23% had previous experience in digital education.

4. Investing in education and training

The funding for education has increased, and seems to partly reverse the investment decrease which occurred over the last decade. In 2010-2019, general government expenditure on education (in deflated values) fell by 25.4% (EUR 3 billion), notably in primary and secondary education. Only spending in tertiary education increased by 4.8% (EUR 60 million). This contrasts with an average EU increase in education spending of 6.4%. In 2019, the downward trend stopped with an increase of 4 pps compared to 2018, reaching 4.4% of GDP. However, as in 2018 the level of spending is still below the EU average (4.7%)³⁰⁶. In pre-primary and primary education, spending in 2019 was 1.5% of GDP (1.2% by central government), 1.6% at secondary education (1.4% by central and 0.2% by local governments), and 0.6% in tertiary education (by central government)³⁰⁷.

Digital education will benefit from a major investment via EU funds. The 'action plan for digital transition'³⁰⁸ is co-financed by the European Social Fund with a total budget of EUR 170 million for education digitalisation. The plan provides for the purchase of computers for all primary and secondary school pupils – giving priority to those belonging to disadvantaged families, to whom socio-economic support is provided – and improve school connectivity. For the 2020/2021 school year, the government provided approximately 450 000 computers with internet connectivity to schools. The plan also includes provision for a nationwide digital teacher empowerment plan to increase the pedagogical use of digital resources. The plan will address the training needs of all teachers in compulsory education by 2023. The digital training of teachers will be adjusted to their individual digital proficiency (based on teachers' self-assessments of their digital skills) and followed by a personalised formative pathway.

Portugal plans to remove asbestos from schools buildings using EU support. The national programme for the removal of asbestos from school buildings (from ECE to compulsory education) was announced in June 2020. It is supported by several national and regional programmes under the European Regional and Development Fund. A total of 599 schools will benefit from the planned investment to remove 950 000 square meters of asbestos, notably those located in the Northern

³⁰⁴ https://www.dge.mec.pt/sites/default/files/recursos_para_o_bem-estar.pdf;
https://www.ordemdospsicologos.pt/pt/covid19/documentos_apoio

³⁰⁵ https://wwwcdn.dges.gov.pt/sites/default/files/comunicado_mctes_dges_11marco2021_v.final_rev.pdf

³⁰⁶ Eurostat: [gov_10a_exp].

³⁰⁷ Ibidem 9.

³⁰⁸ <https://www.portugal2020.pt/content/plano-de-acao-para-transicao-digital-aprovado>

region and the Metropolitan area of Lisbon. In 2014-2020, 440 000 square metres of asbestos were removed from 200 primary and secondary schools³⁰⁹.

Box 1: The National Recovery and Resilience Plan

The EU will disburse EUR 13.9 billion in grants and EUR 2.7 billion in loans to Portugal under the Recovery and Resilience Facility (RRF) to help the country emerge stronger from the COVID-19 pandemic. Investments related to education and skills represent about 13% of the total RRF budget.

The Portuguese Recovery and Resilience Plan aims to: (i) build childcare facilities and provide financial support to low-income families to increase their children's ECEC participation; (ii) improve digital and STEAM (science, technology, engineering, arts and mathematics) education; (iii) invest in energy efficiency in school buildings and affordable accommodation for higher education students; and (iv) help modernise VET and upskill/reskill adults. For disadvantaged communities in the deprived metropolitan areas of Lisbon and Porto, it provides for investment into schools and projects to combat school failure and reduce the number of dropouts by means of fostering VET.

The Plan, among other things, provides for (i) around 600 000 laptops to be supplied to teachers and pupils and 40 000 projectors to primary and secondary public schools; (ii) 15 000 new accommodation places at affordable rents for university students, resulting in 10 000 more higher education graduates, including in STEAM fields; (iii) 22 000 training stations to be upgraded, and (iv) 365 specialised technology centres to be constructed or renovated for training in four strategic areas: industrial, renewable, informatics and digital technologies.

5. Modernising early childhood and school education

Participation in ECE among the 3+ age group is increasing and close to EU average. In 2019, ECE participation of children aged three or over increased to 92.2% (from 91% in 2018), well below the EU average (92.8%) and the EU-level target of 96% by 2030 (Figure 3). Regional differences are pronounced. The 2018 State of Education report³¹⁰ indicated that the Lisbon Metropolitan Area remains the region with the lowest rates of pre-primary schooling for 3, 4 and 5-year olds (70.7%, 85.0% and 89.2%, respectively), while the Algarve and the Autonomous Region of the Azores were the regions with the highest rate of ECE participation, with 99% of 5-year-old children attending pre-school education.

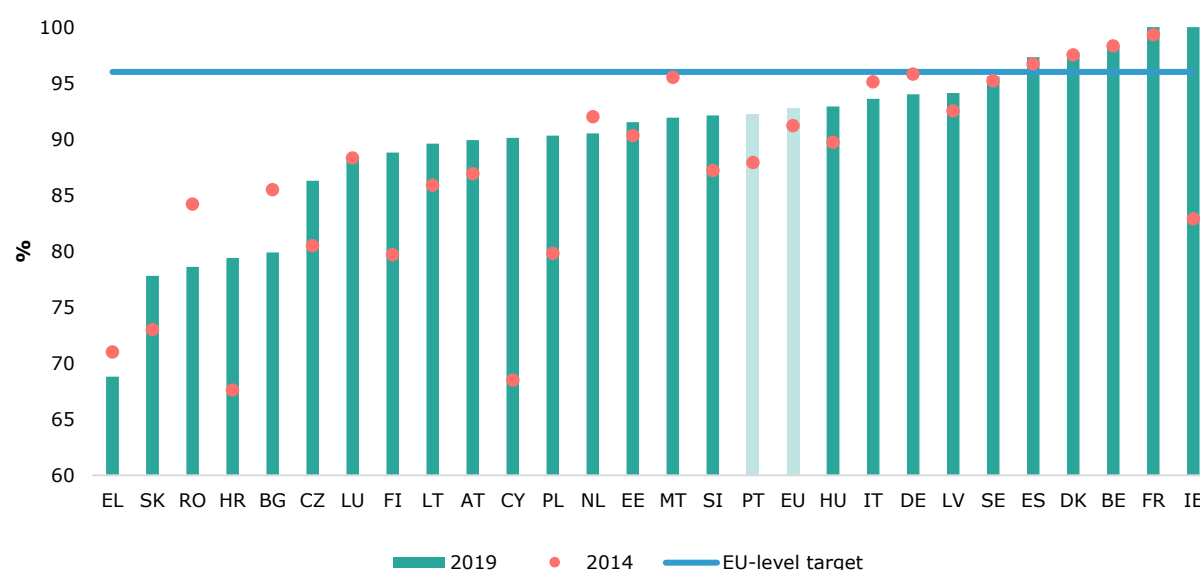
The rate of early leavers from education and training keeps decreasing, but regional differences persist. In 2020, the 'early leaving from education and training' (ELET) rate was at 8.9% (10.6% in 2019), remaining below EU average (9.9%). Disparities in ELET rates range from 6% in the Centro region to 27% in the autonomous region of Azores.

A diagnostic study measured the impact of the first lockdown on students' learning. It consisted of subject tests for students in mathematics, reading and science, as well as questionnaires to students, teachers, and schools' managers. Conducted by the Educational Evaluation Institute (IAVE), a sample of 23 338 students from a universe of around 340 000 students from the 2020/2021 academic year from primary, lower and upper secondary education (third, sixth and ninth years) participated in the tests. Results were published in March and September 2021. The analysis showed learning difficulties particularly in the upper grades, where less than half of the students acquired the expected minimum level of competences. Sixth grade students were the most negatively affected by distance learning. Students who had family support fared better overall. In contrast, the youngest students (in the third grade) found it easier to learn from home.

³⁰⁹ <https://dre.pt/home/-/dre/136365168/details/maximized>

³¹⁰ https://www.cnedu.pt/content/edicoes/estado_da_educacao/Estado_da_Educacao2018_web_26nov2019.pdf

Figure 3 - Participation in early childhood education of pupils from age 3 to the starting age of compulsory primary education, 2014 and 2019 (%)



Source: UOE, [educ_uoe_enra21]

Schools tried to maximise face-to-face education to mitigate learning losses. The Ministry of Education published a report (DGEEC, 2020) on how the education system was coping with the pandemic. Most schools tried to reorganise classes to reduce concentration and limit contagion (implementing shifts, maintaining bubbles, splitting classes, etc.). A vast majority of schools developed distance learning classes and participation rates were high. The report also points out that #EstudoEmCasa, a distance learning platform created during the pandemic, was only used as a teaching tool by around half of schools. Between April and June 2020, the percentage of schools that reported students who were exclusively accessing pedagogical content through #EstudoEmCasa declined significantly.

National assessments in lower and upper secondary education were altered. In response to the pandemic, tests to assess competences as well as the lower secondary final exam at ninth grade were cancelled. To address the major concern on students' learning losses, based on the recommendations of a working group, the Plan 21|23 – Escola+ was launched in June 2021 with the aim of recovering and consolidating students learning plans for students in primary and secondary education³¹¹. Other temporary measures were adopted such as extending the academic year, and changing the school calendar (carnival holidays were suspended and the Easter break shortened).

6. Modernising vocational education and training and adult learning

Portugal is modernising VET with support from the RRF. As part of the national Recovery and Resilience Plan (RRP), Portugal is proposing a significant reform of its VET system to improve the low educational and qualification attainment levels as well as reduce the high number workers who lack basic and digital skills. The ultimate goal is to adapt skills development to current and future labour market needs and broaden education, training and lifelong learning opportunities for all. The dedicated component on skills and qualifications in the Portuguese RRP comprises measures to (i) strengthen the overall policy coordination of education and VET policies and (ii) modernise the VET offer regulated by the National Catalogue of Qualifications (CNQ) based on the system for anticipating which qualifications are needed in the labour market. Major investments are planned to modernise VET institutions and schools in upper secondary by means of (i) creating and modernising

³¹¹ <https://dre.pt/application/conteudo/161521475>

specialised technological centres, and (ii) broadening and modernising the public employment service's network of professional training centres.

In 2020, Portugal launched a dedicated programme for the digital training of youngsters.

The training programme 'Youth + Digital' ('Jovem + Digital')³¹² was launched as part of the action plan for the digital transition. It aims to align vocational training with labour market needs and improve the professional skills of young adults (aged 18 to 35) to increase their social inclusion and employability. The training courses are part of the national catalogue of qualifications leading to qualification at European Qualifications Framework (EQF) levels 4 or 5. They cover areas such as digital commerce, business intelligence, and social network management with a maximum duration of 350 hours (Cedefop and ReferNet, 2021; Cedefop ReferNet Portugal, 2021).

Portugal will encourage students to acquire key competences in VET. According to the 2018 law³¹³, VET graduates must acquire 10 competences described in the students' profile when they finish compulsory education³¹⁴. These include (i) consciousness and body control; (ii) interpersonal relationships; (iii) personal development and autonomy; and (iv) well-being, health and environment (Cedefop and ReferNet, 2021; Cedefop ReferNet Portugal, 2018). The law, in line with relevant legislation³¹⁵, also gave schools more autonomy in designing how learners could gain these competences. Since 2019, several training courses were provided to teachers and school principals to promote autonomy, curricular flexibility and inclusive education. In addition, monitoring teams from the Ministry of Education provide support to schools and promote good practices. Schools share their strategies in addressing learners' needs and promoting their socio-emotional well-being (Cedefop and ReferNet, 2021).

The COVID-19 pandemic further hindered the slow progression in adult learning in Portugal. The share of adults (aged 25-64) participating in learning decreased by 0.5 pps. from 2019 to 2020 (it currently stands at 10.0%, still above the EU average of 9.2%). The share of low-qualified adults decreased even further (from 4.2% in 2019 to 3.3% in 2020, close to EU average of 3.4%). However, the share of high-qualified adults remained unchanged (47.8% in 2020, well above the EU average of 20.8%).

The Qualifica programme remains the main flagship initiative to address the persistent challenges in adult learning. Between 2017 and 2020, the European Social Fund supported the Qualifica programme, significantly contributing to adult education and training (483 471 registered participants by December 2020) and to the recognition, validation and certification of previously acquired skills and competences (562 620 partial and total certifications awarded)³¹⁶. Yet, a significant proportion of the certifications obtained are partial in nature and there is scope to involve a more significant number of adults in the Qualifica programme. This can be achieved notably by recognising learning acquired in formal, informal and non-formal settings, quite relevant for low-skilled adults.

The RRP includes significant investments in adult education. Under the plan, support will be provided to the pilot project 'Accelerator Qualifica' that aims to set up procedures for the recognition, validation and certification of mature skills. In addition, the plan includes the national adult literacy plan (integrated as a component of the Qualifica programme) aimed to strengthen the population's basic skills and therefore promote their social inclusion.

Box 2: VET professional courses in 'Agrupamento de Escolas de Estarreja'

VET secondary double certification courses (three-year cycles) with both training in school and in a work environment, aim to develop the right professional competences for the labour market. These courses, funded under the ESF human capital operational programme, seeks to improve educational opportunities and the labour market relevance of education and training systems,

³¹² Legislative Order no. 250-A/2020, 23 October : <https://dre.pt/application/conteudo/146244078> ; Legislative Order no. 179/2021, 25 August: <https://dre.pt/application/conteudo/170322930>

³¹³ Decree-Law No 55/2018, of 6 July 2018

³¹⁴ Legislative Order no. 6478/2017, 26 July: <https://dre.pt/application/conteudo/107752620>

³¹⁵ Decree-Law No 54/2018, of 6 July 2018 and Law No 116/2019, of 13 September 2019

³¹⁶ Source: Qualifica Centres Monitoring Report, December.2020.

facilitating the transition from education to work. The objective is also to strengthen vocational education and training systems and their quality, including through mechanisms for anticipating the skills needed for the labour market, adapting curricula and setting up and developing work-based learning systems, including dual-learning systems and apprenticeships.

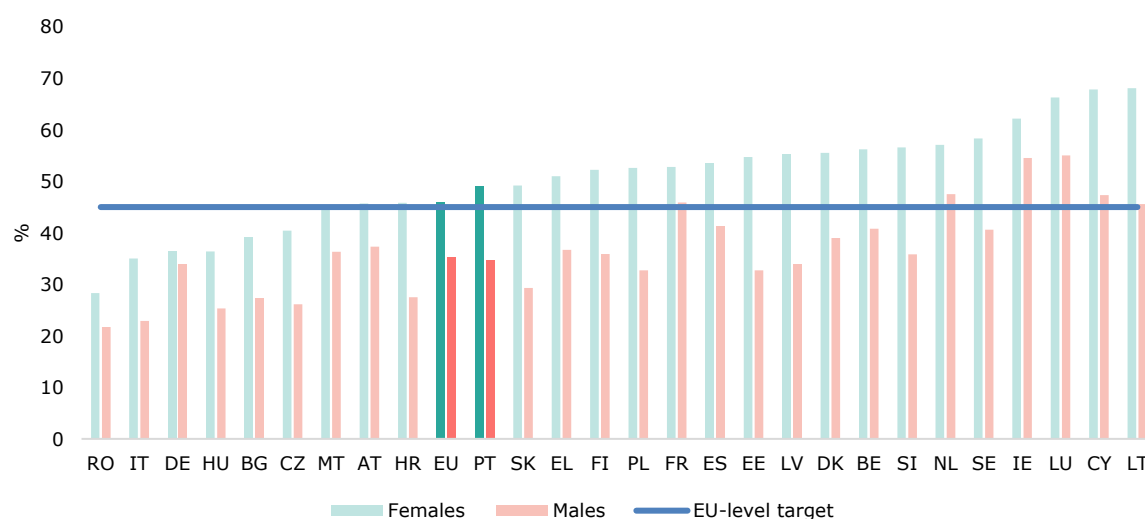
Close cooperation with local employers' skills demands allows training provision and labour market needs to be aligned. A total of 1 664 trainees were supported in the school cluster 'Escolas de Estarreja' between 2014 and 2021 for a total ESF budget of EUR 4 600 953. Results from the 2016-2019 cycle reveal an 83% share of graduated students. Around 80% of the students gained employment after they completed their studies or pursued further qualifications 6 months after concluding the course in 2019.

Website: <https://www.aeestarteja.pt>

7. Modernising higher education

The attainment of tertiary education is increasing, underpinned by measures to support access to and enrolment in higher education. Tertiary education attainment, for ages 25-34, increased in 2020 (41.9% vs 37.4% in 2019). Women continue to surpass men (49% vs 34.6%) (Figure 4). In 2019, the number of science, technology, engineering and mathematics (STEM) graduates increased, but the share of female graduates remained static. For 2020-2021, the Ministry of Science, Technology and Higher Education (MCTES) made a number of the vacant study places reserved for international students available to nationals attending the national competition for access to higher education. To expand access to tertiary education, tuition fees were reduced, and more students were granted scholarships, notably students from disadvantaged backgrounds.

Figure 4 - Tertiary educational attainment (ages 25-34) by sex, 2020



Source: Labour Force Survey, [edat_lfse_03].

The RRF will help build affordable student accommodation to address shortages.

Investments in tertiary student accommodation may help enable access to and completion of tertiary studies. Around one third of university students come from more distant areas³¹⁷, and high accommodation costs (notably in large metropolitan areas) may create a barrier for them to enrol in higher education, sometimes forcing them to abandon their studies. This affects in particular students from low-income households and those with special needs who need more inclusive facilities. In 2019, 600 more places were made available thanks to the collaboration of youth hostels, military infrastructures and churches. The creation of another 2 500 new places was planned for 2020 and

³¹⁷ https://wwwcdn.dges.gov.pt/sites/default/files/pnaes_relatorio_nov18.pdf

2 700 for 2021. The majority will be in the Lisbon and Porto metropolitan areas. The RRF will speed up the implementation of 2019 national students accommodation plan (PNAES)³¹⁸ by providing EUR 375 million in loans to create additional accommodation for 15 000 students by 2025. However, while the Plan provides for 30 000 places to be made available by 2030, the current demand is much higher with 113 000 new students moving into university towns. The newly created places will cover the needs of around 25% of these students.

Higher education professors require further digital and pedagogical training. Digital skills of teachers in higher education were not developed as systematically as for those in compulsory education. Several researchers (Alarcão, 2015; Cunha, 2016; Leite, 2010; Xavier & Leite, 2019; Gomes & Tavares, 2017) highlight the need to invest in pedagogical and digital training for university teachers, as overall they are still very attached to more traditional teaching methods.

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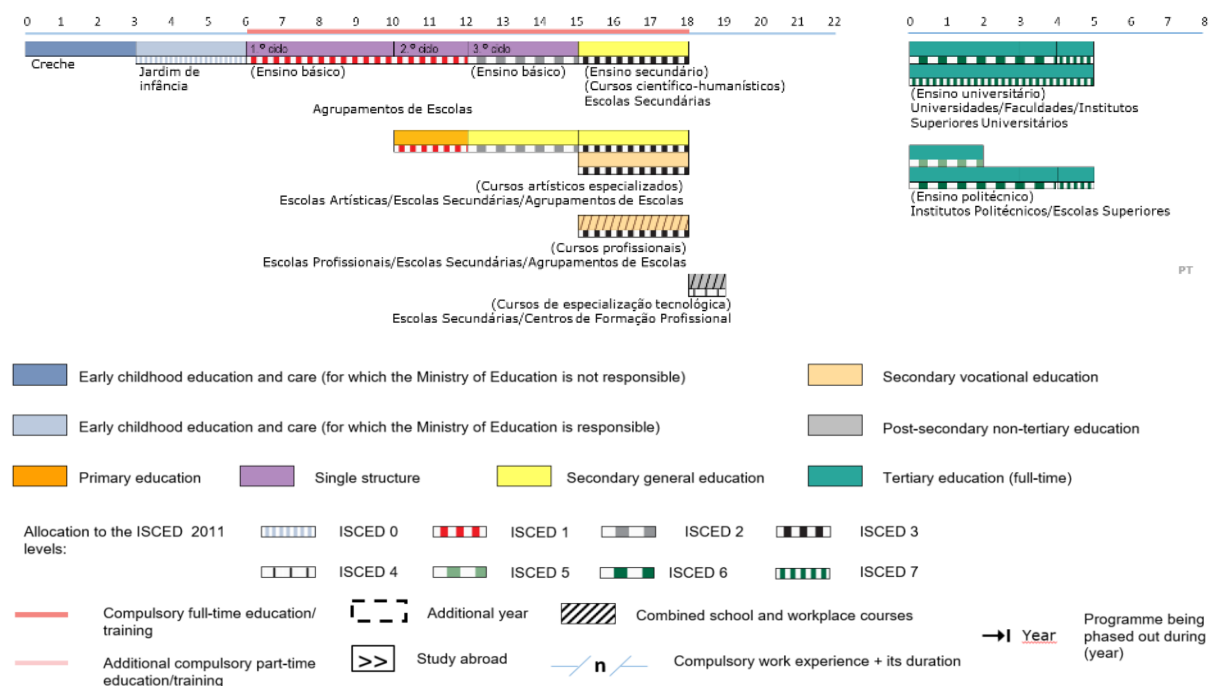
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³¹⁸ https://wwwcdn.dges.gov.pt/sites/default/files/naipa/brochura_pnaes_web.pdf. See implementation level at <https://www.dges.gov.pt/pt/noticia/plano-nacional-para-o-alojamento-no-ensino-superior>

Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022*: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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ROMANIA

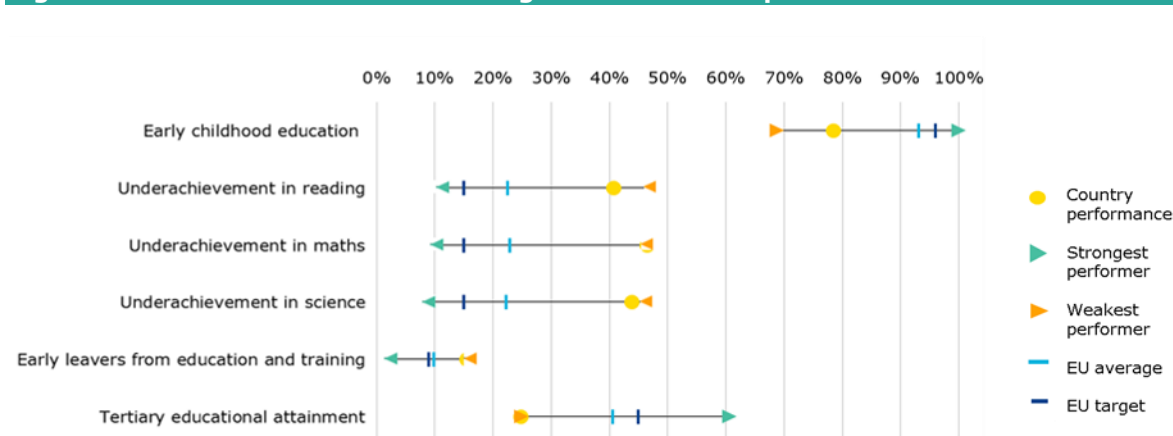
1. Key indicators

Figure 1 – Key indicators overview

			Romania		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		84.1% ¹³	78.6% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	40.4% ^{09, b}	40.8% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	47.0% ⁰⁹	46.6% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	41.4% ⁰⁹	43.9% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		19.3% ^b	15.6%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		20.7% ^b	24.9%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		3.3%	3.6%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€1 668 ¹²	€2 488 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€1 769 ¹²	€3 222 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€4 035 ¹²	€5 460 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		19.3% ^b	15.6%	12.4%	8.7%
	EU-born		:	: ^u	26.9%	19.8%
	Non EU-born		: ^{b, u}	:	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			78.4% ^b	83.0%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		20.7% ^b	24.8%	33.4%	41.3%
	EU-born		: ^{b, c}	: ^c	29.3%	40.4%
	Non EU-born		: ^{b, u}	: ^u	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, c = confidential, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 – Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- The pandemic has negatively impacted students' well-being in education and risks worsening educational outcomes and inequalities. Students from disadvantaged backgrounds, including Roma and those from rural areas, were particularly affected.
- Romania put forward a vision to reform its education and training system, setting out ambitious targets for raising educational outcomes. Swift action and sustained efforts will be needed to achieve progress and improve quality, equity and labour market relevance.
- The Recovery and Resilience Facility will facilitate large-scale investments related to education and training.
- Low participation in adult learning poses obstacles to the development of the skills needed in the economy.

3. A focus on well-being in education and training

In recent years, students' well-being has received increased attention at policy level. Well-being has been integrated in the new quality assurance framework, which entered into force in September 2021. The framework defines well-being as the predominantly positive attitudes of children and young people towards learning, school, teachers and colleagues. They are determined and influenced by individual, family, school and community factors. Measures taken by schools to support students' well-being will be assessed as part of the external evaluations carried out by the quality assurance body in pre-university education (ARACIP)³¹⁹. Schools will also have to reflect on these aspects in their self-evaluations. Recent measures to improve well-being at school include the 2020 methodological guidance for tackling violence and bullying. The concept of well-being was also embedded in the various curriculum syllabi in primary and lower secondary education, for example, as part of personal development, key social competences and digital competences (Palade et al, 2020). Nevertheless, in practice, there has been limited adoption of the concept in concrete learning practice and experiences. In higher education, there is no official definition of well-being. However, evaluation criteria related to education efficacy refer to the requirement for universities to create a favourable learning environment for students and to address students' expectations, needs and satisfaction level in relation to their learning programme (ARACIS 2019).

Romanian students report a lower level of well-being than their European peers. As part of the 2018 Programme for International Student Assessment (PISA), almost 34% of Romanian 15-year-olds said they were bullied at least a few times a month. This is one of the highest proportions in the EU, significantly above the EU average of 22.1%. Disadvantaged students reported a much higher incidence of bullying than their more advantaged peers (39%, compared to 26.7%). The performance of students who were bullied was 40 points lower, equivalent to about a year of schooling. Compared to the EU average, twice as many Romanian teenagers had skipped a day of school at least once in the two-week period before they took the PISA test (50%, compared to 25%). Furthermore, almost 45% of Romanian students felt that they do not belong at school, more than on average in the EU (35%).

The pandemic has had a negative impact on Romanian students, with those from disadvantaged backgrounds particularly affected. The pandemic worsened the well-being of children by limiting their access to basic public services, restricting socialisation, and by reducing family incomes, especially in disadvantaged families (World Vision, 2020). The COVID-19 outbreak led to extended periods of school closures³²⁰ and a shift to distance learning. Although measures were taken to facilitate education continuity, a proportion of students did not engage in remote learning either completely or effectively. For example, in a survey conducted after the first COVID-19

³¹⁹ At present, external evaluations take place every 5 years. The *Educated Romania* report laid down plans to expand the responsibilities of ARACIP, including through the development of regional offices.

³²⁰ In the first COVID-19 wave, all educational establishments were closed. The 2020-2021 school year started in face-to-face mode but by the beginning of November all pre-school and school facilities had closed. They started reopening in February, but some closed again in line with the epidemiological situation at local level. Higher education remained in distance learning practically the entire year, with some exceptions for certain study fields and first year students.

wave (National Centre for Policy and Evaluation in Education, 2020), 65% of respondent school teachers said that all their students engaged in distance learning (69% in urban areas and 58% in rural areas) and 21% stated that more than half of their students did so (18% in urban, 25% in rural). Nevertheless, parents' responses showed that this happened with a varying degree of frequency, while teachers' responses indicated a varying coverage of subjects and of the curriculum (ibid). To facilitate distance learning, Romania launched the 'School from home' national programme to supply digital devices to students from disadvantaged backgrounds. However, lack of devices continued to be an obstacle in the 2020/2021 school year, particularly affecting students from disadvantaged backgrounds, including those from rural areas and from Roma communities. An additional EUR 50 million will be allocated through the REACT-EU initiative to support e-learning, to purchase devices and other equipment, especially in rural areas.

Box 1: Remedial education financed under REACT-EU

REACT-EU will support remedial education measures to compensate for learning losses caused by school closures. The EUR 30 million allocated to this project will fund after-school activities and remedial lessons for 168 000 disadvantaged students, including from rural areas and Roma communities. Considering the disproportionate effects on the learning outcomes of disadvantaged children, such measures are important to avoid widening the educational gap in Romania.

4. Investing in education and training

General government expenditure on education increased markedly in 2019, but remained among the lowest in the EU. In 2019, spending on education increased in real terms by almost 21%, marking the strongest percentage growth in the EU that year, significantly above the average growth of 1.9%. The increase was driven to a large extent by the 2019 pay raise for teachers. Spending also increased across all other categories like goods and services in education, educational infrastructure development and maintenance, as well other non-staff related costs. Although Romania's general government expenditure jumped to 3.6% of GDP in 2019, it remains significantly below the EU average of 4.7% of GDP. Nevertheless, Romania's education spending was slightly above the EU average as a proportion of total government spending (10.1%, compared to EU-27:10%), which points to a rather low level of public spending.

Box 2: The National Recovery and Resilience Plan

Romania's Recovery and Resilience Plan contains grants and loans totalling EUR 29.2 billion out of which more than 10% will support education and skills-related measures. At the time of closing this report (i.e. 19 October), the plan had been endorsed by the European Commission and was awaiting approval by Council.

The RRF will support the implementation of various reforms announced by the *Educated Romania* Report (Presidential Administration 2021), which sets out the vision for the development of education and training by 2030 and envisages an in-depth restructuring of the education and training system. The legislative package ensuring implementation of the Educated Romania project will be adopted in the third quarter of 2023 and will cover several priority areas. These include digitalisation, resilience (i.e. mechanisms for rapid adaptation to crisis situations, increasing quality services in disadvantaged areas, students' resilience, etc.), teaching careers, management and governance in education, as well as financing in education, educational infrastructure, curricula and evaluation, inclusive education, functional literacy and promoting education in STE(A)M (science, technology, arts, engineering and mathematics).

The reforms and investments included in the National Recovery and Resilience Plan cover all levels of education, with measures aiming to improve early-childhood education, reduce early-school leaving, increase the quality of vocational education and training and improve educational infrastructure. The plan will support digital skills development for students and teachers as well as the reform of management and government in education.

5. Modernising early childhood and school education

Participation in early childhood education and care is decreasing. Romania is among the EU countries where participation rates in early childhood education declined compared to 2014 (see Figure 3). The latest data available show an enrolment rate of only 78.6% for children between the age of 3 and the starting age of compulsory education. This figure was one of the lowest in the EU in 2019, significantly below the European average of 92.8%. Participation rates are particularly low in rural areas³²¹ and for the Roma. These low participation rates are of concern given the importance of early years education in laying the foundations for future educational outcomes and social inclusion. Furthermore, in 2019 the participation rate in the age group 0-3 was 14%, significantly below the EU average of 35.5%. As part of the *Educated Romania* report, Romania set an ambitious target for 2030 of raising participation rates for children aged 0-3 to 30% and to 96% for children between the ages of 3 to the starting age of school education. The latter target also corresponds to the EU-level target for 2030.

Figure 3 – Participation in early childhood education of pupils from age 3 to the starting of compulsory primary education, 2014 and 2019 (%)



Source: UOE, [educ_uoe_enra21]

The Recovery and Resilience Facility (RRF) will support improvements in quality and access to early childhood education and care. As part of its Recovery and Resilience Plan (RRP), Romania committed to delivering a revised framework for early childhood education. Preparatory work was supported by the European Social Fund. Furthermore, a large-scale training programme for early education professionals will be developed and implemented with RRF funding. At the same time, access will be improved through the building of 110 crèches, significantly increasing the supply of childcare institutions (currently there are less than 400 such institutions, located almost exclusively in urban areas). The RRF will also fund the development of 412 complementary early childhood education and care services in disadvantaged communities.

A national programme will be rolled out to reduce the high rate of early school leaving. In 2020, the proportion of early leavers from education and training among 18-24 year-olds was 15.6%. Although the rate has decreased in recent years, it remains significantly higher than the EU average of 9.9% and represents a structural challenge for the school system. Early school leaving is higher in rural areas (23%) and among disadvantaged groups, including Roma. These are also the groups that were disproportionately affected by the impact of COVID-19 in education and the school closures. To avoid a worsening of the situation and to reduce early school leaving, a grant programme for schools will be implemented between 2022 and 2026 with funding from the Recovery and Resilience Facility. With a budget of EUR 400 million, the scheme will enable the development of

³²¹ Data from the National Institute for Statistics show a gross enrolment rate (ages 3-6) of 82% in rural areas, compared to 93.8% in urban areas.

various educational support measures and social programmes to prevent and reduce drop-out. More than 2 500 schools will be eligible for funding. In addition, an early warning tool developed and currently being piloted with EU support will be rolled out across the country.

Figure 4 – Early leavers from education and training, 2010 and 2020 (%)



Source: LFS, [edat_lfse_14].

International and national student assessments show the need to improve learning outcomes and reduce inequalities in education. The 2018 OECD Programme for International Student Assessment (PISA) showed that more than 40% of Romanian 15-year-olds lacked basic skills in reading, mathematics or science. These rates of low achievement were about twice as high as the European average (22.5% for reading, 22.9% for mathematics and 22.3% for science). Students from disadvantaged backgrounds had substantially higher rates of low achievement (e.g. 62% in reading compared to 19% among advantaged peers³²²). Apart from the strong impact of socioeconomic status on educational performance, a large rural-urban gap in education also persists. In 2021, 23% of eighth graders who sat the national evaluation did not obtain the minimum pass mark of 5. This was the case for 37% of students from schools in rural areas and 11% in urban areas. This gap is of concern given that more than 40% of students in primary and lower secondary attend schools in rural areas. Furthermore, 30% of candidates failed the baccalaureate exam taken at the end of the 12th grade, of which 34.5% at high schools located in rural areas, compared to 20% in urban areas. On educational outcomes, the *Educated Romania* report outlined ambitious targets to be achieved by 2030. One such target is to halve the rate of underachievers in reading from 40 to 20%, as measured by the PISA test. Romania also aims to halve the proportion of students underperforming simultaneously in reading, mathematics and sciences, from 30% to 15%. Achieving such progress is likely to require substantial efforts to address the root causes of low educational outcomes and high inequalities in education, including targeted policies to compensate for learning losses due to the pandemic and systematically focusing on the needs of disadvantaged students and on the situation of students in rural areas.

Reforming teacher policies remains key for achieving progress in school education. Research in the field of education has identified teachers and teaching methods as the most important factor affecting the quality of education. Thus, successfully implementing Romania's aspirations to raise learning outcomes and develop a competence-based student-centred approach to teaching and learning depend largely on its teachers (OECD, 2020). Nevertheless, previous reports have identified a number of critical aspects facing the teaching profession. These start with insufficient practical preparation in initial teacher education and lack of rigorous selection (OECD, 2017). Although 70% of secondary school teachers³²³ report taking part in continuous professional development (CPD), in

³²² Corresponding to the bottom and top quartiles of the index of economic, cultural and social status (ESCS).

³²³ According to the OECD's 2019 Teaching and Learning International Survey.

general teachers perceive training as insufficiently adapted to their needs (ISE, 2018). Career progression is not accompanied by an increase in the complexity of responsibilities, while additional tasks such as mentoring or training others are not remunerated (OECD, 2017, Presidential Administration, 2021). Schools in rural areas struggle to attract highly qualified staff, and the number of available support specialists remains insufficient. The merit-based allowance tends to encourage a narrow focus on preparing pupils for tests and academic competitions, rather than encouraging progress among low performing students or those from disadvantaged backgrounds. In response to these challenges, the *Educated Romania* report outlined a number of measures to improve the quality of initial teacher education and continuous professional development, as well as measures to develop a flexible career management system.

Several investments financed under the Recovery and Resilience Facility aim to modernise digital infrastructure in schools and facilitate digital education. European surveys³²⁴ and the national mapping of educational infrastructure needs (Ministry of Education and Research, 2018) have shown that digital infrastructure in schools lags significantly behind, especially in rural areas. Furthermore, only 57% of young Romanians aged 16-19 have basic or above-basic digital skills (EU average: 82%), and several areas of teachers' digital skills are in need of strengthening (European Commission 2019). To support the acquisition of digital skills, the Recovery and Resilience Facility will finance the modernisation of computer laboratories and investments in various other IT equipment (e.g. smart screen, laptops, etc.) Digital educational content, including textbooks and open educational resources, will also be developed, and a platform to assess students' skills will be set up with RRF support. The investment package further includes measures to support the uptake of digital pedagogies and improve teachers' digital skills. For example, the requirements for digital skills training in initial teacher education will be updated, and a large-scale training programme aligned with the European Digital Competence Framework will be implemented. Some 45 000 school teachers (almost 50% of Romania's teachers), will receive training on how to incorporate digital tools in teaching and learning.

6. Modernising vocational education and training and adult learning

The pandemic has posed challenges for the practical side of learning in vocational education and training. The shift to remote learning and the temporary closure of some businesses particularly affected the dual element of some VET programmes, making the delivery of work-based learning impossible in many cases. The national 'School from home' programme was also applied to VET programmes. Furthermore, the existing ESF-funded CRED (Relevant Curriculum, Open Education) project was used to facilitate access to online resources and e-learning platforms for all students and teachers, including those in VET. In September 2020, the National Centre for Technical VET Development (CNDIPT) published methodological benchmarks for strengthening teaching and learning in initial VET, as well as a support guide for VET teachers.

Improving the quality and labour market relevance of VET remains a challenge to be tackled. In 2020 a new ESF-funded project (ReCONNECT) was launched, aimed at better matching labour market demand and supply for skills. This project will build on existing skills forecasting data to develop monitoring mechanisms for new graduates and their career prospects. It aims to support labour market integration of recent graduates. Only 68.5% of 20-34 year-olds who have recently completed vocational education and training were employed in 2020, compared to the European average of 76.1%.

An overhaul of the dual education system has been announced. Romania plans to change the way in which dual education is organised. The objective is for VET to become predominantly dual education and to ensure better alignment with the needs of the labour market, ultimately increasing the attractiveness of this form of education. The plans also envisage a revision of the current baccalaureate exam and creation of a distinct educational route that will allow graduates from VET

³²⁴ Compared to the EU average, substantially fewer schools in Romania are highly digitally equipped and connected. Only 14% of Romanian students in primary education (EU average: 35%), 16% in lower secondary and 31% in upper secondary education (EU average: 72%) study in such schools (European Commission, 2019).

programmes to join technical higher education. To support the planned reform of the VET sector, the RRF will invest in equipping VET high schools, including agricultural schools, with laboratories and IT laboratories. In addition, support schemes will finance the development of 10 regional consortia between territorial VET actors (local authorities, schools, universities, chambers of commerce and businesses) in order to deliver effective training in dual VET.

Low participation in adult learning poses obstacles to the development of skills needed in the economy. In 2020, Romania continued to have the lowest participation in adult learning in the EU (1.0%, significantly below the 9.2% EU average). Romania is also near the bottom of the EU table in the proportion of individuals with basic or above-basic overall digital skills (31% in 2019, compared to the EU average of 56%). In terms of the policy framework, work started at the end of 2020 on developing the national strategy for the continuous training of adults (2021-2027), but the project is estimated to take 36 months until completion. Coupled with the low level of educational attainment, the adult learning data above point towards the need to improve the skills supply to the labour market in general. In addition, the employment rate of adults with low educational attainment (56% for those completing less than lower secondary education), coupled with difficulties in accessing continuous education and training, pose significant challenges to individuals' ability to integrate into the job market. This in turn has a limited effect on sustainable growth.

7. Modernising higher education

Tertiary educational attainment is low. Only 25% of the population aged between 25 and 34 holds a tertiary education degree. Although the proportion has improved over time, it is significantly below the EU average of 40.5% and the EU-level target of 45% by 2030. As outlined in the *Educated Romania* report, Romania aims to increase tertiary attainment in the age group 30-34 to 40% by 2030. In 2020, the value of this indicator was 26.4%, significantly below the EU average of 41%. Achieving such an increase is likely to require sustained efforts to overcome the main drivers of low participation in higher education and an insufficient number of graduates. For example, participation rates are affected by persistently high rates of early school leaving, the low passing rate at the baccalaureate exam (less than half of the age-specific cohort is successful in this exam (UEFICSCI, 2020a), as well as by the low participation of students from disadvantaged backgrounds. Participation rates have somewhat increased in recent years. In the 2019/2020 academic year 37.4% of Romanians aged between 19 and 23 were pursuing a Bachelor's programme.

Recent studies and data shed light on the impact and value added of measures to improve equity and reduce drop-out rates. A recent survey (UEFISCDI, 2020b) shows that in the 2018/2019 academic year, 10% of students at the public universities surveyed were receiving social scholarships. These scholarships are seen as having a positive impact on reducing the rate of drop-out and improving graduation rates in nominal time. However, scholarships seem not to motivate more students from disadvantaged backgrounds to access higher education. Nevertheless, a slightly increasing interest was noted for the dedicated places for graduates from upper secondary schools located in rural areas (UEFISCDI, 2020c). Analysis revealed that these study places are insufficiently known to eligible beneficiaries, and that universities have not yet taken sufficient measures to promote them (ibid). Dedicated places for Roma also continue to be financed, with data showing that out of the 386 places allocated to public universities in 2020, 371 were occupied. At the same time, universities and colleges are receiving grants to reduce drop-out rates in the first year of study. Activities provided include remedial measures, tutoring, career counselling and guidance, as well as setting up learning centres to support students at risk of dropping out. As a result of these measures, the retention rate in the first year of study in universities included in the grant scheme has increased. Additional support for higher education will be provided by the Recovery and Resilience Facility for digitalisation and modernisation of auxiliary infrastructure such as dormitories and canteens. 40% of these new or modernised places in dormitories will be allocated to students from disadvantaged backgrounds.

There are relatively low numbers of tertiary educated professionals, and their skills are insufficiently aligned with labour market needs. The latest available data show that for every 1 000 people aged 20-29 there were 46.2 higher education graduates (ISCED 5-8) in Romania, compared to 61.9 on average across the EU. The percentage of graduates in science, technology,

engineering and mathematics is one of the highest in the EU (30%), but due to the low number of graduates, the availability of specialists is low. Emigration further reduces the number of tertiary educated professionals, with an estimated 40% of Romania's graduates in the 24-64 age group having emigrated (World Bank, 2019). Before the start of the pandemic, skills shortages had been documented in key sectors, including ICT, health and education, as well as for science and engineering professionals and technicians (World Bank, 2020). At the same time, graduates' skills are seen as insufficiently aligned with the needs of the labour market. Studies show that many employers view the curricula as using outdated teaching methods and as insufficiently focused on the practical application of knowledge, problem solving and team cooperation (World Bank, 2020). To improve the labour market relevance of higher education and facilitate digitalisation, a grant scheme will be set up with funding from the RRF, benefiting 60 universities (66% of the total) with investments in digital equipment, training of staff and other measures to improve students' digital skills.

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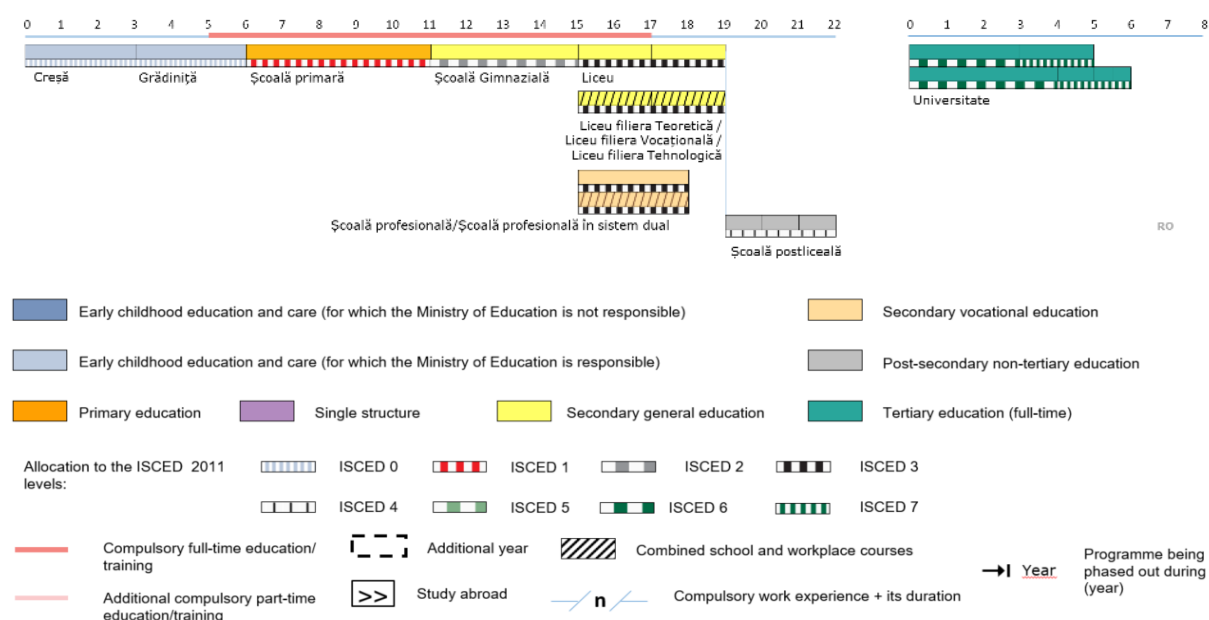
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14. Data by country of birth: edat_lfse_02.
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03. Data by country of birth: edat_lfse_9912.
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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SLOVAKIA

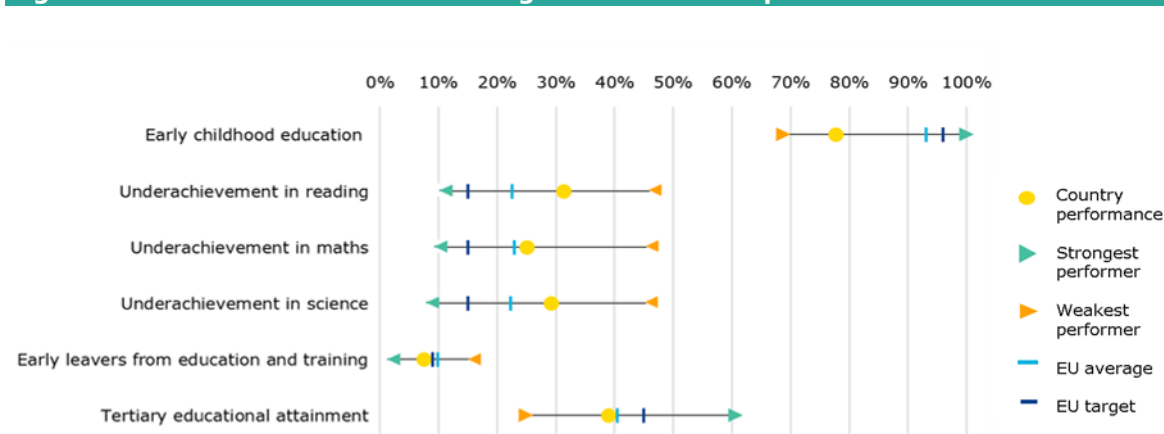
1. Key indicators

Figure 1 – Key indicators overview

			Slovakia		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		72.3% ¹³	77.8% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		32.8% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	22.2% ^{09, b}	31.4% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	21.0% ⁰⁹	25.1% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	19.3% ⁰⁹	29.3% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		4.7%	7.6%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		24.0%	39.0%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		4.6%	4.2%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	:	€4 777 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€3 907 ^{12, d}	€5 047 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	:	:	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		4.7%	7.6%	12.4%	8.7%
	EU-born		:	:	26.9%	19.8%
	Non EU-born		:	:	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			93.2%	89.7%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		24.0%	39.1%	33.4%	41.3%
	EU-born		:	:	29.3%	40.4%
	Non EU-born		:	:	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Slovakia is taking major steps to improve educational outcomes, including through the school curricular reform and measures to enhance inclusiveness and mitigate the COVID-19 impact. The well-being of teachers and students needs improvement too.
- Slovakia implements compulsory pre-school education from age 5 from September 2021.
- The tertiary attainment rate is close to the EU average. Measures are being taken to improve the quality, governance and internationalisation of higher education.
- Slovakia is continuing its reforms in vocational education and training, while adult learning still requires policy attention.

3. A focus on well-being in education and training

The well-being of students is already addressed by different policies, and a more systemic approach is planned. Over recent years, the well-being of students and educational staff has been recognised as a serious challenge, which further aggravated during the COVID-19 pandemic. Slovakia has a policy framework in place on child protection³²⁵ and cyber safety³²⁶, as well as a national mental health programme³²⁷, which includes action in the field of education. Standards on well-being are present in the state curriculum, e.g. for seventh graders in lower secondary education. These consist of recognising bullying, extremism and vandalism, the ability to explain causes of various social conflicts, and proposing assistance to people with disabilities and older people. The new curricular reform, prepared under the National Recovery and Resilience Plan (NRRP), aims to integrate well-being further at primary and lower-secondary level. At tertiary level, as of September 2020 internal quality assurance systems must guarantee protection of students, employees and applicants against intolerance and discrimination. The new digital strategy for education 2030³²⁸ will reflect the European Framework for the Digital Competences of Educators, ensuring a strategic approach to digital well-being. The new 2030 national strategy for equality, inclusion and participation of Roma puts special focus on measures against discrimination and on anti-Roma racism.

Slovakia has taken a strategic approach against bullying, however, strengthened measures may be needed targeting disadvantaged students. The consequences of bullying can be severe, both in the short- and long-term, with physical and mental impacts (Pappas, S., 2013). The anti-bullying strategy for schools, based on Directive No 36/2018, defines bullying and cyberbullying, while providing guidance on preventive and remedial action. Schools have integrated the Directive into their internal regulations, and are supported by their prevention coordinators. According to the OECD (PISA), more than one in four secondary-level students in Slovakia (28.3%) reported being bullied at least a few times a month (EU 22.1%). Significantly more students from disadvantaged socio-economic backgrounds reported being a victim of bullying (31.8% vs 25.4%), highlighting the social and territorial inequalities. Low achievers are much more exposed to frequent bullying than high achievers (39.8% vs 18.6%). Given the high impact of bullying on reading performance (28 points vs EU: 23.2 points) and students' well-being, this could further enhance the educational gaps between pupils with low and high socio-economic background, which calls for action supporting the disadvantaged. As cyberbullying was reported by 84% of the victims of bullying, representing 6% of the total population aged 9-16 (Izrael. P. et al, 2020), online safety needs strengthening too.

Creating a more cooperative and favourable learning environment, and enhancing socio-emotional learning, could improve the school climate and students' academic outcomes. The school inspectorate's 2018/2019 report found that in the majority of inspected schools classroom

³²⁵ <https://www.employment.gov.sk/sk/ministerstvo/NKSpreRPNnD/>

³²⁶ <https://www.slov-lex.sk/legislativne-procesy/-/SK/dokumenty/LP-2019-843>

³²⁷ <http://www.psychiatry.sk/cms/File/NPDZ.pdf> - the programme will be updated by the end of 2021.

³²⁸ To be adopted in 2021.

teaching did not encourage free expression of opinions or active discussion, and students often lacked a sense of security. In VET schools, 83.3% of students did not perceive the learning climate as favourable (SSI, 2019). In international comparison, the proportion of Slovak lower-secondary school students who felt high teacher or classmate support, or were satisfied with school, was below the WHO average (Inchley J, et al., 2020). Research shows that supportive teacher-students relations positively affect student achievement, both directly and indirectly through a greater sense of belonging at school (OECD, 2019b). According to the OECD (PISA), 31% of Slovak students do not feel part of a school community, which affects their performance: on average they scored 21 points less in reading. Slovak students were also among those who were least likely to report student cooperation (OECD, 2019b). Individualised support to students, a more favourable learning climate and more student cooperation would benefit disadvantaged students in particular, thus contributing to a more equitable and resilient education system.

Improving the well-being of teachers, combined with strengthened support and guidance, are essential to enhance the well-being of students. Not all teachers are equally well prepared to support students' well-being. Pedagogical faculties, which prepare primary school teachers, focus on pedagogy and psychology more than other faculties, which run complementary teacher training programmes only. Slovak teachers have the lowest perceived recognition of the teaching profession (OECD 2019a), and the second lowest enthusiasm in teaching in the EU, affecting students' learning outcomes (OECD, 2019b). The pandemic and the closure of schools have additionally affected many teachers' physical (35%) and mental (over 40%) well-being³²⁹. Furthermore, 34% of surveyed teachers would not speak in a school environment about their psychological problems, but 99.4% think it is important to promote teachers' mental health and well-being³³⁰. Moreover, the well-being of teachers can impact student well-being and achievement. A more resilient teaching workforce could be built by addressing teachers' needs, improving the relevance of initial and in-service teacher training (OECD, 2020), and more focus on teachers' well-being. The 'Teachers' national project, funded by the European Social Fund, is a step in the right direction (Box 1).

Slovakia took measures to support teachers' and students' well-being during COVID-19. During 2019/2020 and 2020/2021, schools were closed for 38 weeks³³¹. Experts point out the increased risks for children in this context, like cyberbullying, including sexual abuse, a high rise in domestic violence, and deterioration of children's mental health, disciplinary habits and basic social skills³³². The policy and support measures provided to schools included the 2020/2021 guide³³³, the scheme on improving students' well-being and the school climate, and webinars on teachers' well-being and resuming onsite teaching. The non-public sector has delivered online counselling³³⁴ and well-being courses in schools³³⁵. At tertiary level, the number of students with depression or anxiety rose during lockdown, and nearly one third of respondents reported suffering from them, while one half reported experiencing excessive stress. However, only 16% of students saw higher education institutions (HEIs) provide psychological and prevention measures despite existing support centres³³⁶. In 2020, the government supported 8 development projects in higher education to establish new or expand existing student support centres.

³²⁹ <https://komenskehoinstitut.sk/prieskum-2021/>

³³⁰ <https://institutkonvalinka.sk/teacher-wellbeing-index-slovakia/>

³³¹ <https://en.unesco.org/covid19/educationresponse#durationschoolclosures>

³³² Otvorená výzva na urýchlené otvorenie škôl a školských zariadení (<https://komisarpredeti.sk/otvorena-vyzva-na-urychlene-otvorenie-skol-a-skolskych-zariadeni/>).

³³³ <https://www.minedu.sk/data/att/16787.pdf>

³³⁴ <https://www.krizovalinkapomoci.sk/>

³³⁵ <https://institutkonvalinka.sk/>

³³⁶ <https://srvs.eu/2020/07/23/vysledky-prieskumu-dopad-covid-19-na-studentov/>, https://uniba.sk/detail-aktuality/back_to_page/aktuality-1/article/vyskum-uk-psychieke-zdravie-studentov-sa-vplyvom-pandemie-zhorsilo/
Koronavírus zasiahol duševné zdravie mladých: hlásia viac depresii a úzkostí:
https://www.sav.sk/index.php?doc=services-news&source_no=20&news_no=8928

Box 1: Professional development of teachers and support during COVID-19 (ESF)

The national 'Professional development of teachers' project aims to support teachers' continuing development, review professional standards and develop a new standard for career counsellors. It promotes networking and the exchange of innovations in teaching, and aims to train 8000 teachers (ca. 10% of Slovak teachers). In 2020, the project was amended to mitigate the impact of COVID-19 on pupils and teachers. So far EUR 271708.95 have been deployed to enhance the online platform³³⁷ offering services to schools, pedagogues and civic society actors, provide specialist counselling for staff, parents and students, spring schools, etc. By February 2021, more than 5000 educators had been supported online, and 504 had taken training.

Total budget is EUR 6917756.19. The project is being implemented from February 2020 until December 2022 by the Methodological and Pedagogical Centre, and the State Pedagogical Institute.

See: <https://www.statpedu.sk/sk/o-organizacii/projekty/narodny-projekt-profesijny-rozvoj-ucitelov-teachers/>

4. Investing in education and training

Investment in education and training remains comparatively low despite decreasing student numbers. General government expenditure on education as a share of GDP has remained below the EU average, standing at 4.2% in 2019 (EU 4.7%). Spending as a share of total public expenditure grew to 9.8% in 2019, close to the EU average (10.0%). However, annual public spending per post-primary student in purchasing power standards remains among the lowest in the EU: in 2018, it was 4311.3 for lower-secondary students, 5132.5 for upper-secondary and 6831.6 for tertiary students. The low spending per student persists³³⁸ even though the pre-school and school age population (4-16 years-old) in Slovakia decreased by 1.9% between 2010 and 2020. Furthermore, teachers' low salaries limit the attractiveness of the teaching profession. Teachers' average actual salaries at pre-primary, primary and general secondary levels of education range from 56% to 75% of those of other tertiary-educated workers in Slovakia; they also remain far below the 2020 EU-22 average for teachers (OECD, 2021b).

Slovakia plans measures to improve the effectiveness of spending and decision-making in education. Under the amended Act No 596/2003 Coll. of 14 April³³⁹, from 1 January 2022 the system of financing and governing schools, most school facilities and kindergartens for children with special educational needs will be unified under the education ministry. Furthermore, a network of 40 regional educational centres will be established with RRF support to provide methodological assistance to schools, in particular during the implementation of the curricular reform. To ensure the network's success, the participatory approach needs to be applied, and the scope of assistance needs to be clearly defined. In higher education, performance contracts will be introduced to improve the relevance of the courses offered.

The Recovery and Resilience Facility (RRF) will support investment in educational infrastructure at all levels. Under its NRRP, Slovakia aims to create 12352 places in early childhood education to implement the legal entitlement for 3-year-olds planned for 2025. At least 252 upper-secondary schools will be refurbished to improve their accessibility to students with disabilities, double shifts will be eliminated in 49 primary schools, and 211 school libraries will be established or modernised to provide a high-quality learning environment to disadvantaged students. Some university buildings will be refurbished to improve their energy efficiency.

³³⁷ www.ucimenadialku.sk

³³⁸ Eurostat, UOE: [educ_uae_fine09].

³³⁹ <https://rokovania.gov.sk/RVL/Material/25892/1>

Slovakia intensifies efforts to digitalise education and boost digital skills. This year, the Education Minister launched a 'digital leap' action in education, starting with a EUR 40 million investment in digital technologies³⁴⁰. The digitalisation of schools should be aided by a further allocation of around EUR 229 million from the RRF. In addition to the investment in ICT equipment and connectivity, under its NRRP Slovakia will establish a network of digital methodological coordinators, and develop online upper-secondary school-leaving exam, digital learning materials and training for teachers. The national digital skills strategy is planned for adoption in 2022, and at least 172 800 older people and disadvantaged people will receive training in digital skills.

Box 2: The National Recovery and Resilience Plan (NRRP)

The Slovak Plan³⁴¹ is worth a total amount of EUR 6.58 billion, of which EUR 6.3 billion in grants under the RRF. Investments in education and skills related measures represent over 15 % of the Slovak grants. Slovakia plans to expand early childhood education and care, reform school curricula supported by digitalisation, reform teacher education and professional requirements, improve inclusiveness at all levels of education, curb Roma segregation and mitigate the COVID-19 impact on students. It also aims to improve the governance, quality and internationalisation of higher education, as well as boost digital skills.

5. Modernising early childhood and school education

Slovakia has one of the lowest participation rates in early childhood education and care, but substantial reforms and investments are under way to make it more accessible and inclusive. In 2019, the participation rate of children over 3 in early childhood education was 77.8%, significantly below the EU average of 92.8% (Figure 3). The participation of children with special educational needs is minimal: in 2019, only 12.1% out of an estimated 14000 children with disabilities (0-7 years old) had access to early childhood intervention services. Almost 77% of teachers in mainstream ECEC did not follow any training on teaching children with disabilities, and the related training offer is lacking (To dá rozum, 2019). The reform of the financing system for pre-primary education planned for 2022 under the NRRP aims to ensure sustained national public financial support. Legal entitlement to ECEC for 4-year-olds is planned for 2024, and for 3-year-olds for 2025. At least 10000 ECEC staff will be trained in inclusive education, and early care for children below 3 from marginalised Roma communities will be piloted.

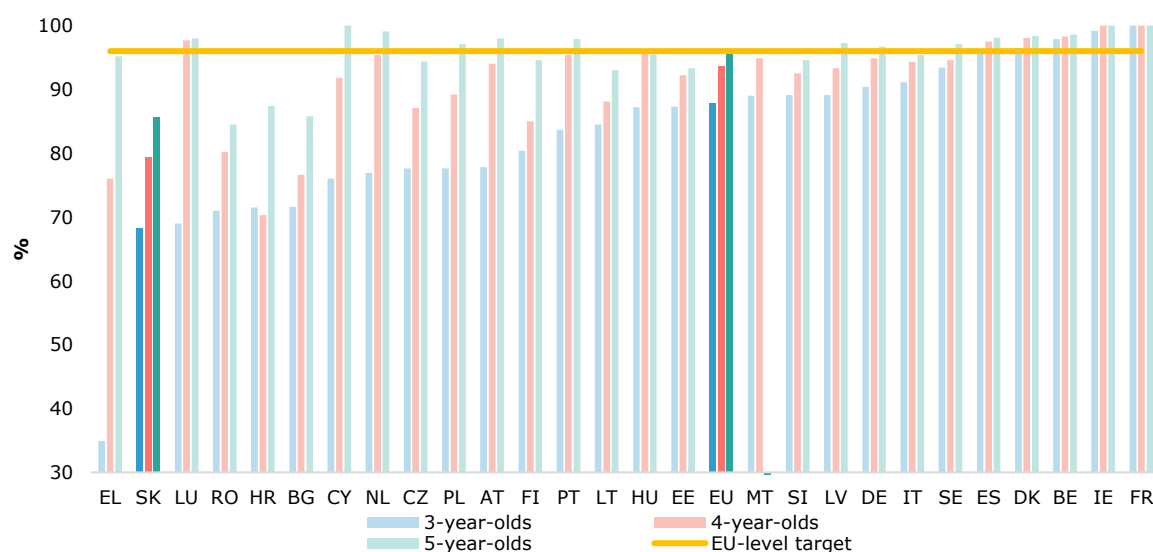
Slovakia is implementing compulsory pre-primary education for 5-year-olds from September 2021. To ensure successful implementation, Slovakia has invested in equipment, learning materials, support for children with a mother tongue other than Slovak³⁴², and in integrating children with special educational needs in mainstream kindergartens. Creation of new kindergarten capacities and inclusive teams continues to be supported with EU funds. Since the new legal framework authorises home schooling and pre-primary education providers other than kindergartens, the quality assurance and inclusive environment will need to be ensured in those settings as well.

³⁴⁰ <https://www.aktuality.sk/clanok/891881/minister-groehling-zaciname-digitalny-skok-tento-rok-pojde-na-digitalizaciu-40-milionov-eur/>

³⁴¹ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

³⁴² <https://www.statpedu.sk/files/sk/svp/zavazanie-isvp-ms-zs-gym/matrska-skola/metodicke-materialy/dieta-hovoriace-inym-jazykom-moznosti-kompenzacnej-podpory-predskskom-vzdelavani.pdf>

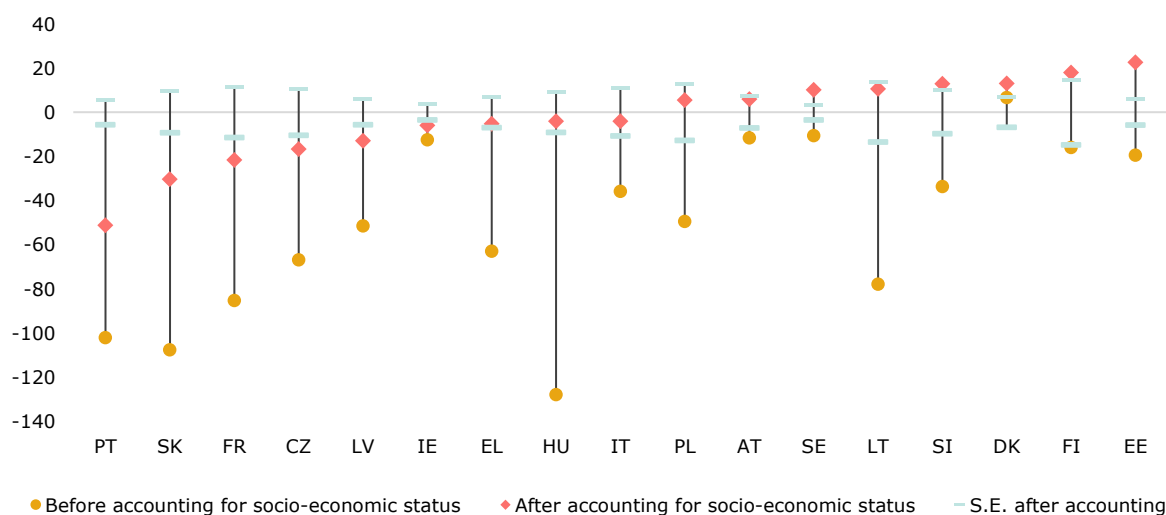
Figure 3 – Participation in early childhood education by age, 2019 (%)



Source: UOE, [educ_uoe_enra20]; [educ_uoe_enra18]; [educ_uoe_enra19]

Slovakia is preparing a comprehensive curricular reform to improve educational outcomes and key competences. According to the 2018 PISA, the level of basic skills of Slovak teenagers is below the EU average, and the proportion of low achievers is significantly above the EU average (31% vs 22.5% in reading, 29% vs 22.3% in science, and 25% vs 22.9% in mathematics). Furthermore, students' socio-economic background strongly affects their performance, and the urban-rural gap in education outcomes is significant (Figure 4). To address these weaknesses, Slovakia aims to introduce a curricular reform at the primary and lower secondary levels, creating a new integrated and competence-based curriculum and opening up the textbook market. The aim is also to improve pupils' transversal skills. The language skills of students whose mother tongue is different from the language of instruction will be additionally supported. The reform will be supported by the RRF, including better integration of ICT in teaching and learning, reforms of initial teacher education programmes, and of continuing professional development. However, the low attractiveness of the teaching profession may hamper the efficient implementation of the reforms. Further organisational measures may also be needed to reduce the city-rural divide in education (OECD, 2021a).

Figure 4 – The rural-city gap in reading performance of secondary school students, PISA 2018



Source: PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed on 15 May 2020), (OECD, 2021).

Slovakia is preparing an inclusive education strategy and plans other systemic measures to improve equity, strongly supported by EU funds. The proportion of pupils with special educational needs placed in fully separate educational settings at 5.63% is the highest among the 23 EU countries surveyed (EU-23: 1.55%) (EASNIE, 2020). The 2020-2021 'Zero' Action Plan of the upcoming inclusive education strategy is being implemented, and the strategy is to be adopted in 2021. The recent EU report on disability equity in Slovakia identifies the 9-year 'Variant A' educational programme for pupils with moderate intellectual disability as the biggest concern. Students following this programme can obtain only a primary level of education (ISCED1) at the most (European Commission, 2021). Under its NRRP, in 2023 Slovakia will amend the School Act to allow those students to gain ISCED2 in vocational education. Furthermore, Slovakia will redefine the concept of special educational needs, introduce an entitlement to inclusive support measures in ECEC and schools, adopt standards for barrier-free learning spaces, and strengthen desegregation of Roma in education.

Slovakia has adopted its 2030 strategy for equality, inclusion and Roma participation. In education, the main objectives of the strategy³⁴³ are defined around the 3 key areas: (i) support for children and students, and family care; (ii) support for teachers' professional skills; and (iii) support for creating a stimulating environment for pupils from marginalised Roma communities. A European Commission infringement procedure against Slovakia on the segregation of Roma children in education is ongoing.

Slovakia plans comprehensive measures to prevent young people from leaving education and training early. Despite a recent improvement (by 1.7 pps since 2017), the share of early leavers from education and training strongly deteriorated in 2020, reaching 7.6% (EU 9.9%) from a low base of 4.7% in 2010 (EU 13.8%). Eastern Slovakia continues to have the highest rate (12%)³⁴⁴. To address this negative trend, with ESF support Slovakia plans to reform the counselling and prevention systems, and set up a robust early warning system. According to a 2021 survey by the Comenius Institute, COVID-19 had a negative impact on students' learning, leading to educational loss³⁴⁵. The government supported 471 schools in organising additional tutoring for pupils from April to June 2021³⁴⁶. These measures are key, since in 2020 the rate of Slovak young people (aged 15-29) who are neither students, employees nor trainees rose to 15.2% from 14.5% in 2019³⁴⁷, following the EU trend.

6. Modernising vocational education and training and adult learning

In 2020, VET graduates seem to fare better on the labour market than their peers completing general secondary education. In 2020, despite the 4% annual decrease in the employment rate to 80.7%, recent VET graduates (age 20-34) have higher employment perspectives than those finishing general education whose employment rate dramatically dropped by 17.5% to 69.3% (Labour Force Survey, 2020). Total enrolment in upper secondary VET in 2019 stayed strong at 67.5%, well above the EU average of 48.4% (UOE, 2019).

Slovakia is transforming VET to meet labour market needs and employers' expectations. In early 2021, the education ministry submitted for public consultation an amendment of the VET Act, to come into effect on 1 January 2022. It aims to: (i) introduce experimental verification of study programmes; (ii) strengthen the influence of employers on the provision of secondary VET; (c) facilitate entry of SMEs/self-employed people to dual education thanks to supra-corporate training centres, reduce the administrative burden for companies and allow for company scholarship; and (d) introduce dual education in the study programmes for health professions and ECEC teachers. Meanwhile, the regions of Prešov and Banská Bystrica are piloting solutions improving the quality of

³⁴³ <https://www.minv.sk/?strategia-pre-rovnost-inkluziu-a-participaciu-romov-do-roku-2030>

³⁴⁴ Eurostat, UOE: [edat_lfse_16].

³⁴⁵ <https://komenskehoinstitut.sk/prieskum-2021/>

³⁴⁶ <https://www.minedu.sk/vyhodnotenie-vyzvy-spolu-mudrejsi/>

³⁴⁷ Eurostat: [edat_lfse_20].

their VET, based on the design set out in the context of the Catching-up Regions Initiative supported by the World Bank and the European Commission, which combines soft components (curricula revision, teacher training, inclusive measures, regional cooperation platforms) and hard investments³⁴⁸.

The NRRP addresses VET partially. Secondary VET schools will be mostly covered by the general measures in education, including digitalisation, fostered accessibility, elimination of Roma segregation in education, prevention of early-school leaving and, more specifically, by the reform of lower-secondary VET programmes. Furthermore, the ratio of professionally-oriented Bachelor's degree programmes should increase to 10% (end-2024) and adequate practical training premises should be ensured (Cedefop and ReferNet, 2021). Measures mitigating the COVID-19 pandemic's impact on VET learners, particularly the disadvantaged, are being introduced. As for dual VET, companies were supported to remain in the system mainly through the compensation of salaries for in-company trainers and the motivational contribution for newly contracted learners during 2020/2021.

The COVID-19 pandemic affected adult learning participation. The 2020 participation rate (25-64 years old in the last 4 weeks) is 2.8%, significantly below the 2020 EU target (15%) and 0.8 pp. less than in 2019. The share of adults with low qualifications dropped by 1.3 pps to 7.3%. The percentage of low-qualified employed adults fell further below the EU average of 55.8%, from 37.8% to 36.4%. The share of low-qualified and unemployed adults engaging in learning remains statistically insignificant. The proportion of Slovak adults (16-74) with basic digital skills decreased by 5% to 54%, 2 pps under the EU average.

Slovakia's adult learning and education system remains fragmented without proper policy acknowledgement, governance structure or financing. The 2020-2024 Government Manifesto pledges to make the system functional by enlarging the quality accessible training offer for the employed and vulnerable groups to help them fare better on the labour market. Adults' skills remained largely unaddressed by the NRRP, leaving the area heavily dependent on ESF funding. In March 2020, in the context of COVID-19, the education ministry issued instructions on accredited courses, specifying what could be taught online. The new lifelong learning strategy (under approval) will replace the 2008 strategy. The upcoming strategy should provide for the implementation of a systemic approach to adult learning, in particular the development of digital skills and skills according to the KOMPAS criteria.

7. Modernising higher education

Tertiary attainment rate is close to the EU average, but the gender gap is double. Between 2010 and 2020, the rate grew by 15 pps, and in 2020, Slovakia had 39% of adults between 25 and 34 holding a tertiary education degree. This is only slightly below the EU average (40.5%). The gender gap in favour of women has, however, widened and at 19.9 pps it was double the EU average (10.8 pps). Slovakia's proportion of Master's programme graduates at 84% in 2019 is the highest in the EU.

The employment rate of recent tertiary graduates exceeded the EU average and that of upper secondary vocational education and training. In 2020, the employment rate of recent tertiary graduates (aged 20-34) continued to increase and reached 84.9%, exceeding the EU average (83.7%) and the employment rate of upper-secondary VET graduates (80.7%)³⁴⁹. The latter dropped by 3.9 pps compared to 2019, likely resulting from COVID-19. The proportion of science, technology, engineering and mathematics (STEM) graduates remained limited in 2019 at 21.82% (EU 26%), essentially unchanged since 2014³⁵⁰. The proportion of female STEM graduates out of the total female graduates (12.2%) is slightly below the EU average (14.7%), but is among the lowest in ICT, at 13.6% (EU 20.3%). In its NRRP, Slovakia plans reforms to improve the labour market relevance

³⁴⁸ BBSK Portal > Úrad > Organizačné jednotky Úradu BBSK > Oddelenie Catching-Up Regions > Komponent 2 and 2. etapa - Prešovský samosprávny kraj (po-kraj.sk).

³⁴⁹ Eurostat, UOE: [edat_ifse_24].

³⁵⁰ Eurostat, UOE: [educ_uoe_grad02].

of Bachelor's programmes. The employment rate of recent ISCED 6 graduates (aged 25-34) is the lowest among all tertiary graduates (65% in 2018) (OECD, 2019c).

Slovakia announces further reform measures to improve the quality, governance and internationalisation of higher education. Slovakia established a new system of accreditation, based on the legal framework adopted in 2018³⁵¹. It set new quality standards, increasing the importance of the internal quality assurance procedures. The 2021-2022 action plan for external quality assurance of HEIs in alignment with the Standards and Guidelines for Quality Assurance in the European Higher Education Area was developed with the support of Erasmus+³⁵². Under its NRRP and additionally supported by the European Commission's Technical Support Instrument, Slovakia intends to implement further reforms to change the governance and financing models, streamline the HEI network and boost internationalisation. Furthermore, Slovakia plans to establish scholarship programmes for international and domestic students, including for those with a disadvantaged background, and for international staff mobility. The 2030 strategy for internationalisation of higher education is to be adopted by end 2021. The education ministry also participates in the 'MICROBOL' project focusing on micro-credentials.

COVID-19 has boosted digital learning, but the digital skills of teaching staff need to be supported. During the COVID-19 lockdown in 2020 and 2021, HEIs mostly provided digital learning. In this context, the government supported projects on: (i) collecting best practices and developing guidelines for implementing virtual mobility and Collaborative Online International Learning (COIL); and (ii) developing courses in artificial intelligence and cybernetics taught in English and in the blended learning format³⁵³. According to the brief survey of the Slovak Accreditation Agency for Higher Education and the Slovak Student Council of Higher Education³⁵⁴, students have the necessary digital equipment and skills for online education, while the level of digital skills of HEI teachers vary.

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³⁵¹ Act No 269/2018, the amendment to Act No 270/2018.

³⁵² <https://www.minedu.sk/data/att/20126.pdf>

³⁵³ <https://www.minedu.sk/vyzva-na-podavanie-rozvojovych-projektov-verejnych-vysokych-skol-v-roku-2020/>

³⁵⁴ <https://srvs.eu/2020/07/23/vysledky-prieskumu-dopad-covid-19-na-studentov/>

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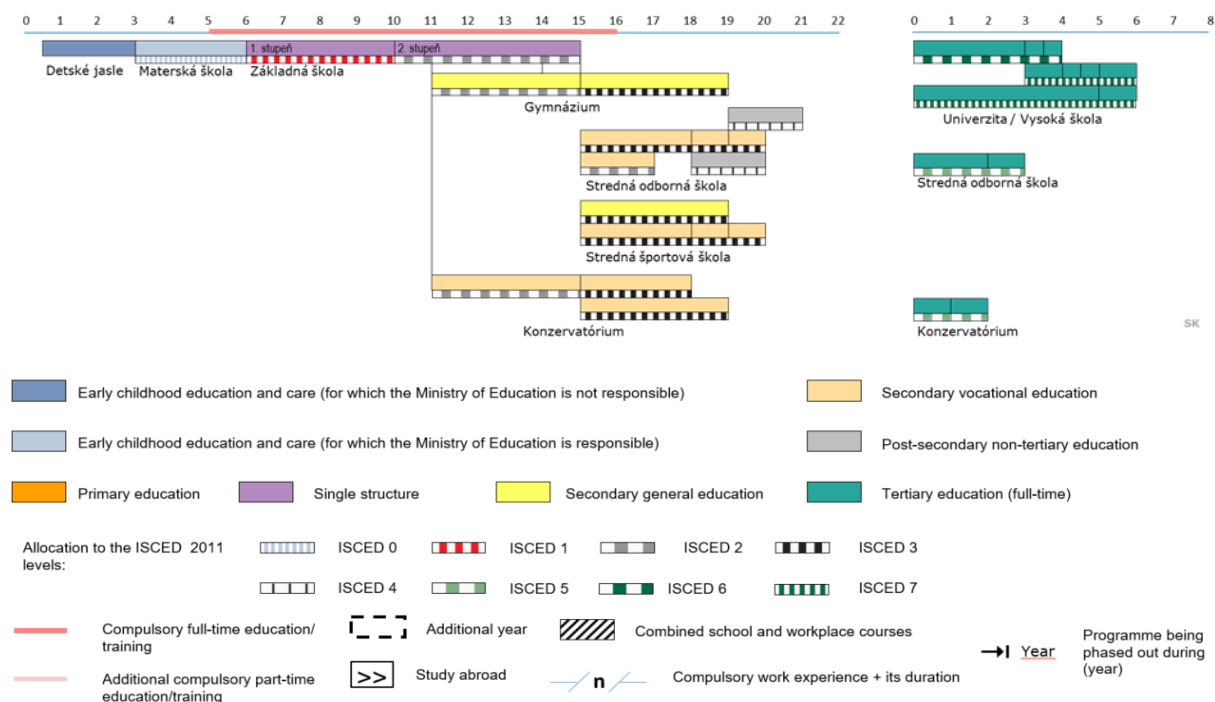
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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SLOVENIA

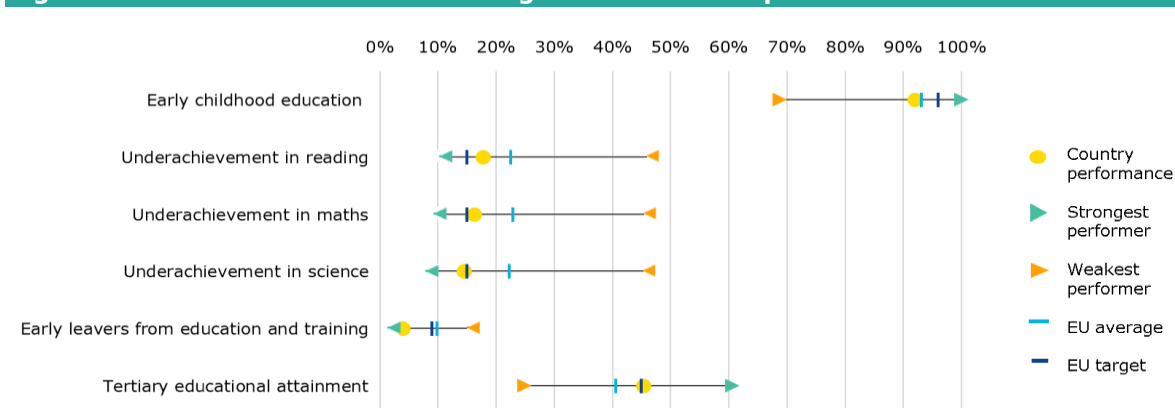
1. Key indicators

Figure 1 – Key indicators overview

			Slovenia		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		87,9% ¹³	92,1% ¹⁹	91,8% ¹³	92,8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		35,8% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	21,2% ^{09, b}	17,9% ¹⁸	19,7% ^{09, b}	22,5% ¹⁸
	Maths	< 15%	20,4% ⁰⁹	16,4% ¹⁸	22,7% ⁰⁹	22,9% ¹⁸
	Science	< 15%	14,8% ⁰⁹	14,6% ¹⁸	17,8% ⁰⁹	22,3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		5,0%	4,1%	13,8%	9,9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		31,3%	45,4%	32,2%	40,5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		6,5%	5,5%	5,0%	4,7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€7 207 ¹²	€7 032 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€5 353 ¹²	€5 803 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€8 359 ¹²	€9 749 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		4,5%	3,8%	12,4%	8,7%
	EU-born		:	:	26,9%	19,8%
	Non EU-born		20,2% ^u	7,4% ^u	32,4%	23,2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			89,1%	92,8%	79,1%	84,3%
Tertiary educational attainment (age 25-34)	Native		32,4%	48,2%	33,4%	41,3%
	EU-born		25,7% ^u	25,2% ^u	29,3%	40,4%
	Non EU-born		9,3% ^u	22,9%	23,1%	34,4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- A legal framework for ensuring well-being exists and teachers are provided with training and information.
- Investments are mostly focused on digital education and resources for distance education.
- New support measures for migrant and Roma pupils have been introduced in basic schools.
- Employment rate of recent vocational and educational training (VET) graduates and participation in adult education decreased significantly.

3. A focus on well-being in education and training

Slovenia aims to ensure well-being by providing safe and stimulating learning environments. In 2016, the amendment of the Act on the Organisation and Financing of Education³⁵⁵ included provisions for safe and stimulating learning environments, and banned violence and unequal treatment of children based on gender, origin, religion, race, and physical and mental development. In 2018 the Safe and Encouraging Learning Environment website³⁵⁶ was established to provide education professionals and parents with professional material and good practice examples, guidelines on preventive action and response, and classroom management strategies for dealing with adverse behaviour. In November 2020, the Programme for Children 2020-2025 (Program, 2020) was adopted, which aims to improve the well-being of children, create equal opportunities and more inclusive early childhood education and care (ECEC) and school education.

In recent years, education professionals have been provided with training and information on how to ensure well-being in education. Emotional and social competences, inclusive education, well-being, and approaches to creating a good school climate are part of the continuous professional development programmes supported by EU funding. The Slovenian Network of Healthy Schools³⁵⁷, connecting 60% of educational institutions, focuses on strengthening mental health, preventing addiction and developing social and emotional competences. In schools and ECEC, special attention is devoted to nutrition through national dietary guidelines³⁵⁸, and sports activities are encouraged (e.g. Youth Sport programme)³⁵⁹. In basic schools, an experimental extended programme is testing different activities that would contribute to pupils' wellbeing through two content sets: 1. Movement for physical and mental health that includes subsets movement (focussing on sports, relaxation and creativity), nourishment, (healthy dietary habits, hygiene etc.), health and security (physical and mental health, healthy environment, safety, prevention of addiction and violence, quality free time); and 2. Culture and tradition with a subset called Culture of coexistence (culture of dialogue, social learning, developing school and citizen culture). The Safer Internet Centre Slovenia provides information, support and training on how to safely use the internet³⁶⁰. However, no monitoring mechanisms for school climate and well-being are in place apart from school self-evaluation.

Students' sense of belonging is high and bullying is not frequent, but students with migrant or low socio-economic background are more often affected. Compared with the EU average, more students feel that they belong in their schools (73.7% vs EU 65.2%), though this sense is lower for disadvantaged students (0.21 points gap) and students in schools with a high concentration of students with a migrant background (0.06 points gap). Sense of belonging strongly affects reading performance in PISA (9 pps difference per one unit increase after accounting for a student's and a school's socio-economic status (SES)). Fewer students are bullied at least a few times a month compared to the EU average (20.9% vs 22.1%), but bullying is increasing since 2015

³⁵⁵ <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO445>

³⁵⁶ http://www.mizs.gov.si/si/varno_in_spodbudno_ucno_okolje/

³⁵⁷ <https://www.nijz.si/sl/slovenska-mreza-zdravih-sol>

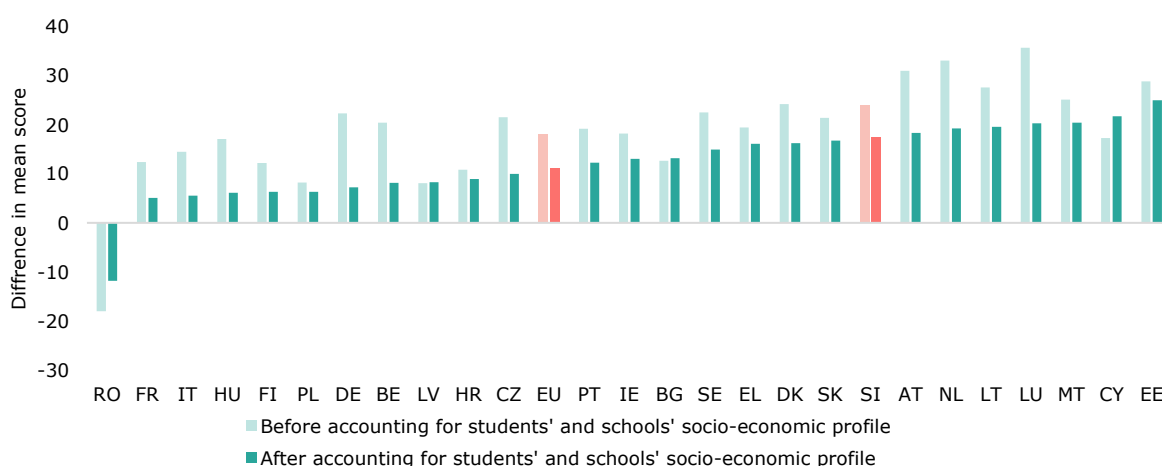
³⁵⁸ <https://www.nijz.si/sl/podrocja-dela/moj-zivljenjski-slog/prehrana/solska-prehrana>

³⁵⁹ <https://www.sportmladih.net/>

³⁶⁰ <https://safe.si/>

(+4.5 pps). Boys are more frequently bullied than girls (8.5 pps gap). Worryingly, disadvantaged students and students with a migrant background are also more affected by bullying (4.6 pps and 6.6 pps difference, respectively). The same is the case for students from schools with high concentration of students with low SES (14.5 pps), public schools³⁶¹ (difference of 12.1 pps, the highest in the EU) and schools with high concentration of students from migrant background (3.7 pps v EU 2.7 pps). High rates of bullying in school have strong negative effects on students' reading performance. Nevertheless, school principals tend not to see this as an obstacle to learning (44.1% think it is not an obstacle at all vs EU 28%). The negative effects that stem from the feeling of not belonging in school and from bullying are reflected in the gap in the educational outcomes between the students with a migrant background and the native students (European Commission, 2020). A national study on the effects of special needs, migrant background and SES on educational outcomes confirmed their strong correlation with lower educational outcomes (especially in mathematics and Slovene) and tracking into VET upper secondary schools (Cankar, 2020).

Figure 3 - Change in PISA reading performance when students report that they feel like they belong at school, 2018



Source: OECD, PISA 2018. Note: Data for FI and IT are not statistically significant.

COVID-19 posed new challenges to well-being in the education system. There are no data on the impact of distance learning on well-being, but the media reports that education professionals, psychologists and parents have warned about the negative effects of closures on ECEC children and pupils, and of growing differences in knowledge. However, the results of the matura exam³⁶² and the national assessment of knowledge³⁶³ in 2021 were comparable to previous years. In 2021, several stakeholders have conducted evaluation activities (coordinated by the Ministry of Education, Science and Sport) on the effects of distance learning, but they are still in progress. Studies show that the mental health of young people aged 18-29 is worsening with up to 25% being at risk of a depressive disorder³⁶⁴. Another study discovered that students (mostly aged 18-29) fear an uncertain future (94.1%) and losing freedoms (85.3%). They face a decline in concentration or motivation to study, lack of contact with peers, lack of free time and feelings of guilt when taking time for themselves, and they doubt their abilities. Almost all students have at times noticed signs of depression and anxiety (89.5%), a negative attitude towards themselves (88.2%), and chronic fatigue (84.5%). Many felt they need psychological help (47.5%), but few have asked for it (only 12.5%). Teachers experienced fatigue, apathy, reluctance and sadness, as well as lacked contact with students. Major causes of stress were the coordination of work with family, engaging pupils/students, lack of physical face-to-face communication, preparation of materials, guidance in the interpretation of material, use of ICT tools, and written assessment (Kerč, 2021). A study on

³⁶¹ Public schools provide VET programmes and private schools don't.

³⁶² <https://www.gov.si/novice/2021-07-12-znani-so-rezultati-mature-2021/>

³⁶³ <https://www.gov.si/novice/2021-06-28-rezultati-npz-2021-spodbudni/>

³⁶⁴ <https://www.studentska-org.si/alarmanтни-podatki-o-dusevnihi-stiskah-mladih-v-casu-epidemije-covid-19/>,
https://www.nijz.si/sites/www.nijz.si/files/uploaded/panda_porocilo_po_8_valu_koncno_1.pdf

higher education (HE) students found that only 23.3% did not experience anxiety, depression was pronounced (77.6%), and resilience low. They were more likely to ask for help since the pandemic began, but less inclined to seek help from experts. Students were dissatisfied with distance education (Gabrovec et al., 2021).

IT equipment was provided systematically, while other support measures depended on schools' own initiative. Initially, support to vulnerable pupils mostly concentrated on providing computer equipment for distance education, though counselling and learning support were also provided. Guidelines for distance teaching required teachers to adjust students' burden, enable two-way communication, offer counselling and help students with special needs or status. Schools also published guidelines for home-based education (ZRSŠ, 2020). Upon returning to school, teachers were instructed to talk to students about their feelings, linking these talks to the curricular objectives (social and emotional learning, health), and to create safe and stimulating learning environments, especially for vulnerable groups (ZRSŠ, 2020a). During the second closure, schools were also advised to organise Slovene language lessons for migrant students, if possible. However, didactic instructions were missing, causing differences in provision. Some schools contacted students' compatriots, and organised tutoring with engagement of teachers, students and NGOs. Some teachers provided more individualised tuition for migrant pupils, establishing direct dialogues, offering moral and emotional support, and narrowing the learning content to allow students to concentrate on learning the Slovene language. For Roma pupils in areas with a significant Roma population, Roma assistants helped in distance education and ensured communication between the schools, parents and pupils. Counsellors of the Centre of School and Outdoor Education, which led the project in which Roma assistants were provided³⁶⁵, also offered support to other disadvantaged students. Municipalities provided free daily warm meals to low SES pupils during distance education (at school, home or pick-up point)³⁶⁶. The 'TOM telephone' helpline, which has been running for over 30 years and has nearly 200 qualified consultants provided online and phone support to children and students and ideas on lockdown activities³⁶⁷. HE students with a permanent residence in Slovenia received a solidarity benefit of EUR 150 from the State budget twice, students studying abroad once. Cultural institutions offered online culture and art activities on the platform Cultural Bazaar³⁶⁸ intended for children, pupils and students, and staff in kindergartens and schools.

The Ministry of Education faced opposition for closing educational institutions. Stakeholders deemed the complete closure of ECEC facilities unacceptable, because it negatively affected the development and well-being of children, especially those from disadvantaged backgrounds (ZRSŠ, 2020b). Education professionals warned of the negative effects of distance education in increasing knowledge gaps between pupils. An upper secondary students' initiative ('We demand school') petitioned the Ministry of Education, Science and Sport in January 2021 for an immediate return to school (demanded by 55% of upper secondary students), and demanded that grading be carried out exclusively in schools, to avoid inequalities. They also asked for amendments to the Matura exam. On 9 February, a large number of upper secondary students boycotted distance learning³⁶⁹.

4. Investing in education and training

Investment in education and training is higher than the EU average and growing, but expenditure per pupil is decreasing. The education budget for 2021 increased by 9.2% compared with 2020. EUR 2.2 million is earmarked for free ECEC places for siblings. In 2019, the spending on education both as a share of GDP (5.5%) and as a share of total general government expenditure (12.6%) were higher than the EU average (4.7% and 10%, respectively)³⁷⁰. Between 2013 and 2018, annual expenditure per pupil increased for almost all levels of education, except in primary education: -5.9%³⁷¹. This may have been due to the increase in the number of pupils enrolled in

³⁶⁵ <http://www.skupajzaznanje.si/>

³⁶⁶ <http://www.edusinfo.si/DnevneVsebine/Novice.aspx?id=273644>

³⁶⁷ <https://www.e-tom.si/stopi-v-stik/>, <https://www.e-tom.si/kaj-naj-pocnem-ostanimodoma/>

³⁶⁸ <https://kulturnibazar.si/kuv-na-daljavo/>

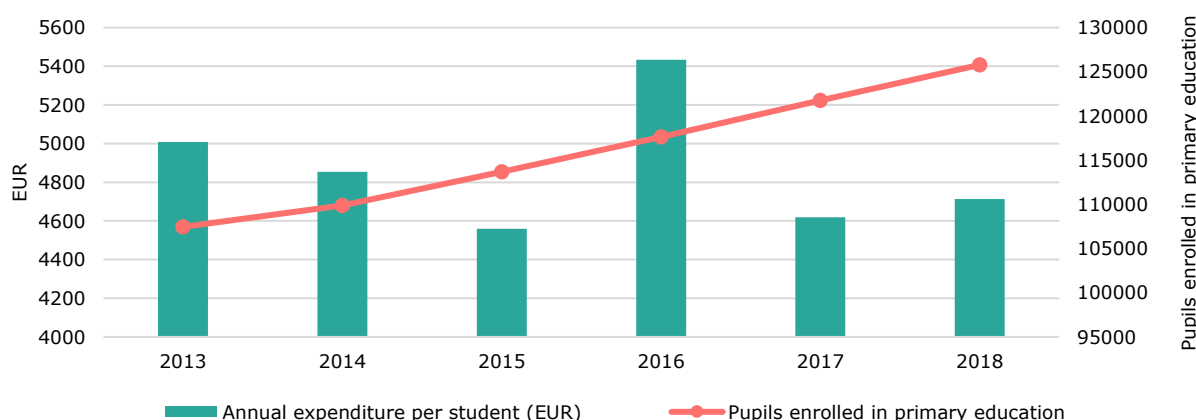
³⁶⁹ <https://www.mladina.si/204995/solski-pouk-danes-bojkotira-vec-kot-70-000-dijakov/>; <https://www.delo.si/novice/slovenija/dijaki-v-torek-bojkot-pouka-na-daljavo/>

³⁷⁰ Eurostat, COFOG, 2019.

³⁷¹ Eurostat, [educ_uoe_fini04], [nama_10_gdp].

primary education between 2013 and 2018 (+17.1%). In November 2020, the Ministry of Education, Science and Sport adopted the Decision to allocate EUR 0.7 million for information-communication technology (ICT) and licence purchase to public higher education institutions (HEIs) in 2020.

Figure 4 – Trends in pupils enrolled in primary education and in annual expenditure per student in primary education, 2013-2018



Source: [educ_uoe_fini04], [educ_ipe_ernp05], [nama_10_gdp]. Values for annual expenditure per student are deflated.

EU funds will provide substantial support for distance and digital education. Due to the shortage of computers and access to internet for teachers and pupils, Slovenia reallocated EUR 4 million under the Coronavirus response investment initiative to purchase laptops and provide internet access for pupils in need. It requested an additional EUR 10.5 million under the REACT-EU programme to help implement blended learning. HEIs will receive the equipment necessary for developing the didactic bases for blended learning enabling a quick transition into quality online teaching. EUR 66.73 million from the Recovery and Resilience Plan (RRP) will be used to provide better data connections to the 228 education institutions, new IT applications and 40 permanent long-distance 100 Gbps inter-urban fibre connections for academic and research network ARNES.

Box 1: The National Recovery and Resilience Plan

The Slovenian RRP³⁷² is worth EUR 2.483 billion: around EUR 1.78 billion in grants and EUR 705 million in loans. Reforms and investments in education and skills related measures represent almost 14% of the total RRP. Planned reforms and investments cover all education levels, supporting the development of digital and sustainable development competences and improving the labour market relevance of education and training.

5. Modernising early childhood and school education

Participation in early childhood education and care for children over 3 years old is slightly below the EU average. Participation in formal childcare of children under 3 is high, at 46.9% in 2019 (EU average: 35.3%), and almost all of them spend 30 hours or more in ECEC (44.4% vs EU 21.5%)³⁷³. Participation in ECE between age 3 and the starting age of compulsory primary education was 92.1%, 1 pp. higher than in 2018, but below both the new EU-level target of 96% and the EU average of 92.8%³⁷⁴. In January 2021, the ECEC Act was amended to increase enrolment, providing the right to free ECEC to a second sibling attending at the same time or to further children from the same family regardless of the older siblings' education level.

³⁷² <https://www.eu-skladi.si/sl/po-2020/nacrt-za-okrevanje-in-krepitev-odpornosti>, https://www.eu-skladi.si/sl/dokumenti/rf/noo_končna.pdf

³⁷³ Eurostat, EU-SILC: [ilc_caindformal].

³⁷⁴ Eurostat, [educ_uoe_enra21].

National tests and the Matura examination are being resumed. In 2020, basic schools were closed throughout most of the autumn and part of the winter. National tests for sixth and ninth grade pupils in basic schools took place in May 2021 to measure the effect of distance education on education outcomes. Upper secondary schools were closed longer than basic schools; they applied blended learning in the spring. The Matura examination took place as usual³⁷⁵, with the possibility of vaccination before (end of April) and the requirement of a negative PCR test for quarantined pupils³⁷⁶.

Educational performance is generally good, but there are significant differences between the native-born and pupils with a migrant background. At 4.1%, the early leavers from education and training rate is among the lowest in the EU (EU 9.9%) and below the EU-level target of less than 9%³⁷⁷. While still low compared with other EU Member States, the percentage is nearly double for foreign-born pupils (7.4%)³⁷⁸. The percentage of low-achieving 15-year-olds in basic skills is above the EU-level target of 15% for mathematics and reading, but better than the EU average in all three skills: mathematics 16.4% (EU 22.9%), science 14.6% (EU 22.3%) and reading 17.9% (EU 22.5%) (OECD, 2019, Vol. I). However, underperformance in reading is much higher for students with a migrant background, with 20.1 pps gap between them and the native-born students, one of the largest in the EU. There is also a big gender gap, with boys performing significantly worse in reading (OECD, 2019, Vol. II). The share of 16-19 year-olds with above basic digital skills is relatively high (72% vs EU 57%) and significantly increased between 2015 and 2019 (16 pps v EU 5 pps)³⁷⁹.

New measures to support migrant and Roma pupils apply in basic schools from academic year 2020/2021. For migrant pupils, new curricula for Slovene apply from 2020/2021. Migrant pupils have the right to language lessons organised in groups. Furthermore, schools with over nine migrant pupils can hire an extra teacher to teach them Slovene (Pravilnik, 2021). The number of hours for Slovene lessons for migrants also increased in upper secondary schools (Cedefop and ReferNet, 2021). For Roma pupils, it is now possible (in line with the Strategy of Education of Roma 2020 – 2031) to employ a Roma assistant (previously this was only financed temporarily through projects). Basic schools with 16-30 Roma pupils are entitled to a Roma assistant working half-time; those with more can have a full-time assistant, and if needed, apply to the Ministry of Education for additional Roma assistants. Similar solution regarding Roma assistants applies to kindergartens.

New legislation introduces changes in ECEC and the Ministry is starting to modernise education programmes for ECEC and schools. In December 2020, Slovenia adopted an 'Act on the Intervention for Children and Youth with Emotional and Behavioural Disorders in Education', providing flexible support and systemic solutions for integrated treatment of such children and pupils, and establishment of preventive centres (ZOOMTVI, 2020). The promotion of staff working in social welfare institutions providing adapted ECEC and special education programmes for children and young people with special education needs has become similar to that in mainstream educational institutions (MESS, 2021). In 2020/2021, modernised upper secondary programmes began including obligatory active citizenship content. A general modernisation of education programmes began in February 2021.

The RRP will focus mainly on developing digital and green skills by integrating them into the curricula and into teacher training. Despite previous substantial investments in digital education under the Digital Slovenia 2020 strategy, a survey of basic and upper secondary schools in the summer of 2020 showed that schools were not prepared for distance learning. Among other things, only 37 schools out of 111 provided regular training for employees and teachers so they could develop their digital competences³⁸⁰. Even though in TALIS 2018 basic school head teachers in Slovenia reported the smallest shortage of digital technology (4.2% vs EU-22 27.6%) and least insufficient internet access (1.8% vs EU-22 23.8%), infrastructure and resources were insufficient for the new needs of distance education. Lower secondary teachers were also the second most

³⁷⁵ <https://www.gov.si/novice/2021-05-03-zacetek-splosne-mature-202021/>

³⁷⁶ <http://www.edusinfo.si/medijsko-sredisce/v-srediscu/282692>

³⁷⁷ Eurostat, [edat_ifse_14].

³⁷⁸ Eurostat, [edat_ifse_02].

³⁷⁹ Eurostat: [isoc_sk_dskl_i].

³⁸⁰ <https://4pdih.com/en/2021/03/24/digital-maturity-schools/>

confident in the EU: 67% felt well prepared for the use of ICT for teaching, and only 8.5% reported that they needed professional development in that area (OECD, 2019b, Vol. I). However, the use of ICT for project work was low and in practice many needed help. Therefore, digital education has been selected as one of the main priorities for the RRP, encompassing integration of digital competences into curricula at all levels and into the training of education professionals, the development of digital teaching materials and IT applications, and of supportive systems (RRP, 2021). A Strategy for Greening Education and Research Infrastructure will also be developed as a part of RRP reforms that will include the design of modern learning spaces supporting innovative pedagogical approaches. Additionally, investments into greening educational infrastructure will be also supported (EUR 145 million).

6. Modernising vocational education and training and adult learning

In 2020, the employment rate of recent VET graduates dropped significantly. In 2019, total enrolment in upper secondary VET was 70.8%, the highest in the EU (average: 48.4%). Between 2018 and 2020, the employment rate of recent VET upper secondary graduates decreased from 84.5% to 71.6%, worse than the EU average (from 79% to 76.1%). Youth employment was particularly affected by the indicated economic trends.

The pilot apprenticeship scheme, which forms part of the reform of upper secondary VET, continued. The evaluations carried out in 2020 showed satisfaction with its organisation and quality, and interest in its continuation (Cedefop and ReferNet, 2021), despite the added challenges of distance education.

The RRP includes measures to increase the labour market relevance of education and enable transition to the labour market. Actions include promoting VET and apprenticeships, training mentors in companies, improving the labour market relevance of vocational and professional education, strengthening cooperation between schools and employers (in particular for practical skills in health, ECEC and social care), and developing a VET graduate tracking application. These measures should help achieve the EU-level VET target of increasing by 2025 the share of recent VET graduates benefiting from exposure to work-based learning during VET to at least 60%.

Box 2: Transition of young SEN people to the labour market

The Project *Transition of young people to the labour market* (<https://prehodmladih.si/>) aims to help young people with special needs (up to 29 years of age) transition from school to the labour market. They are provided with tailor-made professional counselling (taking into account their interests, skills and ambitions) and information on suitable schools and professions, to provide them with equal opportunities as they enter the labour market.

Beneficiaries: 1 576 young people with special needs.

The results (confirmed by several relevant stakeholders) show that this is an important, much-needed project that makes a significant difference, contributes to more inclusive society and to reducing discrimination against young people with special needs who are looking for a job.

Total funding: EUR 4.2 million (EUR 3.4 million from the European Social Fund)

Project duration: January 2018 – December 2021

<http://www.eu-skladi.si/sl/ekp/primeri-dobrih-praks/prehod-mladih>

Participation in adult education and among low-qualified adults significantly decreased in the past year. The share of adults who participated in adult learning 4 weeks before the assessment, dropped from 11.2% in 2019 to 8.4% in 2020. The participation rate of low-qualified adults decreased

by 0.6 pps to 1.7%, leaving room for improvement³⁸¹. To address the decreasing participation of adults in lifelong learning, three important documents were adopted in 2020: Guidelines for implementing adult education guidance as a public service³⁸²; Guidelines for preparation of educational programs for adults³⁸³ (implementation started in 2020); and the Rules on standards and norms for financing and performing public service in the field of adult education³⁸⁴.

The COVID-19 pandemic has posed challenges to adult learning. The COVID-19 measures had a negative impact on adult learning. The duration of the closure of relevant facilities was the longest in the EU³⁸⁵. Learners attending basic school programmes for adults were badly affected³⁸⁶. The main challenges identified in a survey of the Slovenian Institute for Adult Education on the well-being of learners and teaching staff during the pandemic were access to ICT tools, a lack of ICT skills and the organisation of distance learning. The Institute provided recommendations for adult learning providers³⁸⁷ and they were also addressed by the law on temporary measures to mitigate the consequences of COVID-19³⁸⁸.

7. Modernising higher education

Tertiary education attainment has already reached the EU-level target, but major gaps between the genders and native and foreign-born people persist. In 2020, the rate of 25 to 34 year-olds with tertiary education stood at 45.4% (1.3 pps higher than in 2019), above the EU average of 40.5% and the EU-level target of 45% for 2030. The gender gap is one of the highest in the EU (20.8 pps vs EU 10.8 pps)³⁸⁹. There is also a large gap between the native-born population (48.2%) and the foreign-born (23%)³⁹⁰. The employment rate of recent HE graduates (89.2% in 2020, above the EU average of 83.7%) has slightly decreased by 0.4 pps in the last year, probably due to the effects of the pandemic³⁹¹.

Higher education relocated mostly online during the pandemic. According to the government's guidelines for organising study courses in HEIs in the winter semester of 2020/2021 (MESS, 2020), they could take place on the premises if it was indispensable and could be organised safely (e.g. laboratory or clinical work). Activities at HEI premises partly resumed in February 2021, with shorter closure from 1 to 10 April. From February onwards, students could sit exams, take part in seminars involving up to 10 participants, do laboratory work, and attend individual lectures. HEI staff was tested weekly and hygiene rules had to be followed. Testing was also recommended for students (MH, 2020).

Requirements for enrolment in HE were amended. In October 2020, the Communicable Diseases Act was amended, requiring all candidates for secondary and HE programmes in the fields of health, education and social welfare, to be vaccinated as specified by the Minister responsible for health, or exempt from vaccination for valid health reasons (ZNB-B, 2020). Another Act, adopted in October, allowed HEIs to amend the compulsory elements of study programmes in 2020/2021, and

³⁸¹ Eurostat (2021). European Training Monitor data 2020 – Adult Learning.

³⁸² <https://www.acs.si/en/digital-library/guidelines-for-implementing-adult-education-guidance-as-a-public-service/>

³⁸³ https://www.acs.si/wp-content/uploads/2020/11/Guidelines_for_preparation_of_publicly_verified_education_programmes_for_adults.pdf

³⁸⁴ <http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV14115>

³⁸⁵ Peter Beltram (2021). *Adult learning – Status report. Report on National Developments in Adult Learning.*

³⁸⁶ Ibid.

³⁸⁷ <https://kakovost.acs.si/knjizna-polica/izkusnje-z-izobrazevanjem-odraslih-na-daljavo-v-casu-pandemije>;
<https://www.acs.si/novi-koronavirus-in-mi/priporocila-izvajalcev-programa-osnovna-sola-za-odrasle/>;
<https://www.acs.si/novi-koronavirus-in-mi/priporocila-za-izvajalce-srednjega-poklicnega-in-strokovnega-ter-gimnazijskega-izobrazevanja-odraslih/>;
<https://www.acs.si/novi-koronavirus-in-mi/priporocila-za-izvajanje-programov-pismenosti-in-temeljnih-zmoznosti/>

³⁸⁸ https://www.acs.si/wp-content/uploads/2020/11/Zakon_o_zacasnih_ukrepih_za_omilitev_in_odpravo_posledic_COVID-19-28102020.pdf

³⁸⁹ Eurostat, [edat_lfse_03]

³⁹⁰ Eurostat, [edat_lfs_9912]

³⁹¹ Eurostat, [edat_lfse_24].

determined that enrolments for 2021/2022 were to take place digitally (Zakon, 2020). Amendments to the Foreigners Act requires non-EU residents to prove sufficient means of subsistence to be allowed residence. This includes foreign students, who need to have nearly EUR 5000 for one year of studies, and it might negatively affect the internationalisation of HE³⁹². Slovenia currently participates in two European Commission initiatives under the Erasmus+ programme, in collaboration with the OECD, which contribute to higher education policymaking (particularly the national HE strategy and masterplan, and RRP planning): (i) HEInnovate, that provides guidance for more innovative and entrepreneurial HEIs, and the (ii) 'Labour Market Relevance and Outcome' (LMRO), which identifies policies and measures to improve labour market relevance of HE.

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³⁹² <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2021-01-1153/zakon-o-spremembah-in-dopolnitvah-zakona-o-tujcih-ztuj-2f>; <https://www.studentska-org.si/s-spremembo-zakona-o-tujcih-tezji-dostop-studija-v-sloveniji/>

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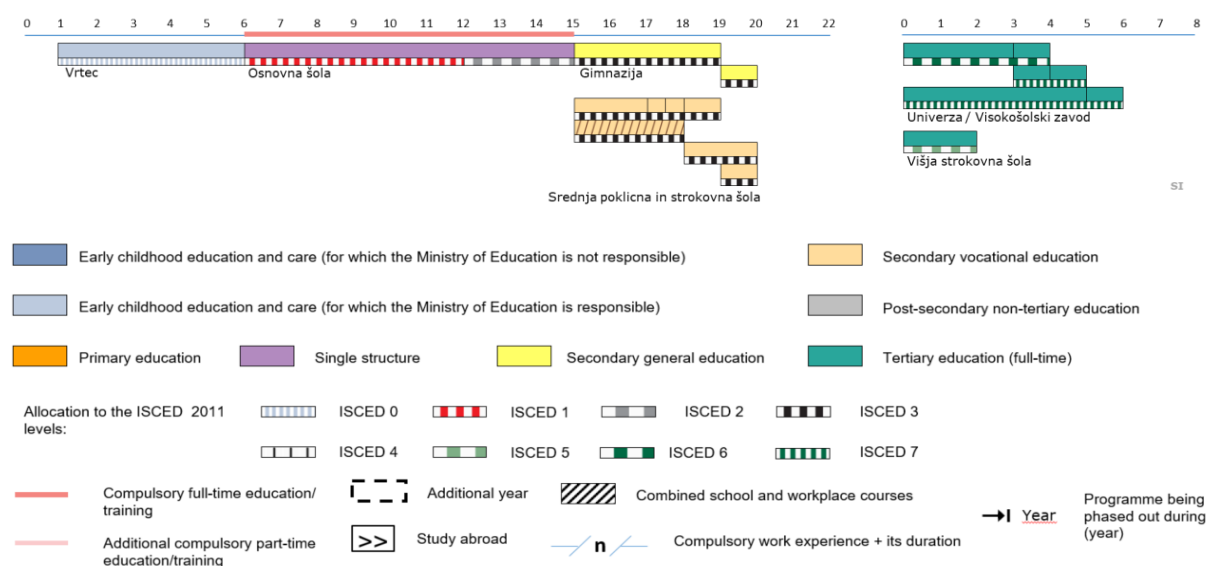
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14 . Data by country of birth: edat_ifse_02 .
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03 . Data by country of birth: edat_ifse_9912 .
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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SPAIN

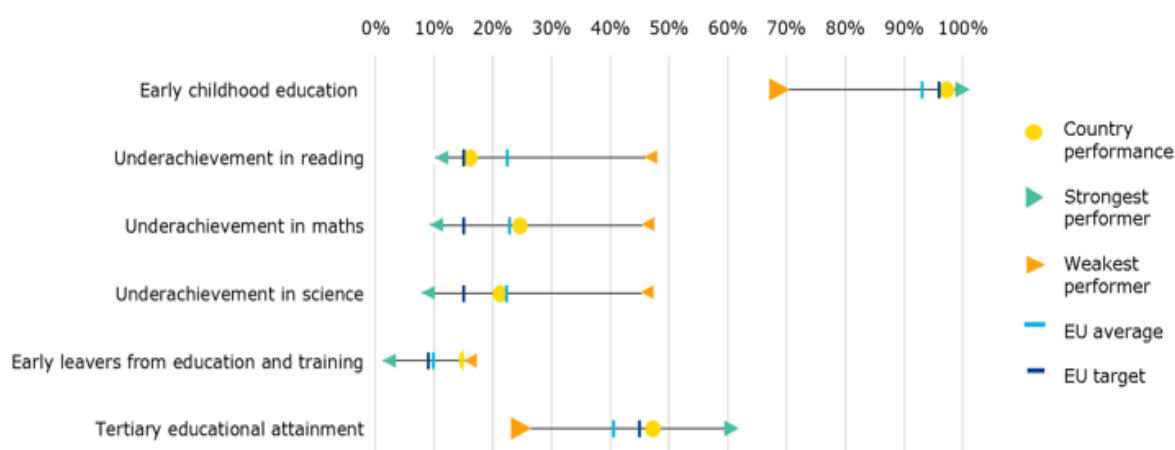
1. Key indicators

Figure 1 – Key indicators overview

			Spain		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96%		96.6% ¹³	97.3% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	19.6% ^{09, b}	23.2% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	23.8% ⁰⁹	24.7% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	18.2% ⁰⁹	21.3% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		28.2%	16.0%	13.8%	9.9%
Exposure of VET graduates to work based learning	≥ 60%		:	:	:	:
Tertiary educational attainment (age 25-34)	≥ 45% (2025)		40.3%	47.4%	32.2%	40.5%
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		4.5%	4.0% ^p	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€5 785 ¹²	€6 079 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€6 775 ¹²	€7 525 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€9 155 ¹²	€9 477 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		25.1%	13.2%	12.4%	8.7%
	EU-born		39.7%	31.2%	26.9%	19.8%
	Non EU-born		44.0%	28.5%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			61.5%	75.9%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		45.3%	52.4%	33.4%	41.3%
	EU-born		31.5%	35.0%	29.3%	40.4%
	Non EU-born		20.7%	31.1%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent; b = break in time series, d = definition differs, p = provisional, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Spain maintained a good school climate during the COVID-19 pandemic, however students' well-being was negatively affected.
- The new Education Act plans a thorough modernisation of the education system with several reforms and large investments. It will receive EU support through the National Recovery and Resilience plan.
- Girls outperform boys both in school and higher education, but remain underrepresented in science, technology, engineering and mathematics (STEM).
- Higher education attainment is above the EU average, but low employability and skill mismatches persist. Enrolment in upper vocational education and training (VET) and in adult participation (notably for low qualified people) are improving but still remain a challenge.

3. A focus on well-being in education and training

National and regional policies on well-being focus mainly on measures against bullying and discrimination. Ensuring well-being at school is a priority in the Spanish education policy, seen as an essential component of quality education. Peaceful conflict resolution (notably in the case of bullying) and the support and protection of students against harassment, sexual abuse, violence, and discrimination figure among the main goals of the Spanish Education Act. All public education administrations (central, regional and local) have well-developed institutional and legislative frameworks to fight against bullying and discrimination³⁹³. All primary and secondary schools must adopt a school life strategy and follow clear protocols in case of bullying or cyberbullying, violence (particularly gender-based violence), and aggression against teachers. In higher education, the focus is on fighting against sexual harassment. Most universities have equity units, take preventative measures and follow protocols in cases of sexual violence or harassment. In May 2021, a new law on university coexistence was adopted³⁹⁴, establishing a common framework for the resolution of conflicts in a democratic way. It requests universities to draw up norms for coexistence, including prevention and remediation measures against harassment, discrimination and violence.

An observatory of school life³⁹⁵ disseminates good practices, monitors and provides guidance on how to improve school climate. Created in 2007, the observatory is composed of members from several ministries (social services, immigration, disability, gender, justice, interior, drugs, and youth), all Spanish regions (Autonomous Communities), the Ombudsman, education stakeholders (schools organisations, parents' associations and trade unions), and specialists on school well-being.

International surveys point to a relatively good school climate. According to the 2018 OECD Programme for International Student Assessment (PISA) (OECD, 2019a), bullying was less frequent in Spain (17% of students reported being bullied at least a few times a month) than the EU average (22%). However, bullying seems to be a more serious problem in primary schools. According to TIMSS 2019, 39% pupils in fourth grade claimed to have suffered from some form of bullying (EU22 average: 34%). 15 years old Spanish students have the highest sense of belonging to schools in the EU (87% vs an EU average of 65%). However, some disciplinary weaknesses have been observed. For example, compared to the EU average, more students had skipped a day of school (30% vs 25%) and 44% had arrived late for school in the 2 weeks prior to the PISA test (EU 41%).

School lockdown had a considerable impact on students' well-being. According to Orgiles et al. (2020), 88.9% of the 431 Spanish parents participating in the study observed changes in the

³⁹³ An overview on how school life and well-being is regulated across Spain, and what actions are taken by the Ministry of Education and all Spanish regions (Autonomous Communities) can be found at <http://www.educacionyfp.gob.es/mc/sgctie/convivencia-escolar/mapa-ccaa.html>

³⁹⁴ <https://www.universidades.gob.es/portal/site/universidades/menuitem.43f867cc076c14d185cacc2c026041a0/?vgnextoid=b44e1fa61c2a9710VgnVCM1000001d04140aRCRD>

³⁹⁵ <https://www.educacionyfp.gob.es/mc/sgctie/convivencia-escolar/observatorio.html>

emotional state and behaviour of their children during the school lockdowns. The most frequent symptoms detected were difficulties in concentrating (69.1%), boredom (49.4%), irritability (43.2%), restlessness (38.8), nervousness (44.3%), loneliness (18.1%), uneasiness (30.4%) and worry (27.4%). However, according to a study by Martínez et al. (2020), younger children (8-10 year-olds) developed greater emotional well-being during quarantine. One explanation mentioned is the reduced pressure from the daily routines. 30% of children declared feeling comfortable in their homes with their family during lockdown. CANAE, the confederation of students' associations, called for increased attention to students' mental health during the pandemic³⁹⁶.

Stakeholders contributed to mitigating the negative consequences of the pandemic on students' well-being. Education and health administrations supported teachers, parents, and students with guidance and orientation. Stakeholders (trade unions and students associations) were also active. CEAPA, the organisation of parents in public schools, issued a guide to prevent digital addictions during lockdown³⁹⁷. CANAE gathered some proposals to improve blended learning schemes and to overcome associated challenges³⁹⁸. Trade unions, such as ANPE, developed guidelines for teachers on how to cope with stress in times of COVID-19³⁹⁹, and CSIF organised webinars for teachers on how to deal with anxiety and stress⁴⁰⁰.

Students with special educational needs experienced learning difficulties during the pandemic. Particularly during the three months of quarantine, children and adolescents with dyslexia showed less reading activity and less motivation to read. Parents of children with dyslexia reported significantly more stress, and nearly all parents of children with special educational needs reported difficulties in establishing study routines, negative impacts on their child's learning, and insufficient help from teachers on how to support their child's learning (Soriano Ferrer et al., 2021).

Box 1: Education, the key to young Roma inclusion and well-being

The education promotion programme aims to prevent and reduce early school leaving among young Roma living in the region of Extremadura (western Spain). Project teams at district level are composed of an education mentor, a job counsellor, an intercultural agent and a job prospector. Together, they design and develop individualised pathways that comprehensively address the difficulties experienced by children up to the age of 16, and regularly monitor the implementation of measures. The mentors, usually coming from the Roma community itself, enhance Roma families' participation in education, raise awareness among teachers on the needs of young Roma, and help to create links between the Roma community and the education system.

The 2018-2020 programme, which had a total budget of EUR 1.2 million (80% contribution from the ESF operational programme for the region of Extremadura) allowed 1 053 young Roma to participate. This is a significant increase compared to the 2016-2017 programme, which involved just 604 participants.

4. Investing in education and training

The proportion of spending on education as a share of GDP remains stable. In 2019, Spain spent 4% of its GDP on education, similar to the last 3 years, and below the EU average of 4.7%. For pre-primary and primary education, spending was 1.6% of GDP, for secondary education 1.5%, and for tertiary education 0.6%⁴⁰¹. In 2019, scholarships represented EUR 2 billion (4% of total education spending). The Ministry of Education has made a remarkable effort to increase grants and scholarships for students: from EUR 1.5 billion in 2017 to more than EUR 1.9 billion in 2020-2021. For 2021-2022, the scholarship budget will increase again by EUR 128 m, benefiting around 850 000

³⁹⁶ <https://canae.org/salud-mental-para-estudiantes-una-prioridad-en-tiempos-de-pandemia/>

³⁹⁷ <https://www.ceapa.es/guia-para-evitar-las-adicciones-tecnologicas-en-situacion-de-confinamiento/>

³⁹⁸ <https://canae.org/estudiantes-en-cuarentena-un-analisis-de-la-pandemia-desde-el-punto-de-vista-de-los-estudiantes/>

³⁹⁹ <https://anpeandalucia.es/notices/134864/El-servicio-del-defensor-del-Profesor-de-ANPE-lanza-un-decálogo-para-la-gestión-del-estrés-docente-en-tiempos-de-covid>

⁴⁰⁰ <https://www.csif.es/contenido/andalucia/educacion/296107>

⁴⁰¹ Eurostat: [gov_10a_exp]

students (390 000 from university)⁴⁰². The minimum marks required to obtain a scholarship for studying for a Master's degree decreased from 6.5 to 5 points on average.

Investment in education decreased during the last decade but increased again in the last 5 years. From 2010 to 2019, government spending on school education decreased overall by 1.5% (EUR 0.7 billion less, in real values) and by 9.1% (EUR 0.6 billion less in real values) in tertiary education. This contrasts with an average EU spending increase of 6.4% (4.2% in tertiary education). However, in 2015-2019, education expenditure increased (in real values) by 7.4% (above the EU-27 average of 5.4%): 8.4% in pre-primary and primary education, 11.2% in secondary and post-secondary education and 3.1% in tertiary education. The state budget for 2021 envisages an increase of EUR 4.9 billion, part of which (EUR 1.8 billion) will come from Spain's Recovery and Resilience Plan⁴⁰³ (see Box 2).

Box 2: The National Recovery and Resilience Plan

The EU will disburse EUR 69.5 billion in grants to Spain under the Recovery and Resilience Facility (RRF) to help the country emerge stronger from the COVID-19 pandemic. Investments related to education and skills represent more than 10% of the total RRF budget.

Spain's Recovery and Resilience Plan envisages several reforms: operationalising the new Education Act; designing and implementing a new curriculum model for key competences; a VET modernisation plan; and a comprehensive reform of the university system. It includes investments to support these reforms, notably to: (a) create public places for the first early childhood education and care (ECEC) cycle (preferably 1-2 year-olds); (b) support the education guidance, advance and enrichment (#PROA+) programme in schools of particular educational complexity; (c) set up education support for vulnerable students, personal guidance and family units in educational and/or psychoeducational services located in school areas and districts; (d) train teachers and research staff; (e) improve digital university infrastructure; (f) promote the National Distance Education University (UNED); (g) upskill and reskill the workforce; and (h) enable the digital transformation, innovation and the internationalisation of VET.

The plan also includes investment in basic and advanced digital skills (AI, cybersecurity) and covers institutional reforms and capacity building of the national science, technology and innovation system (including universities) as well as the development a new scientific career scheme.

The plan envisages the creation of 1 000 service units to support vulnerable students and a support and guidance programme for low performing students to prevent early school leaving. It also envisages 135 000 new places in VET and the formal accreditation of professional skills acquired through work experience and non-formal training. It is also expected to significantly boost access to digital learning through investments in devices and skills, as well as through the development of online training courses.

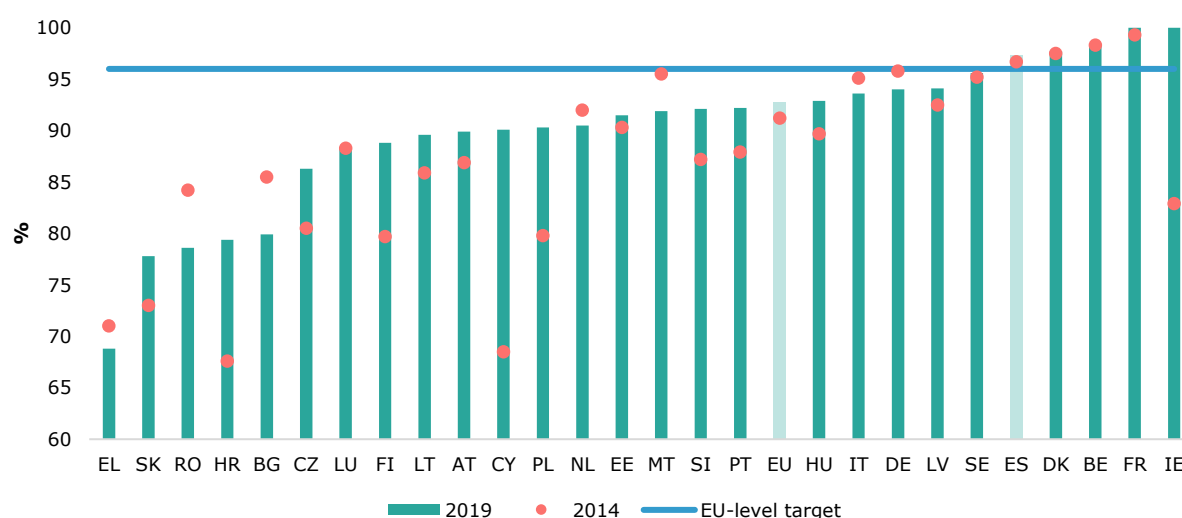
5. Modernising early childhood and school education

The new Education Act (LOMLOE) plans to ensure universal access to ECEC. In 2019, ECE participation of children over the age of 3 (97.3%) remained stable compared to 2014, and above the EU average (92.8%) (Figure 3). Participation of children under 3 years-old in formal childcare has grown steadily in recent years (from 39.3% in 2016 to 57.4% in 2019) and is also above the EU average (Flisi and Blasko, 2019). Policies increasingly focus on improving access for children living in areas of higher risk of poverty or social exclusion as well as in rural areas, to further increase the participation of the under 3 age group.

⁴⁰² <https://www.universidades.gob.es/portal/site/universidades/menuitem.43f867cc076c14d185cacc2c026041a0/?vgnextoid=4208d6be8b75a710VgnVCM1000001d04140aRCRD&vgnnextchannel=cc3cd58bc3350710VgnVCM1000002006140aRCRD>

⁴⁰³ <https://www.educacionyfp.gob.es/va/dam/jcr:d6fb3623-2fee-47b3-899b-f9c47ae48ab8/situacion-educacion-covid--avance-15-ene-.pdf>

Figure 3 - Participation in early childhood education of pupils from age 3 to the start of compulsory primary education, 2014 and 2019 (%)



Source: UOE, [educ_uoe_enra21]

There is a high level of segregation in Spanish schools. According to the Ferrer and Gortazar (2021) report, based on TIMSS and PISA outcomes, Spain is the EU country with the highest degree of school segregation⁴⁰⁴ at primary school level. However, the level of segregation is average in secondary schools. The report shows that socio-economic and immigrant backgrounds determine school choice and consequently segregation in Spain. The level of segregation differs significantly between regions, with Madrid having the highest rate (if the socio-economic factor is considered) and Cantabria the lowest. The new Education Act lays the foundations to fight against school segregation, with measures to avoid the concentration of vulnerable students in certain schools centres for socio-economic or other reasons.

A curricular reform aims to strengthen competence-based teaching. The reform of school curricula, envisaged under the new Education Act, will affect ECEC, primary and secondary education. It will include methodological guidelines for teaching and learning based on a competence-based curriculum. By incorporating 'soft skills', the new curricula respond to the Council Recommendation on key competences for lifelong learning⁴⁰⁵. They will also have a stronger focus on digital competences, education for sustainable development and citizenship education. At least 100 independent experts were involved in developing the curricula for all educational levels, with the help of a competence assessment evaluation framework. The reform will also include the preparation of support, guidance and teaching material, as well as training for teachers (at least 4 000 professionals). The roll out of the new curricula is expected by 2022-2023.

Early school leaving is decreasing, but regional differences and gender gaps persist. In 2020, the early leaving from education and training (ELET) rate was 16%, 1.3 pps lower than in 2019. However, the rate for boys was significantly higher (20.2%) than for girls (11.6%). There were also significant regional differences: four Autonomous Communities had ELET rates below 10%, another four had rates between 10% and 15%; seven had rates between 15% and 20%; and the remaining four had rates above 20%⁴⁰⁶. According to González-Anleo et al. (2021) and Soler et al. (2021), 30% of young people quitting education do so due to economic reasons (need to work to afford studies or other family needs) and 4.4% abandoned school due to social pressure (from family or peers).

⁴⁰⁴ The authors define school segregation as the concentration level of certain category of students at the same school premises. Usually the less advantaged and/or those with a migrant background.

⁴⁰⁵ https://ec.europa.eu/education/education-in-the-eu/council-recommendation-on-key-competences-for-lifelong-learning_en#:~:text=The%20Council%20has%20adopted%20a%20Recommendation%20on%20Key,citizenship%20and%20social%20inclusion%3A%20%E2%80%A2%20Literacy.%20%E2%80%A2%20Multilingualism.

⁴⁰⁶ <https://www.educacionyfp.gob.es/servicios-al-ciudadano/estadisticas/laborales/epa.html> and Eurostat: [edat_ifse_16]

Students' performance in higher education entry exams seems to have changed during the pandemic. The number of students participating in the university admission exam (EBAU) increased by 17.6% on average (225 000 secondary graduates). This is likely due to the increased flexibility, as advised by the Ministry, on exam content and subject choices. Preliminary data on exam results indicate that the proportion of successful candidates was similar to the pre-pandemic period (93.2% vs 95%)⁴⁰⁷. Some regions showed lower success rates (3-5% less), which may be associated with a sharp increase in participants (20-30%). In most regions with around 14% more applicants, no significant changes in test results were observed. Regional disparities in success rates continue to grow (a gap of 9 pps in 2021 compared to 4.5 pps in 2016). Stakeholders and opposition political parties have raised concerns about regional differences in the content of exams and assessment criteria, which they see as a potential risk to a level-playing field. A successful candidate can enrol in any Spanish university, irrespective of the place of exam.

Girls outperform boys in educational attainment. The Ministry of Education report on gender equality (MEFP, 2021) points out that 84% of female students graduate from lower secondary education (ESO), and 63% from upper secondary (*bachillerato*), vs 74% and 48% of boys respectively. Seven out of 10 school teachers are women, and women occupy 66% of management positions in schools.

6. Modernising vocational education and training and adult learning

Enrolment in vocational education and training (VET) remains low; the COVID-19 crisis significantly affected the employment rate of VET graduates. In 2019, the share of upper secondary students in VET (36.4%), while growing (35.8 in 2018), remained below the EU average (48.5%). The employment rate of recent upper secondary VET graduates in Spain dropped from 66.0% in 2019 to 50.3% in 2020. The decline was stronger than in other EU countries and in line with the increase in youth unemployment.

The government is proposing a plan for a single integrated VET system. The 2020-2023 plan for modernising the VET system encompasses both initial and continuous VET with the goal of integrating them into a single system linked to the National Qualifications System. The plan also aims to support the continuing professional development of teachers through placements in companies.

The Spanish Recovery and Resilience Plan (RRP) will support the modernisation of the VET system. The contribution of EUR 2 bn will enable more than 3.3 million workers to receive certification of basic and professional skills. The plan also envisages a new VET law by 2022 to regulate the integrated VET system, approved by the Council of Minister on September 2021⁴⁰⁸.

The National Catalogue of Professional Qualifications (NCPQ) will be reviewed and extended. The catalogue will include the design of new vocational training qualifications with a focus on strategic sectors. In initial VET, new short specialisation VET courses were developed for holders of an intermediate- or higher-level VET qualification to allow them to acquire occupation-specific and digital skills qualifications in the same field of studies.

The new Education Act (LOMLOE) envisages a VET reform. The 2020 law improves the regulatory framework for the VET system with the goal of increasing its overall flexibility and responsiveness. It also establishes the same qualification and training requirements for VET teachers as for secondary education teachers (Cedefop and ReferNet, 2021).

VET systems prioritised learners' well-being during the COVID-19 crisis. The VET system made special arrangements for work placements and final assessments (e.g. online courses) to ensure the programme's completion. Learners were provided with equipment and internet access, while teachers received teaching resources for digital education (Cedefop ReferNet Spain, 2020;

⁴⁰⁷ <https://elpais.com/educacion/2020-07-28/ebau-2020-los-aprobados-describen-ligeramente-pero-se-mantienen-por-encima-del-93-en-la-selectividad-mas-multitudinaria.html>

⁴⁰⁸ <https://www.lamoncloa.gob.es/consejodeministros/resumenes/Paginas/2021/070921-cministros.aspx>

Cedefop and ReferNet, 2021). Individualised mentoring schemes provided vulnerable young people with daily support for academic, health or personal issues (Cedefop, 2020).

Participation in adult learning grew, but only for the highly-qualified. Overall, adult participation in learning increased from 10.6% in 2019 to 11.0% in 2020 (EU average: 9.2%) thanks to the increase in online training. However, compared to 2019, the increase only applied to highly-qualified adults (+0.7 pps), whereas low-qualified adults participated less (-0.3 pps). Consequently, gaps in the participation levels of both groups widened further in 2020 (18.2% of adults with tertiary education vs 3.5% for the less qualified).

The RRP will help to increase adult digital skills. The plan will support the national digital competences plan with EUR 3 bn in 2021-2023. Around 2 600 000 people and 450 000 workers in Spain will benefit from digital skills training to improve their competences and employability. The RRP will also provide upskilling and reskilling training for the employed and unemployed alike, especially the low-skilled, targeting 1 000 000 workers.

7. Modernising higher education

A comprehensive reform of the higher education system in the pipeline. The reform aims to promote access to higher education, reorganise the teaching offer, foster teaching and research capacity, promote the requalification and mobility of teaching and research staff and guarantee the quality and good governance of universities. The reform is being developed after a process of hearing and consultation with relevant stakeholders from the university education community and responds to the recommendations made by the Conference of Rectors of Spanish universities (CRUE) (see below).

New standards for higher education institutions. The Government approved in July a new regulation on the establishment of new Universities, aimed to enhance their quality by strengthening institutional accreditation and internal systems of quality assurance⁴⁰⁹. Moreover, in September the reform of the organisation of study courses and quality assessment procedures was approved. The government plans to reform the organisation of study courses and quality assessment procedures⁴¹⁰, possibly changing from the current 3+2 system to 4+1. This could increase the quality of Bachelor's and Master's degrees and make it easier to complete a Master's degree by lowering the tuition fees, making them more affordable, notably for low income students. It also plans to make the current academic offer more relevant to the labour market. Currently, only 24 out of 3 880 university degrees follow 3+2 system (most at private universities in the Catalonia region). Universities participating in European university alliances (24 out of 85 campuses) will be allowed to use the 3-2 system. The impact of this reform on the Bologna process and on the automatic mutual recognition of academic titles is to be seen.

Enrolment and completion rates remain high, but study choices are not aligned with labour market needs. The tertiary education attainment at 47.4% in 2020 is one of the highest in the EU (above the average of 40.5%)⁴¹¹ and keeps growing (0.9 pps higher than in 2019). The rate is higher for women than men (53.5% vs 41.3%) (Figure 4). In the last 5 years, the number of STEM graduates decreased almost by 10%⁴¹², as well as the number of female STEM graduates declined (from over 32 000 in 2015 to around 28 000 in 2019). In 2020, the employment rate of recent tertiary graduates in Spain (75.9%) was below the EU average (83.7%)⁴¹³. The share of ICT graduates in 2019 remains at 4.2% (above the EU average of 3.9%). The share of ICT specialists in the labour force is growing (3.8% vs 3.6% in 2019)⁴¹⁴, including female ICT specialists (1.14% vs 1.04% in 2019), but both are still below the EU average (4.3% and 1.39% respectively in 2020).

⁴⁰⁹ <https://www.boe.es/boe/dias/2021/07/28/pdfs/BOE-A-2021-12613.pdf>

⁴¹⁰ <https://www.boe.es/boe/dias/2021/09/29/pdfs/BOE-A-2021-15781.pdf>

⁴¹¹ Eurostat: [edat_lfse_03].

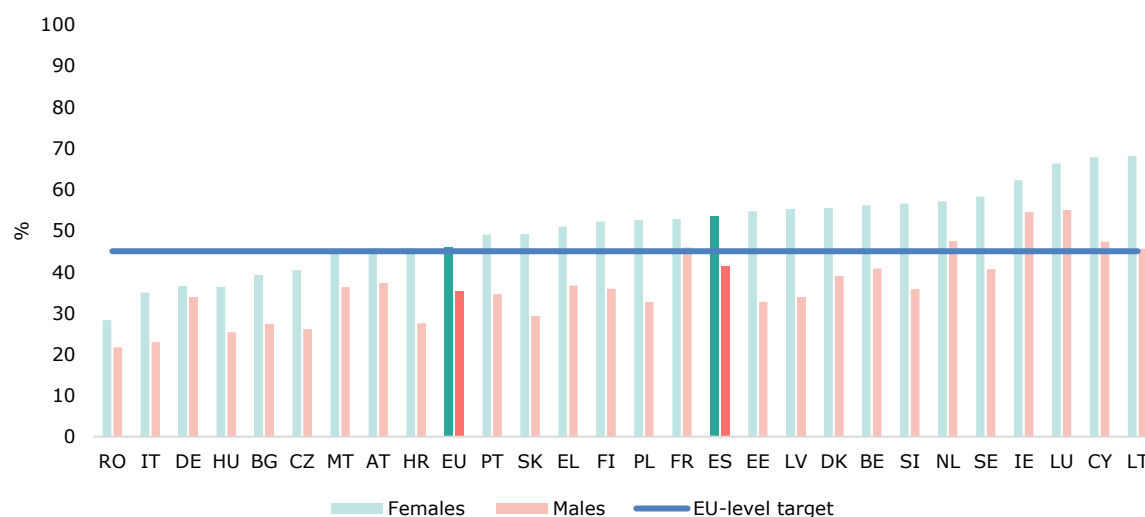
⁴¹² Eurostat: [educ_uoe_grad02]

⁴¹³ Eurostat: [edat_lfse_24]

⁴¹⁴ Eurostat: [isoc_sks_itspt]

ANECA, the National Agency for quality evaluation and accreditation, developed in collaboration with 64 universities a reference guide for universities to improve the employability of their graduates⁴¹⁵.

Figure 4 -Tertiary educational attainment (25-34) by sex, 2020



Source: Labour Force Survey, [edat_ifse_03].

A 2030 strategy for Spanish universities will transform higher education⁴¹⁶. The CRUE strategy recommends measures to: (1) adapt the university education offer and it make more flexible; (2) implement new teaching models for distance/blended learning, including remote assessment of students; (3) support the role of universities in long-life learning (new formal and non-formal teaching/learning models for upskilling/reskilling); (4) promote internationalisation (joint EU-wide degrees and mutual grade recognition); (5) modernise and improve quality assurance and appraisal systems for teaching staff and higher education institutions; (6) boost and attract talent (including from the private sector) and increase teachers/students mobility; (7) foster technology transfer, entrepreneurship and university-business cooperation; (8) make universities more suited to the green and digital transition and make them more inclusive; (9) develop new financial models and multiannual financial frameworks; and (10) update the staff regulation to create new models of recruitment, career development and closing gender and inclusiveness gaps.

Tuition fees vary widely between universities. The cost of a university credit (equivalent to 10 teaching hours) differs by up to 50% between Spanish universities. For 2020-2021, the government capped the fee per credit of Bachelor's and Master's degrees at EUR 18.46⁴¹⁷. Universities exceeding that limit have to lower their fees by 2022-2023. Madrid and Cataluña have the highest average fees (around EUR 24) and the Canary Islands and Galicia have the lowest (around EUR 12)

The pandemic affected higher education. CRUE issued a report describing how universities reacted to the pandemic⁴¹⁸ and making a number of policy recommendations, notably to: guarantee the highest possible students participation in face-to-face courses; provide more scholarships and enough digital means for online teaching; optimise the use of the learning environment; further develop digital technologies for learning; and increase teachers' digital competences, including applying digital assessment techniques.

⁴¹⁵ <http://www.aneca.es/Sala-de-prensa/Noticias/2021/Marco-para-la-autoevaluacion-de-las-universidades-espanolas-en-la-mejora-de-sus-actuaciones-en-materia-de-empleo-y-empleabilidad>

⁴¹⁶ <https://www.crue.org/universidad-2030/>

⁴¹⁷ <https://www.boe.es/boe/dias/2020/06/03/pdfs/BOE-A-2020-5605.pdf>

⁴¹⁸ <https://www.crue.org/wp-content/uploads/2020/12/La-Universidad-frente-a-la-Pandemia.pdf>

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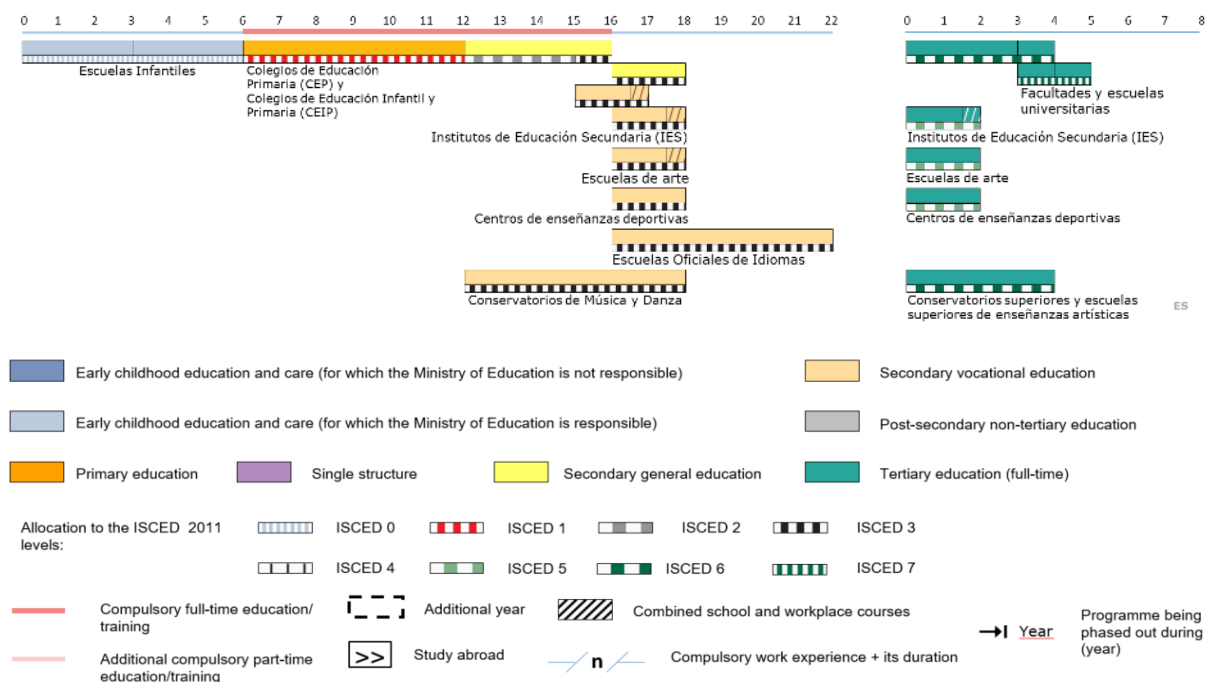
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_ifse_14. Data by country of birth: edat_ifse_02.
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_ifse_03. Data by country of birth: edat_ifse_9912.
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_ifse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

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SWEDEN

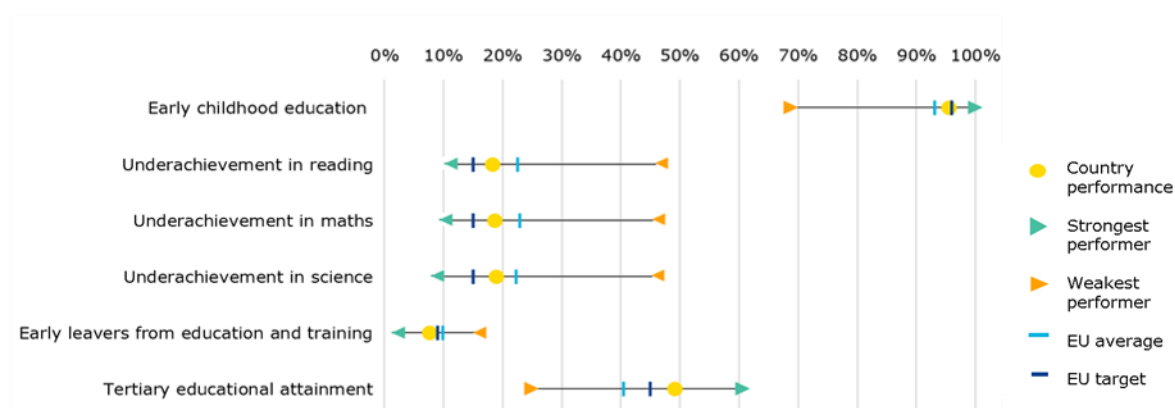
1. Key indicators

Figure 1 – Key indicators overview

			Sweden		EU-27	
			2010	2020	2010	2020
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96%	95.0% ¹³	95.6% ¹⁹	91.8% ¹³	92.8% ¹⁹
Low achieving eighth-graders in digital skills		< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.4% ^{09, b}	18.4% ¹⁸	19.7% ^{09, b}	22.5% ¹⁸
	Maths	< 15%	21.1% ⁰⁹	18.8% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	19.1% ⁰⁹	19.0% ¹⁸	17.8% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	6.5%	7.7%	13.8%	9.9%
Exposure of VET graduates to work based learning		≥ 60%	:	:	:	:
Tertiary educational attainment (age 25-34)		≥ 45% (2025)	42.3%	49.2%	32.2%	40.5%
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		6.4%	6.9%	5.0%	4.7% ¹⁹
	Expenditure on public and private institutions per FTE/student in € PPS	ISCED 1-2	€8 101 ¹²	€9 016 ¹⁸	€6 072 ^{12, d}	€6 359 ^{17, d}
		ISCED 3-4	€8 430 ¹²	€9 110 ¹⁸	€7 366 ^{13, d}	€7 762 ^{17, d}
		ISCED 5-8	€17 358 ¹²	€17 997 ¹⁸	€9 679 ^{12, d}	€9 995 ^{17, d}
Early leavers from education and training (age 18-24)	Native		5.9%	5.3%	12.4%	8.7%
	EU-born		: ^u	: ^u	26.9%	19.8%
	Non EU-born		11.3%	16.2%	32.4%	23.2%
Upper secondary level attainment (age 20-24, ISCED 3-8)			87.2%	83.1%	79.1%	84.3%
Tertiary educational attainment (age 25-34)	Native		43.0%	49.9%	33.4%	41.3%
	EU-born		57.8%	69.0%	29.3%	40.4%
	Non EU-born		36.0%	42.2%	23.1%	34.4%

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and in Volume 1 (ec.europa.eu/education/monitor). Notes: The 2018 EU average on PISA reading performance does not include ES; the indicator used (ECE) refers to early-childhood education and care programmes which are considered by the International Standard Classification of Education (ISCED) to be 'educational' and therefore constitute the first level of education in education and training systems – ISCED level 0; FTE = full-time equivalent, b = break in time series, d = definition differs, u = low reliability, := not available, 09 = 2009, 12 = 2012, 13 = 2013, 17 = 2017, 18 = 2018, 19 = 2019.

Figure 2 - Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2020, UOE 2019) and OECD (PISA 2018).

2. Highlights

- Prevention of bullying is strong and effective, but the well-being of pupils is decreasing.
- Teachers' well-being suffered during COVID-19, potentially worsening further the attractiveness of the profession.
- The percentage of pupils who leave school without a certificate is the highest in the EU, and variations point to inequalities.
- Tertiary education attainment is already higher than the new EU target and interest in studying has increased due to the pandemic.

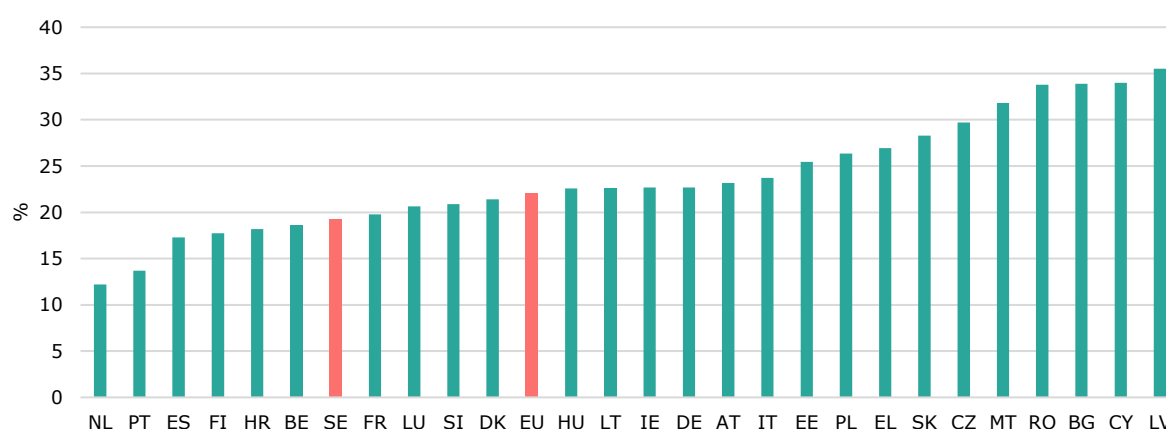
3. A focus on well-being in education and training

Well-being of pupils in Sweden is decreasing. A recent inquiry also looking into students' well-being found an increasing incidence of mental, social, and psychosomatic problems among children and young people (SOU, 2021). A national survey of citizens' health also shows a downward trend in the mental well-being of students aged 16-29 compared to professionals of the same age (Folkhälsomyndigheten 2018), and that the proportion of 15-year-olds who had at least two psychosomatic problems more than once a week has doubled between 1985/86 and 2017/18 (Folkhälsomyndigheten 2018a). While early childhood education and care (ECEC) teachers' education is focused on children's well-being, this reduces progressively for teachers at higher levels of education. Current well-being measures consist mainly of anti-bullying measures and the unified student health services 'elevhälsa' (encompassing psychologists, special needs teachers, school nurses, school doctors and school counsellors) in schools and at universities, introduced in 2010. At universities these services are usually outsourced and their quality varies.

Prevention of bullying, as an aspect of well-being, is strong and effective. Conflict resolution is a part of teachers' education. Anti-bullying is also part of continuous professional development initiatives, and measures are obligatory for each ECEC institution and school. The Education Act prescribes that staff has an obligation to report all forms of degrading treatment to the principal, who reports it to the school provider to investigate and take action. Additionally, the non-profit organisation 'Friends' is working with schools to stop bullying, providing them with knowledge and tools and offering to design a tailor-made three-year programme for each school based on the analysis of their challenges. All this has achieved good results: the share of students reporting being bullied at least a few times a month is among the lowest in the EU (19.3% v EU 22.1%) (Figure 3). Girls and high-achieving students are less likely to be bullied, but these differences are smaller than the EU average (-2.3 pps gap v EU -4.7 pps gap, and -8.3 pps gap v EU -15.9 pps, respectively). The effects of socio-economic status (SES), migrant background and school characteristics are negligible (OECD, 2019, Vol. III).

Pupils feel safe, but feeling of safety decreases in the higher grades. An annual national questionnaire examines the sense of security and well-being of children in ECEC and school pupils in compulsory and secondary schools. In 2020, 86.5% of pupils in the fifth grade of compulsory school said that they feel safe in school, 18.2% were afraid of other pupils and 9.8% of adults in school, and 81.6% believed adults will interfere if one pupil is mean to another. For grade 9, the same statistics are less favourable, with marked loss of trust in adults: 79.4% feel safe, 18.7% are afraid of other pupils and 18.3% of adults in school. Only 62.4% expected adults to help in conflicts (Skolinspektionen, 2020). This points to the need for further investigation of the causes and appropriate measures. Due to strong protection of children's rights by the Education Act and Ombudsman for children, some teachers are afraid to intervene in conflicts, for fear of being reported for degrading treatment (Lärarförbundet, 2020).

Figure 3 - Percentage of students reporting being bullied at least a few times a month, PISA 2018



Source: OECD, PISA 2018.

No specific well-being measures have been introduced during COVID-19 as ECEC and schools did not close. ECEC facilities and compulsory schools up to grade 6 were kept open, without the use of protective masks. Secondary schools and higher education institutions (HEIs) applied distance or blended education as needed (see description of Swedish approach in Monitor 2020). For upper secondary schools, a survey of a pupils' organisation showed that during distance education every second pupil felt worse, experienced increased stress and a lower sense of belonging and context (Sveriges elevkårer, 2020). In school year 2021/2022, schools returned to in-situ teaching, as it is best for majority of pupils (despite stress it caused teachers) except around Christmas and later blended learning until April. Upper secondary school principals believe that distance education went well, but that pupils in introductory programmes and with social anxiety at home were more vulnerable. Some principals tried to provide those students with additional support through individualised follow-up, communication and health interventions, but no national measures were taken for these groups (Skolinspektionen, 2020b). Temporary ordinance allowing schools to schedule teaching in other ways than usual during the pandemic has been extended until 31 July 2022 (Regeringen, 2021). A state subsidy of EUR 20 million for free and infection-free holiday activities for 6-15-year-olds in 2021 has been proposed (Regeringen, 2021b). In higher education (HE), the picture was mixed. Students experienced feelings of loneliness, isolation and longing for social student life, but some also felt increased flexibility, appreciated the opportunity to study more efficiently and access more study materials online (UKÄ, 2021). There have been more applications for higher education, more cheating during exams and more drop-outs among students whose parents have low educational attainment. Higher education staff experienced more stress (UKÄ, 2021).

Teachers' well-being has suffered during COVID-19. According to the survey of a teachers' union, teachers in ECEC and schools have experienced a high level of stress due to very high workload during the pandemic (78% of teachers) and conflict with parents due to unclear instructions on access to ECEC (58% of ECEC teachers) (Läraryrket, 2020b). Many teachers questioned the early return from distance teaching to presence in schools (opinion of 60% of upper secondary teachers) (Lärarnas Riksförbund, 2021). Every second teacher worried about being on sick leave due to work-related stress and 70% worried about colleagues being on sick leave (Läraryrket, 2020b). At the same time, 77% of principals in compulsory schools thought that the pandemic did not have much of an effect on the school's ability to perform its task (Skolinspektionen, 2020c).

One third of all pupils feel that they do not belong at school, and this feeling is more frequent among disadvantaged and migrant pupils, further reducing their educational outcomes. The sense of belonging (67%) has decreased by 2.3 pps since 2015 (v EU 65.2% with 1.6 pps decrease). It is lower for students with low SES (0.27 mean index points gap v EU 0.2) and migrant background (0.13 mean index points gap v EU 0.1) (OECD, 2019, Vol. III), who are at higher risk to achieve lower educational results (see Monitor 2020). Higher sense of belonging positively affects reading score (4 points increase in reading per one-unit increase in the index of sense of

belonging after accounting for students' and schools' socio-economic profile), while grade repetition has a strong negative effect on reading (87 points v EU 58.5 points). Loss of sense of belonging upon repeating a grade is the second biggest in the EU (0.27 v EU 0.11) (OECD, 2019, Vol. III).

4. Investing in education and training

Investment in education is high and continues to increase. Investment in education continues to increase, and spending on education as a share of GDP (6.9% v EU 4.7%) was highest in the EU in 2019, and as a share of total general government expenditure it is equally among the highest (14.1% v EU 10%)⁴¹⁹. The share spent on compensation of employees in total general government expenditure is the lowest in the EU (44% v 64% EU average)⁴²⁰.

Substantial investments from the national budget are planned across all educational levels. In ECEC, language development is supported by EUR 10 million in 2021 (Regeringen, 2020). In preparation for the introduction of ten years of compulsory schooling by formally integrating the preschool class into it, a state subsidy corresponding to 70% of the school providers' costs is planned for the professional development of ECEC teachers. EUR 10 million have been set aside for this in 2021, EUR 2 million in 2022 and from 2023 onwards EUR 17 million annually (Regeringen, 2021c). The Swedish school system has been given additional funding of SEK 1 billion (EUR 100 million) in the Budget Bill for 2021 to increase equity and continue to raise learning outcomes. A further EUR 38.5 million has been provided for schools in areas with socio-economic challenges, and EUR 17 million for holiday schooling (Regeringen, 2020). The government has also proposed to set aside EUR 770 000 annually in 2021 and 2022 for the project Uppdrag fullföljd utbildning⁴²¹, to help more pupils complete upper secondary education (Regeringen, 2020b). To enable more people to study a foundation year offering preparatory education needed for eligibility for some HEI studies, the government proposed an investment of approximately EUR 40.5 million in 2021 (corresponding to 4 000 additional full-time students), and its extension to 2022 (Regeringen, 2020b). Due to the growing interest in studying, the Budget Bill for 2021 proposed funding corresponding to study places at HEIs for almost 19 000 new full-time students (Regeringen, 2020c).

5. Modernising early childhood and school education

ECEC participation is high, but it is lower for children with migrant background. ECEC attendance by children under three is high, at 53.1% in 2019 (EU 35.3%); and a little over two thirds of them spend 30 hours or more in ECEC (37.1% v EU-17 21.5%)⁴²². Participation between age 3 and the beginning of compulsory primary education was at 95.6% in 2019, just below the new EU-level target of 96%, but above the EU average of 92.8%, and 0.5 pps higher than in 2018⁴²³. However, children with migrant background participate less (SCB, 2019). During COVID-19, some municipalities reduced access to some groups (like children of unemployed people) due to the lack of staff, and some parents kept their children at home despite ECEC being open. ECEC is not mandatory. Another challenge in ECEC is the increasing size of groups, which was aggravated during COVID-19 due to growing sick leave rates among ECEC staff (Folkhälsomyndigheten, 2021). A recently completed inquiry 'Preschool for all children – for better language development in Swedish' proposes that ECEC should be compulsory from five years onwards, that municipalities should do outreach activities and ensure that all children who are in need of ECEC for their Swedish language development (i.e. children of newly arrived migrants) are enrolled in ECEC to learn Swedish early on. ECEC staff should be provided with professional development in supporting language development (SOU, 2020a).

⁴¹⁹ Eurostat, COFOG, 2019.

⁴²⁰ Idem.

⁴²¹ <https://skr.se/skolakulturfritid/forskolagrundochgymnasieskola/uppdagfullfoljdutbildning.26377.html>

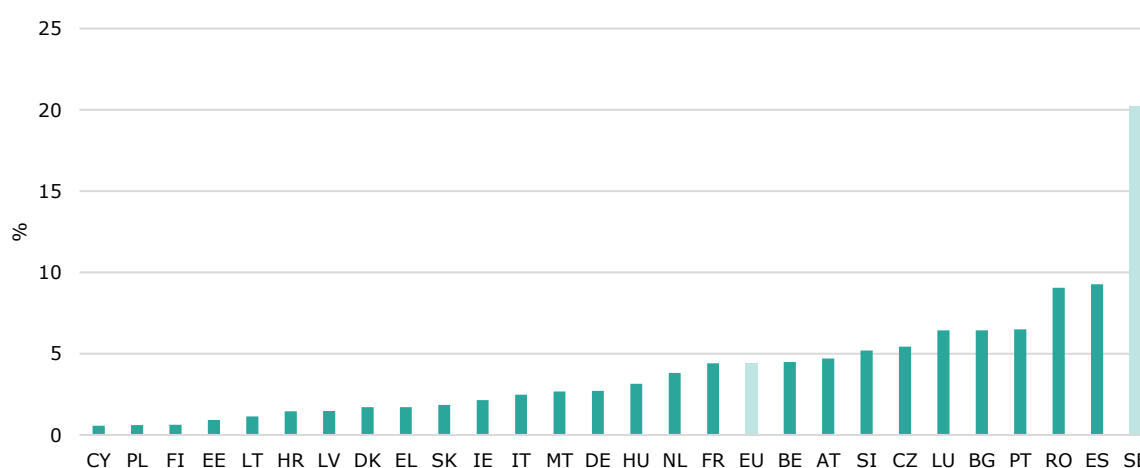
⁴²² Eurostat, EU-SILC: [ilc_caindformal].

⁴²³ Eurostat, [educ_uoe_enra21].

While basic skills results are promising, the pandemic has impacted national tests and possibly negatively affected equality. The percentages of low achieving 15-year-olds in Sweden are below the EU averages, but above the EU-level target. However, a national audit showed that the improvement noted in PISA 2018 might have been affected by participating schools excluding more foreign-born pupils than allowed (Riksrevisionen, 2021). The share of 16 to 19 year-olds whose digital skills are above basic level is high (71% v EU 57%) and has slightly increased between 2015 and 2019 (by 1 pps)⁴²⁴. The proportion of those eligible for upper secondary school increased from 82.5% in 2017 to 85.6% in 2020 (Regeringen, 2021d), as did the average grades in grade nine. National tests in primary and secondary schools have been cancelled during the pandemic (Regeringen, 2021e). Inequalities may have increased, as schools faced difficulties in responding to the different needs of children and pupils and providing individualised support (NAE, 2021). In the National Reform Programme (NRP) the possibility for pupils in grade 3 of upper secondary school to take part in holiday schools has been expanded to avoid pupils leaving upper secondary school without sufficient competences.

Early school leaving is below the EU average, but Sweden has the highest percentage of pupils leaving school without a certificate; variations point to inequalities. The share of early leavers from education and training is below the EU average and the EU-level target (7.7% v EU 9.9%), but it is twice as high for foreign-born pupils (15.6%). At the same time, the completion rate for upper secondary or post-secondary school (20 to 24-year-olds) is below the EU average (64.9% v EU 66.8%)⁴²⁵. The percentage of pupils who leave compulsory school without eligibility to national programmes in upper secondary school is the highest in the EU (20.2% v EU 4.4%) (see figure 4). Here Sweden records the biggest difference between private and public schools among the EU Member States (12.4 pps); pupils from public schools are leaving school without a certificate much more often. It is also much more frequent in schools that have many pupils who repeated a grade (8.7 pps v EU 3.4) (OECD, 2020). This points to inequalities and segregation issues in schools. Pupils with migrant backgrounds also generally attend public schools, and they are more at risk of leaving school without a certificate/diploma. The government is looking into ways to ensure that all pupils complete upper secondary education. The most important measures proposed in the inquiry 'Upper secondary school for all' are: providing pupils with mentors that would monitor their progress, extending teaching time, assessing the knowledge of all newly arrived pupils and developing supporting teaching materials, and providing teachers with in-service training in guidance, support and mentoring (SOU, 2016).

Figure 4 - Proportion of students in school's final grade who left school without a certificate, PISA 2018



Source: OECD, PISA 2018. Note: Certificate that allows the student to enter post-school education or employment; results based on principals' reports. For Sweden: Proportion of students in school's final grade who left school without eligibility to enter post-school education programmes.

⁴²⁴ Eurostat: [isoc_sk_dskl_i].

⁴²⁵ Eurostat: [edat_lfse_03]

The government has initiated inquiries into the state governance of education and student health. The government has launched an inquiry into the possibility of the state taking over the following tasks from municipalities: the employment of school staff, the financing of schools, the management of education and the day-to-day running of the schools. The inquiry should also analyse the consequences of this for municipal self-government and the possibilities for adaptation to local needs (Regeringen, 2020d). Teachers and teachers' trade unions are in favour of this change. An inquiry on active support and student health analysed how pupils could be supported to reach minimum competence levels together with improved mental health. For instance, the report includes recommendations on the maximum number of pupils for which a doctor, a nurse, a psychologist and a school counsellor can be responsible. The proposal requires more support personnel, and would mean annual cost increase of nearly EUR 82.6 million (SOU, 2021).

Several inquiries into reforms of the upper secondary education delivered their reports and proposals in 2020. The inquiry into the planning and dimensioning of upper secondary education proposes more nationally and regionally coordinated planning of the educational offer in upper secondary school and in adult education to better meet the needs of pupils and the labour market. Upper secondary school providers would also have to provide factual information about labour market outcomes and transition to HE (SOU, 2020b). The Assessment and Grading Inquiry proposed that subject grades should replace course grades, while maintaining division by levels and awarding grades by level (SOU, 2020c). Pupils in vocational schools should be given real possibilities to study the subjects they need to become eligible for HE studies (Regeringen, 2020e).

Education materials and secrecy of school data are currently an issue. Surveys have shown that teachers cannot buy the teaching materials needed, that schools' purchases are very unequal (and have decreased since the 1990s) and that students and teachers see teaching materials as very valuable (Läromedelsförfattarna, 2020, 2021 and 2021a). Textbook authors, teachers unions and students organisations want to have the right to teaching materials introduced into the law, increased resources for them and teachers to have influence over their purchase. Regarding the recently introduced secrecy of school data requested by independent schools (see Monitor 2020), an attempt to change it due to the need for transparency was refused by the Parliament. A temporary secrecy-breaking rule has been introduced between 1 July 2021 and 1 July 2023 that enables open access to relevant school information, while a long-term solution is being investigated (Riksdagen, 2021).

6. Modernising vocational education and training and adult learning

A combination of language learning and VET should speed up labour market integration. It will consist of vocational courses in municipal adult education and Swedish for immigrants or Swedish as a second language. The focus will be on a specific profession, with language courses tailored for that field. This will shorten the time before establishment on the labour market for people who are often far from it.

The upper secondary business and administration programme has been replaced with a modernised sales and service programme focussing on digital and green skills. It is to be adjusted to provide retail-specific content concerning sustainability and digital competences, relevant to e-commerce, to be able to meet the demands of a changing landscape in commerce (Cedefop ReferNet Sweden, 2020). This ambition is also supported by the national strategy for digitalisation, which emphasises the importance of digital transformation at all education levels.

The government approved curricular changes to impede traditional gender patterns in February 2021. The curricular changes are a response to counteract sexism, sexual harassment, forced marriage and honour-related violence and oppression, and should communicate an overall modernised view of gender. This amendment would counteract the competence shortage so that more jobs traditionally done by males can be accepted as VET tracks for women, and vice versa (Cedefop ReferNet, 2021).

Municipal adult education benefited from big investments, including in mapping and validation. Large investments were made in adult education in light of the pandemic. In 2020, the state took a bigger responsibility for financing of vocational adult municipal education. Among the

measures for 2021, Sweden increased funding for more study places in adult education (17 000 additional state-funded places). Funds were allocated for temporary mapping and validation of previous qualifications and knowledge within municipal adult education, to increase the number of validated qualifications, and improve the students' opportunities for supplementary education.

The prioritisation rule for selection for municipal adult education has changed and a new preparatory degree for university study has been introduced. Previously, selection priority for municipal and regional adult education was given to those with 'least education', while now it is for those with the 'greatest need', to facilitate studying for a change of career path. A new preparatory degree for university study by municipal adult education has been introduced. It can be obtained by passing courses from several different programmes.

No national strategy or specific measures on well-being exist in adult education. Municipalities can choose to offer student health in adult education, but no national data exists on the extent to which this is done. Adult education is not legally required to have student health corresponding to that in primary and secondary school. The health authorities are tasked by the Government to develop a basis for a new national strategy for mental health and suicide prevention from 2023 onwards, but this is not limited to education and there is no specific mention of different types of education (Regeringen, 2020f).

Box 1: (ESF): KASAM 2.0 Alla ska med!

Strömsund municipality's project involves all employees (1 280 employees, 80% participation required) and aims to increase competencies and combat exclusion based on participation, responsibility, respect and knowledge exchange. It should develop a sustainable working life model for employees, with lasting peer support through health-promoting development talks and 'triocoaching' dialogue, and reduce sick leave rates for women (twice as high as those for men). Employees take part in three thematic workshops: 'What is a good working environment?', 'Health and strength in everyday life' and 'Workplaces that succeed'.

Due to COVID-19, activities have been carried out digitally. Quantitative participation targets have been achieved, but fewer managers than foreseen have received individual guidance.

Project period: 01/02/2019 – 31/12/2021.

ESF funding: SEK 7 898 604 (approx. MEUR 0.8)

Website: <https://www.stromsund.se/4410.html>.

7. Modernising higher education

Tertiary education attainment (TEA) is already higher than the new EU target. In 2020, the percentage of 25 to 34 year-olds with tertiary education was 49.2% (0.8 pps higher than in 2019), above both the EU average (40.5%) and the EU-level 2030 target of 45%. The gender gap is rather high, with women more likely to have completed tertiary education than men (17.7 pps v EU 10.8 pps)⁴²⁶. The gap between the native-born population (49.9%) and the foreign-born (47.2%) is small. The attainment rate for people born in another EU country is high, the third highest in the EU (69% v EU 40.4%)⁴²⁷. The TEA gap between the population living in cities (60.9%) and in rural areas (33.4%) is higher than the EU average (27.5 pps v 22 pps).

Interest in studying increased, but it is harder for students from a disadvantaged background and access to the aptitude test is limited. The pandemic caused an increase in HE applications and examinations. Teaching became digital and examination methods changed. It also made studying harder for new students with low-educated parents, whose dropout rates increased, while they decreased among students with highly educated parents. The number of disciplinary cases increased by 61% between 2019 and 2020, mostly for plagiarism and illicit cooperation (UKÄ, 2021).

⁴²⁶ Eurostat, [edat_ifse_03]

⁴²⁷ Eurostat, [edat_ifs_9912]

As the Swedish University Aptitude Test, granting access to one third of places at the university, has been cancelled (spring 2020) or severely limited in 2020/2021 (e.g. in spring 2021 they were only for those doing their last semester in upper secondary school or older) since the beginning of the pandemic, the government has been given the right to temporarily change the regulations for admissions to HEIs during peacetime crises (Regeringen, 2021f and Riksdagen, 2021b). It has not yet used this possibility. Long-lasting shortages of students for the professions of doctors, nurses and teachers persists, but interest in nursing education has increased due to the pandemic. In its NRP, the government proposes expanding resources to HEIs (the possibilities for part-time study, increasing the number of summer courses at HEIs and additional places at HEIs).

The pandemic has decreased general employment rate of HE graduates. The employment rate of recent HE graduates is high (90.8% in 2020, above EU 83.7%), but has slightly decreased by 0.9 pps in the last year, probably due to the effects of the pandemic⁴²⁸. The effect differed depending on the graduates' sector of education, with fewer problems for nursing graduates.

Digitalisation and cooperation between HEIs have increased. An expert group's report on the digitalisation of HEIs shows that HE has shifted to distance education relatively smoothly, resulting in a rapid expansion of digital teaching, use of digital resources and exchange of resources, information, knowledge and webinars, and cooperation between HEIs through various networks. However, it is important to keep in mind that digital transformation should only be a tool for developing HE pedagogy (Nyman, 2020). The report suggests, among other things, that more support should be given to HEI cooperation networks, the Recommendation on Open Educational Resources should be implemented, and the management of validation in HE should be reformed – transferred to a central government agency.

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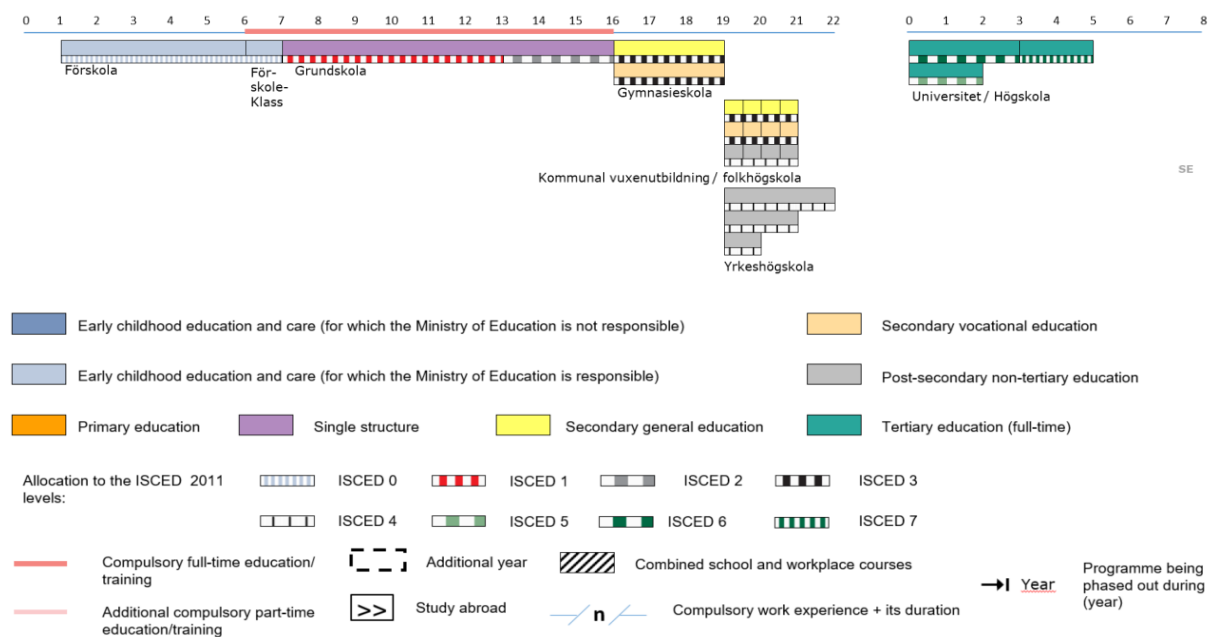
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Annex I: Key indicators sources

Indicator	Eurostat online data code
Participation in early childhood education	educ_uoe_enra21
Low achieving eighth-graders in digital skills	IEA, ICILS.
Low achieving 15-year-olds in reading, maths and science	OECD (PISA)
Early leavers from education and training	Main data: edat_lfse_14. Data by country of birth: edat_lfse_02.
Exposure of VET graduates to work based learning	Data for the EU-level target is not available. Data collection starts in 2021. Source: EU LFS.
Tertiary educational attainment	Main data: edat_lfse_03. Data by country of birth: edat_lfse_9912.
Participation of adults in learning	Data for the EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Upper secondary level attainment	edat_lfse_03

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2021. *The Structure of the European Education Systems 2021/2022: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Any comments and questions on this report can be sent to:
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